

M.COM

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)	
PEO-1:	Become well versed and competent in the core concepts of the Programme.
PEO-2:	Be recognized for quantitative, qualitative, cognitive and analytical skills to identify, analyze, design and create business opportunities in a dynamic environment on the Global map.
PEO-3:	Become successful entrepreneurs and finance professionals in the field of Banking, Insurance, Manufacturing, Transport, Telecom, Service, Hospitality, IT and to pursue career in teaching and for advanced studies.
PEO-4:	Contribute to the creation, transmission and application of knowledge in the field of Commerce and other related fields adapting to a rapidly changing environment through lifelong learning.
PEO-5:	Become with professional integrity and humanitarian values to fulfill the societal needs at regional, state, national and global levels

PROGRAMME OUTCOMES (POs)	
PO 1:	Acquire in-depth knowledge of Commerce discipline, including wider and global perspectives, with an ability to discriminate, evaluate, analyze and synthesize existing and new knowledge, and integration of the same for enhancement of knowledge. (Academic result & International / global reach)
PO 2:	Analyze complex business problems critically; apply independent judgment for synthesizing information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context. (Research and Innovation)
PO 3:	Think laterally and originally, conceptualize and solve Business problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors in the core areas of expertise at the national and

	international levels. (International / global reach)
PO 4:	Extract information pertinent to unfamiliar industry issues through literature survey and experiments, apply appropriate research methodologies, techniques and tools, design, conduct survey, analyze and interpret data, demonstrate higher order skill and view things in a broader perspective, submit a report about the study in commerce. (Practical managerial analytical skills & Industry interaction)
PO 5	: Demonstrate ability to understand commerce in multifunctional areas like Banking and Finance, Auditing and taxation, Marketing & Entrepreneurship. Also they will be able to demonstrate ability to understand and derive meaningful inferences about organizational performance. (Functional Specialization)

PROGRAMME SPECIFIC OUTCOMES (PSOs)	
PSO 1:	Display knowledge and understanding of group dynamics, recognise opportunities and contribute positively to collaborative-multidisciplinary management research, demonstrate a capacity for self-management and teamwork, decision-making based on open-mindedness, themselves as well as others. (Team Work)
PSO 2:	Demonstrate knowledge and understanding of commerce principles and apply the same to one's own work, as a member and leader in a team, manage projects in the work environment efficiently in respective disciplines and multidisciplinary environments after considering the economical and financial factors. (Industry interaction)
PSO3:	Communicate with society at large, regarding complex managerial activities confidently and effectively, such as, being able to comprehend and write effective reports and design
PSO4:	Documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions. Also they will demonstrate an ability to communicate effectively, both in writing and orally (Speaking / Writing skills).
PSO5:	Recognize the need for, and have the preparation and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously. (Continuing education awareness)

PSO6:	Display commitment towards professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society. (Values, ethics, professional integrity and contribution to society)
PSO 7:	Observe and examine critically the outcomes of one's actions and make corrective measures subsequently, and learn from mistakes without depending on external feedback. (Independent and Reflective Learning)
PSO 8:	Identify a timely opportunity and using business innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large. (Successful career, immediate employment & entrepreneurship)

M.Com – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.Com – I Semester		
PCOT12	International Trade And Practices	<p>Describe and interpret core functional areas of International Trade and Practices and the assumptions and structure of standard models of international trade theory and policy (k6)</p> <p>CO1.Conduct an environmental scan to evaluate the impact of world issues on an organization's international business opportunities. Apply the current business phenomenon and to evaluate the global business environment in terms of economic, social and legal aspects (k5)</p> <p>CO2.Identify major recent developments in the world trading system, and be able to critically analyse key issues raised both by the current round of WTO negotiations and by the spread of regional trading arrangements. (k4)</p> <p>CO3.Conduct, evaluate and present market research to support an organization's international business decision-making. Create evidence-based solutions to business problems or opportunities. (k6)</p> <p>CO4.Demonstrate and interpret how institutions and policy affect international trade. (k3)</p>
PCOT13	Advanced Financial Management	<p>Explains the role of financial management in business firms and the essentials of corporate finance. They are able to relate the concept and mechanics of the time value of money, capital budgeting techniques, and the theory of capital structure to assess a firm's leverage and the cost of capital. (k1, k6)</p> <p>CO1.Critically evaluate the financial objectives of various types of organizations' and the requirements of stakeholders (k6)</p>

		<p>CO2. Explain alternative sources of finance and investment opportunities and their suitability in particular circumstances (k2)</p> <p>CO3. Analyse the complexities associated with management of cost of funds in the capital Structure (k4)</p> <p>CO4 Assess the factors affecting investment decisions and opportunities presented to an organisation. Select and apply techniques in managing working capital, analyse a company's performance and make appropriate recommendations. (k6)</p>
PCOP11	Computerized Accounting with Tally	<p>Identify the key components of Tally (Students are familiarized with the statutory features of Tally like VAT, CST, TCS, TDS, FBT, and Goods and Service Tax. Students are also familiarized with the Point of Sale and Payroll features of Tally.) (K1)</p> <p>CO1. Process and record the business transactions and manage the accounts information (K3)</p> <p>CO2. Calculate the amount of tax that needs to be paid at the end of a particular accounting period (K3)</p> <p>CO- Student will do by their own create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc. in Tally ERP.9 software (k5)</p> <p>CO4. To be employed as Tally data entry operator as an accountant and as a Chief Financial Officer (CFO) in companies. (k3)</p>
PCOE11	Managerial Economics	<p>Recognize applications of managerial economics. (k1)</p> <p>CO1. Explains the relationships between short-run and long-run costs. (k2)</p> <p>CO2. Explains uniform pricing and how it relates to price</p>

		discrimination and total revenue.(k2, k4) CO3. Recognize is a role of the government to play in managerial economies (k1) CO4. Integrate the concept of price and output decisions of firms under various market structure.(k6)s
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Code	Course Name	Course Outcomes
M.com – II Semester		
PCOT21	Modern Banking And Insurance	Able to describe fundamental concepts behind modern banking technologies. (k1) CO1. Explains how internet can help in growth of the business.(k2) CO2. Express the importance of security, privacy and ethical issues as they relate to E-Commerce. Explain the nature and principles of insurance and the regulatory framework of it in India (k2) CO3. Describe the features of General Insurance (k1)
PCOT22	Advanced Cost Accounting	Able to : Recognize the basic concepts and processes used to determine product costs, able to interpret cost accounting statements, (K1) CO1. Analyze and evaluate information for cost ascertainment, planning, control and decision making, and (K4,K5) CO2. Prepare Cost Sheet, Tender and Quotations. Various aspects of material cost control and Analyze inventory control methods (K3) CO3. Calculate Labour, Contract , Process Costing (K3) CO4. Interpret the cost accounting records (k5)
PCOT23	Business Research	To identify empirical and analytical problems affecting

	Methods	<p>the research process and ways to overcome them. (k1)</p> <p>CO1.To identify a business problem/ need, translate it into a research question, and design an appropriate way to answer it. (k1, k2)</p> <p>CO2.Design an experiment as a research method, develop skills in choosing suitable case studies, sampling, measurement, Designing questionnaire, conducting interviews and surveys, leading focus groups. (k6)</p> <p>CO3.To formulate testable hypotheses and choose the most appropriate tools for testing them.(k6)</p> <p>CO4.Interpret research findings and their implications in a clear and well organized way, both orally and in writing.(k5)</p>
PCOT24	Quantitative Techniques for Business Decisions	<p>Identify the source of a quantifiable problem, recognise the issues involved and produce an appropriate action plan (k1)</p> <p>CO1.Extrapolate from data interpret the important trends in order to forecast as accurately as possible (k5)</p> <p>CO2.Employ appropriate mathematical and statistical tools to solve problems (k3)</p> <p>CO3.Calculate and interpret numerous statistical values and report the findings to the business manager (k3, k5)</p> <p>CO4.Demonstrate an ability to apply statistical methods and carry out a simple sample survey, analyse the results and present the findings to the class. (k3, k4)</p>
PCOE22	Business Environment	<p>Identify and evaluate the various elements of Business environment and complexities of business environment and their impact on the business. (k1, k6)</p> <p>CO1.Analyze the relationships between Government and Business and understand the political, economic, legal and social policies of the country. (k4)</p> <p>CO2.Analyze current economic conditions in developing emerging markets, and evaluate present and future</p>

		<p>opportunities.(k4)</p> <p>CO3.demonstrate the Industrial functioning and strategies to overcome challenges in competitive markets.(k3)</p> <p>CO4.Analyse the principle and the different foreign exchange rate regimes' impact on businesses and Integrate the concept and opening economies of developing countries like India through RTB and multilateral route (WTO). (k4,k6)</p>
PCOE22	Organizational Behaviour	<p>Explain the concept of organizational behaviour and classifies the behaviour of people in the organization. (k1, k2)</p> <p>CO2: Demonstrate the applicability of analyzing the complexities associated with management of individual behaviour in the organization. (k3)</p> <p>CO3: Analyze the complexities associated with management of the group behavior in the organization. (k4)</p> <p>CO4. Describe why conflict resolution, crucial conversations and other communication is necessary to study in organizations (k1)</p> <p>CO5. Discuss change management as it functions in organizational behaviour, various ways of change has succeeded and failed in contemporary issues in organizations (k2)</p>

Code	Course Name	Course Outcomes
M.Com – III Semester		
PCOT31	Indirect Taxation	<p>Explain the provisions of levy and collection of GST (k1)</p> <p>CO1.Analyse and evaluate the effect of an indirect tax</p>

		<p>on consumers, producers and the government. (k4,k6)</p> <p>CO2.Summarize various types of Assessment under GST Act (k2)</p> <p>CO3.Able to compute valuation of goods under Customs Duty (k3)</p> <p>CO4.Plan for Future Business / Implementation Challenges and Compliances & Assessment Procedures (k6)</p>
PCOT32	Financial Markets and Services	<p>List the role and function of the financial system with reference to the macro economy. (k1)</p> <p>CO1.Demonstrate an awareness of the current structure and regulation of the Indian financial services sector. (k3)</p> <p>CO2.Evaluate and create strategies to promote financial products and services. (k5)</p> <p>CO3.Summaries the various speculators and describe the speculative activities (k2)</p> <p>CO4.Students can describe the different components of a financial system and their role and the trading mechanism in the stock market (k6)</p>
PCOT33	Advanced Corporate Accounting	<p>Demonstrate conceptual knowledge of corporate accounting (k1)</p> <p>CO2. Perform the skill of recording financial transactions and preparation of reports in accordance with Indian and International Standards (k3)</p> <p>CO3. Prepare final accounts of Holding, banking and Insurance companies. (k3)</p> <p>CO4. Perform computerized accounting using Tally package. (k3)</p> <p>CO5. Explain comprehensive understanding of the advanced issues in corporate accounting (k6)</p>
PCOT34	Management	Differentiate between cost accounting, financial

	Accounting	<p>accounting and management accounting (K4)</p> <p>CO1.Identify Important Information Found On Key Financial Statements And Analyze The Relationships Between Key Financial Statements (K1)</p> <p>CO2.Perform Cost-Volume-Profit Analysis (K3)</p> <p>CO3.Perform Standard Costing Variation Analysis Through Standard Costs (K3)</p> <p>CO4.Prepare In The Analytical Statement For Decision Making, Using Relevant Cost Benefit Analysis Technique(K3,K6)</p>
PCOE33	Logistics Management	<p>Analyze how logistical decisions (e.g., facilities, inventory, and transportation) impact the performance of the firm. (K4)</p> <p>CO1.Analyze the strengths and weaknesses of various transportation modes and perform cost analysis and evaluate the logistics cost calculation methods. (K4)</p> <p>CO2.Develop the strategies that can be taken to find the best paths to route vehicles to deliver and collect goods at multiple stops. (K6)</p> <p>CO3.Develop the strategies that can be taken to manage inventories, including deciding the timing and quantity for replenishments. (K6)</p> <p>CO4.Compile basic characteristics and costs of warehousing and materials handling activities.(K5)</p>
PCOE33	Human Resources Management	<p>Effectively manage and plan key human resource functions within an organizations (K5)</p> <p>CO1.Examine current issues, trends, practices, and processes in HRM and Contribute to employee performance management and organizational effectiveness (K4)</p> <p>CO2.Ability to handle employee grievance issues and evaluate the new trends in HRM (K6)</p> <p>CO3.Describe appropriate implementation ,</p>

		<p>monitoring and assessment procedures of training and list training and development need for the 21st century (K6)</p> <p>CO4.State the importance of Human Resource management in planning and staffing organisational man power requirements (K2)</p>
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Code	Course Name	Course Outcomes
M.Com – IV Semester		
PCOT41	Income Tax & Tax Planning	<p>Students will know different types of incomes and their taxability, apply various deductions to reduce the taxable income (K3)</p> <p>CO1.Define the procedure of direct tax assessment. (K1)</p> <p>CO2.Able to file IT return for individual persons. (K3)</p> <p>CO3.Appraise the penalties levied in the assessment of income. (K3)</p> <p>CO4.Give a framework for tax panning measures for different heads of income (K2)</p>
PCOT42	Strategic Management	<p>Able to describe major theories, background work, concepts and research output in the field of strategic management. (K1)</p> <p>CO1.Develop and prepare organizational strategies that will be effective for the current business environment (K6)</p> <p>CO2.Able to solve practical business problems in the field of strategic management, (K3)</p> <p>CO3.Able to make their own conclusions and place them in appropriate professional framework, (K5)</p>

		CO4. Use critical analysis and synthesis in solving complex multidisciplinary issues in the field of strategic management. (K3)
PCOD41	Project	<p>CO1 Demonstrate a sound technical knowledge of their selected project topic.(K3)</p> <p>CO2. Identify problem, formulate and find solution.</p> <p>CO3. Design professional solutions to complex problems utilising a systems approach.(K6)</p> <p>CO4. Conduct project (K5)</p> <p>CO5. Communicate at large in written an oral forms. (K5)</p>

M.Sc. COMPUTER SCIENCE

PROGRAMME OUTCOMES (POs)	
On successful completion of this programme the students will be able to:	
PO1:	Get core competence in various subjects of Computer Science.
PO2:	Recognize the organizational need and to engage themselves in continuing professional development.
PO3:	Apply knowledge of computing and mathematics appropriate to the discipline.
PO4:	Design, implement, and evaluate a computational system to meet the desired needs within realistic constraints.
PO5:	Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computational systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
PO6:	Function effectively on teams to accomplish shared computing design, evaluation, or implementation goals.
PO7:	Recognize the need for and ability to engage in continuing professional development.
PO8:	Use appropriate techniques, skills, and tools necessary for computing practice.
PO9:	Identify, formulate, develop solutions to computational challenges. Understand professional, ethical, legal, security, and social issues and responsibilities for the computing profession.
PO10:	Apply design and development principles in the construction of software systems of varying complexity.

PROGRAMME SPECIFIC OUTCOMES	
PS01:	Able to handle any kind of software development
PS02:	Able to maintain the software network to handle the technological challenges.
PS03:	Able to develop strong analytical skills, critical thinking and experimental skills.

PS04:

Able to solving on Computational problems, system networking knowledge, use of technology with innovative ideas

M.Sc. Computer Science – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.Sc.Computer Science – I Semester		
PCST11	Advanced Java Programming	<p>After successful completion of this course, the students shall be able to</p> <p>CO1: Design and Create Java Applications using OOPs concept K6</p> <p>CO2: Utilise the features of exception handling, threads & util package in Java. K3</p> <p>CO3: Simplify the communication between client & server using database connectivity. K2</p> <p>CO4: Build Java applications that include GUIs and event driven programming K3</p>
PCST12	Data Structures And Algorithms	<p>After successful completion of this course, the students shall be able to</p> <p>CO1: Analyse the space and time complexities for an algorithm K2</p> <p>CO2: Identify and use appropriate data structure to solve problems K3</p> <p>CO3: Use Hashing Techniques to solve real time Problems K3</p> <p>CO4: Implement and Handle various searching and sorting algorithms K3, K4</p>
PCST13	Mathematical Foundations Of Computer Science	<p>After successful completion of this course, the students can be able to</p> <p>CO1: Construct simple mathematical proofs and possess the ability to verify them. K6</p> <p>CO2: Utilise Algebraic Structures and Recurrence</p>

		<p>FunctionK3</p> <p>CO3: Know various graphs and its algorithms in computer programs. K2</p> <p>CO4: Describe computer programs in a formal mathematical manner K2</p>
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Code	Course Name	Course Outcomes
M.Sc.Computer Science – II Semester		
PCST21	Advanced Operating System	<p>Students will be able to gain:</p> <p>CO1:Knowledge about advanced concepts in OS K4</p> <p>CO2:Able to rectify the designing concepts of OS K4</p> <p>CO3: Ability to develop OS for distributed systems K3</p> <p>CO4:Understand the Mutual exclusion, Deadlock detection and file sharing in Distributed operating system K2</p>
PCST22	Relational Database Management System	<p>After successful completion of the course, Student shell be able to:</p> <p>CO1:Create E/R models from application descriptions. K6</p> <p>CO2:Improve the database design by normalization. K4</p> <p>CO3: Students can create database structure K3</p> <p>CO4: Create databases in an RDBMS and enforce data integrity constraints and queries using SQL K3, K4</p>
PCST23	Computer Networks	After successful completion of the course, Student

		<p>shall be able to:</p> <p>CO1: Have a good understanding of the OSI Reference Model K2</p> <p>CO2: Students can understand TCP/IP Model and in particular have a good knowledge of Layers. K2</p> <p>CO3: Identify the different types of network devices and their functions within a network K4</p> <p>CO4: Students will Analysis the requirements for a given organizational structure. K4</p>
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Code	Course Name	Course Outcomes
M.Sc.Computer Science – III Semester		
PCST31	Compiler Design	<p>Understand the working process of the compiler. K2</p> <p>CO1: Learn the various parsing techniques and different levels of translation. K4</p> <p>CO2: Have a good understanding of specific object code from source language. K2</p> <p>CO3: Learn to optimize the code and schedule for optimal performance. K4</p>
PCST32	Software Engineering	<p>After successful completion of the course, Student shall be able to:</p> <p>CO1: Understands the process to be followed in the software development life cycle K2</p> <p>CO2: Understand fundamental concepts of requirements engineering. K1</p> <p>CO3: Find the practical solutions to the problems. K4</p>

		CO4: Student can work as an individual and as part of a multidisciplinary team to develop and deliver quality software K5,K6
PCST33	Web Programming	<p>1. Students will learn to design web pages using HTML. K6</p> <p>2. Able to gain knowledge on creating interactive web pages using JavaScript, Query. K2,K4</p> <p>3. Able to write a program and to use Cascading Style Sheets (CSS) and DOM. K3</p> <p>4. Able to develop server side scripting using PHP K3</p>

Code	Course Name	Course Outcomes
M.Sc.Computer Science – IV Semester		
PCST41	Digital Image Processing	<p>After completion of the course, Student shall be able to</p> <p>CO1. Understand how digital images are represented and manipulated in computer K2</p> <p>CO2. Develop a broad range of image processing techniques and their applications. K3</p> <p>CO3: Understand the different types of image transformations and image features. K4</p> <p>CO4: Understand the advancements in Computer Vision of Images. K4</p>
PCST42	Mobile Computing	<p>After successful completion of the course, Student shall be able to:</p> <p>CO1:. Understand the characteristics and limitations of mobile hardware devices including their user-interface modalities K2</p> <p>CO2. Design and develop context-aware solutions for</p>

		<p>mobile devices. K3</p> <p>CO3. have clear idea about Satellite Systems K2</p> <p>CO4. develop their knowledge in mobile computing system and how to interact with servers and database systems. K3</p>
PCSE11	Computer Graphics	<p>After successful completion of the course, Student shall be able to:</p> <p>CO1: Explain Graphic primitives and the working of I/O devices K2</p> <p>CO2. Apply geometric transformations in objects K3</p> <p>CO3.: Implement Graphic modeling process K3</p> <p>CO4: Create interactive graphics applications in C++ using graphics application programming interfaces. K6</p>
PCSE22	Data Warehousing and Data Mining	<p>After successful completion of this course, the students shall be able to</p> <p>CO1: Identify the characteristics of data warehousing. K4</p> <p>CO2: Identify the association rules for mining applications. K4</p> <p>CO3: Design appropriate classification/clustering techniques for data mining problems K3</p> <p>CO4: Select appropriate tools for various data mining applications. K4</p>
PCSE22	Cryptography And Network Security	<p>After completion of the Course, students shall be able to</p> <p>CO1: Learn and operate secure programming techniques K2</p>

		<p>CO2: Understand the design issues in Network Security K2</p> <p>CO3: Identify security threats, security services and mechanisms to counter them. K4</p> <p>CO4: Be familiar with security applications in wireless environment K3</p>
PCSE33	Software Project Management	<p>After completion of the Course, Students shall be able to</p> <p>CO1: Learn how to estimate the cost associated with a project K2</p> <p>CO2:Plan and monitor projects for the risk management K4</p> <p>CO3:Learn the process of monitoring and controlling K2</p> <p>CO4:Gain the in-depth knowledge about software development standards and to know how to manage people and organization of teams with their own. K4</p>
PCSE33	Big Data Analytics	<p>After completion of the Course, students shall be able to</p> <p>CO1:Know the fundamental concepts of big data and analytics. K1</p> <p>CO2:utilise the tools and practices for working with big data K3</p> <p>CO3: understand about the research that requires the integration of large amounts of data. K2</p> <p>CO4:Gain the In depth knowledge in stream computing K2</p>

M.A. ENGLISH

PROGRAMME OUTCOMES (POs)

On successful completion of M. A. English programme, the students would have

PO1:	developed mastery of English language skills and forms to be used in explicitly meaningful contexts through literature and criticism
PO2:	acquired necessarily required linguistic competence to be mastered in various real life situations
PO3:	appreciated and admired the master minds of literature and analyzed a variety of literary samples to determine the components, organizations, and structure of academic text
PO 4:	molded themselves into full-fledged literary critics with good attitude towards objectivecriticism and unbiased conclusions
PO 5:	integrated the indispensable human values to become respectful humans and law-abiding citizens
PO6:	promoted their managerial skills to work independently and in groups so that they could transform themselves into job-ready candidates and achieve their career goals
PO7:	widened their perspective to face the literary and artistic challenges and incorporate ICT skills to clear competitive examinations like NET, SET, UPSC, TNPSC etc.

PROGRAMME SPECIFIC OUTCOMES

At the end of the programme, the student will be able to

PSO1:	Read, understand, analyze, interpret, and extrapolate from the complex texts that are at the heart of the diverse traditions of the English language.
PSO2:	Identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.
PSO3:	Demonstrate a command of written academic English, including the abilities to a) organize and present material in a cogent fashion, b) formulate and defend original arguments, c) employ effectively the language of their discipline, and d) write under time constraints.
PSO4:	Analyse, interpret, and understand the complex interrelationships between authors, texts, and specific social, political, and historical contexts and apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.
PSO5:	Write well in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources and to cogently convey their own interpretations and perspectives, or produce new creative and artistic works themselves

M.A.English – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.A. English – I Semester		
PENT11	British Literature I	<p>CO1:know the poetic tactics of the classical writers(K1,K2)</p> <p>CO2:understand the difference between Old English and Middle English(K1,K2)</p> <p>CO3:be aware of the salient features of aphoristic style (K2,K4)</p> <p>CO4:Discover and to apply the creative power behind art and literature (K2,K3,K6)</p> <p>CO5:Critically analyze the life and works of great writers and will be able to create literary pieces on their own (K4,K6)</p>
PENT12	British Literature II	<p>CO1:understand the sense of rationalism and sensibility of the writers</p> <p>CO2:recognize and understand the figurative language</p> <p>CO3:apply the technical nuances of Neo-Classical dramas</p> <p>CO4:comprehend the artistic style of the writers and to adopt the style in writing</p> <p>CO5:appreciate the intense zeal of the writers and to stimulate the creativity of the students</p>
PENT13	Indian Writing in English	<p>CO1:Understand the social, and political controversies in India during the colonial and post- colonial periods</p> <p>CO2:Acquire knowledge about Indian cultural ethos and its uniqueness</p> <p>CO3:Evaluate the unique characteristics of Indian writing in English</p> <p>CO4:Appreciate the spirit of the Indian writers to preserve the noble values of Indian society</p> <p>CO5:Acquire literary acumen for facing the SET/ NET/TET and</p>

		other competitive examinations with confidence
PENT14	Diasporic Fiction	<p>CO1:introduce the emerging body of literature</p> <p>CO2:intimate the process of cross cultural studies and comparative literary studies</p> <p>CO3:display an understanding of both literal and metaphorical meaning of literary texts</p> <p>CO4:negotiate the complexities and ambiguities</p> <p>CO5:incorporate the literary products with different cultural and geographical specificity</p>
PENE11	Creative Writing	<p>CO1:Construct a variety of flawless sentences in English using appropriate grammatical structures</p> <p>CO2:Earn their skills in Technical Writing to be a reporter, Content Writer</p> <p>CO3:Draft effective research proposals/reports</p> <p>CO4:Exploit the resources of English language for professional enrichment</p> <p>CO5:Master the mechanics of writing and to be a writer/a teacher</p>

Code	Course Name	Course Outcomes
M.A. English – II Semester		

PENT21	British Literature-III	<p>CO1:know the revolutionary ideologies of the romantic writers</p> <p>CO2:identify the lyrical qualities in romantic poetry</p> <p>CO3:discover the creative power behind art and literature and to imitate and to recreate</p> <p>CO4:appreciate the style of the essayists</p> <p>CO5:relish the aesthetic beauty, wonder in the realm of nature and reflect in Writing</p>
PENT22	British Literature – IV	<p>CO1:know the religious and philosophical insight through dramatic monologues</p> <p>CO2:understand the writers’ vision for the betterment of mankind</p> <p>CO3:ponder the values and ideas propagated by the Victorian writers</p> <p>CO4:explore the several social problems in Victorian England</p> <p>CO5:analyze the life of the Victorians to apply human values and ethics in real life</p>
PENT24	Shakespeare-V	<p>CO1:understand the magnitude of the Shakespearean world</p> <p>CO2:introspect the complexities of Shakespeare’s plays</p> <p>CO3:attain a comprehensive knowledge of the plays of Shakespeare</p> <p>CO4:analyze the stylistic features of Shakespeare</p> <p>CO5: relish the sublimity of Shakespearean language and express through creative writing</p>

Code	Course Name	Course Outcomes
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M.A. English – II Semester		
PENT21	Language and Linguistics	<p>CO1:know the concepts of linguistics</p> <p>CO2:familiarize with the basic symbols of the International Phonetic Alphabet and to familiarize with pronunciation</p> <p>CO3:enhance intrinsic values of language usage</p> <p>CO4:analyze the various aspects of articulation effects</p> <p>CO5:practice the intricacies of various structures of modern English and to practice transcription</p>
PENE22	TRANSLATION THEORY AND PRACTICE	<p>CO1:understand the history of translation</p> <p>CO2:develop the transactional skills</p> <p>CO3:refine their standard in translation</p> <p>CO4: appreciate the intercultural concepts</p> <p>CO5:apply the intrinsic skills of translation</p>

Code	Course Name	Course Outcomes
M.A. English – III Semester		
PENT31	American Literature	<p>CO1:learn the literary works & culture of the Americans</p> <p>CO2:understand the literary activities of the writers of American descent</p> <p>CO3:gain a perception of literary trends set by the American writers</p> <p>CO4: understand the character, flavor and ethos of the American literature</p> <p>CO5:Appreciate the positive approaches of the American writers towards equality and emancipation and enable them</p>

		to practice and to be an instructor.
PENT32	World Classics In Translation	<p>CO1:Acquire perception of the classical texts amidst the whole gamut of world literatures.</p> <p>CO2:Discover the richness of the cultures and their writings</p> <p>CO3:Possess the capacity to identify, expound on and compare literary genres and periods.</p> <p>CO4:Relish the essence of knowing the works of people from other cultures and background.</p> <p>CO5:Exposed to analyze and demonstrate the knowledge of the major literary movements of the period and to apply in translation oriented works.</p>
PENT33	Literary Theory And Criticism	<p>CO1:The course intends to provide a critical understanding of the developments in literary criticism from the beginning to the end of 19th century</p> <p>CO2:Moreover some selected texts/critics are prescribed for detailed study whose contribution to this area constitutes a significant benchmark in each era.</p> <p>CO3:It also provides a conceptual framework for developing an understanding of the function and practice of traditional modes of literary criticism</p> <p>CO4:Learn the history of literary criticism and various literary theories. Apply critical and technical theory and vocabulary to describe and analyze, and formulate an argument about literary and other texts.</p> <p>CO5:Think about the non-fixity of meaning of literacy texts.</p> <p>Develop a skill in applying various literary theories in interpreting a specific text.</p>

<p>PENE33</p>	<p>Writing For The Media</p>	<p>CO1:Demonstrate their ability to observe events, gather information, write news reports and news releases and report on events</p> <p>CO2:Gain first-hand experience in the designing the News Letters.</p> <p>CO3:Understand the difference between communication and media theories and would have gained expertise to handle this area in their profession</p> <p>CO4:grasp the complex relationship between communication/media theories and a diverse set of individual, social, and professional practices</p> <p>CO5:Know the processes and practice of writing for the media and to have placement in Media</p>
<p>PENT34</p>	<p>Research Methodology</p>	<p>CO1:Comprehend Literary Research against other types of researches and will have learnt to identify and describe the Research Question</p> <p>CO2:Imbibe the rhetoric styles, language appropriate for research and the knowledge on the mechanics and methodology of writing a literary project</p> <p>CO3:Acquire training in selecting and defining the appropriate research problem and parameters.</p> <p>CO4:Understand how to organize ideas and format a dissertation.</p> <p>CO5:develop data analytics skills and meaningful interpretation to the data sets so as to solve the Research problem</p>

Code	Course Name	Course Outcomes
M.A. English – IV Semester		
PENT41	Post Colonial Literature	<p>CO1:Familiarized with some of the seminal works on colonialism</p> <p>CO2:Acquainted with the key concepts of postcolonial literary theory through the study of postcolonial texts</p> <p>CO3:Introduced to aspects of subjectivity, race, class and feminism as they inhere in the postcolonial space</p> <p>CO4:Known how a literary text, explicitly or allegorically; represents various aspects of colonial oppression</p> <p>CO5:Learnt how a text reveals about the politics and/or psychology of anti-colonialist resistance and trace the history of post-colonial movements in India and its textual representations and trained them to teach and to be sensitized towards cross cutting issues.</p>
PENT42	Women's Writing	<p>CO1:Learn how and on what grounds women's writings can be considered as a separate genre.</p> <p>CO2: Read and understand canonical texts written by Women writers across different ages.</p> <p>CO3:Differentiate between sex and gender and how the latter is a social construction.</p> <p>CO4:Be aware about the issues and concerns of the women writers of the developed, developing and under-developed countries</p> <p>CO5:Demonstrate awareness of cultural and intercultural concerns relating to women's writing</p>

M Sc. MATHEMATICS

PROGRAM EDUCATIONAL OBJECTIVES	
The M. Sc Mathematics curriculum is dedicated to preparing students for productive careers after 3-5 years of graduation.	
PEO1:	Apply their knowledge in modern industry or teaching, or secure acceptance in highquality graduate programs in mathematics.
PEO2:	Development in their chosen profession and/or progress toward an advanced degree
PEO3:	The trust and respect of others as effective and ethical team members.
PEO4:	Graduates will become effective collaborators and innovators, leading or participating in efforts to address social, technical and business challenges.
PEO5:	Promote the culture of interdisciplinary research among all disciplines and applied mathematics.

PROGRAMME OUTCOMES	
PO1:	Inculcate critical thinking to carry out scientific investigation objectively without being biased with preconceived notions.
PO2:	Equip the student with skills to analyze problems, formulate a hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.
PO3:	Prepare students for pursuing research or careers in industry in mathematical sciences and allied fields
PO4:	Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.
PO5:	Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.

PROGRAMME SPECIFIC OUTCOMES	
PSO1:	Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.
PSO2:	Prepare and motivate students for research studies in mathematics and related fields.
PSO3:	Provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degrees at reputed academic institutions.
PSO4:	Nurture problem solving skills, thinking, creativity through assignments, project work.
PSO5:	Assist students in preparing (personal guidance, books) for competitive exams e.g. NET, GATE, etc.

M.Sc. Mathematics – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.Sc.Mathematics – I Semester		
PMTT11	Linear Algebra	<p>Upon successful completion of this course students will be able to:</p> <p>CO1: Determine relationship between coefficient matrix invertibility and solutions to a system of linear equations and the inverse matrices.</p> <p>CO2: Find a basis for the row space, column space and null space of a matrix and find the rank and nullity of a matrix.</p> <p>CO3: Students completing this course will be able to find the matrix representation of a linear transformation given bases of the relevant vector spaces.</p> <p>CO4: Use computational techniques and algebraic skills essential for the study of systems of linear equations, matrix algebra, vector spaces, eigenvalues and eigenvectors, orthogonality and diagonalization. (Computational and Algebraic Skills).</p> <p>CO5: Work collaboratively with peers and instructors to acquire mathematical understanding and to formulate and solve problems and present solutions.</p>
PMTT12	Real Analysis- I	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Students will be able to demonstrate competence with elementary properties of sets by proving identities involving union and intersection and Cartesian Products of sets.</p> <p>CO2: Students will be able to demonstrate competence with elementary properties of functions by proving results involving composite functions and inverse functions.</p> <p>CO3: Students will be able to demonstrate competence with the algebraic and order properties of real numbers.</p>

		<p>CO4: Students will be able to demonstrate competence with properties of real numbers by finding supremum and infimum of sets and using the completeness property of real numbers.</p> <p>CO5: Students will be able to demonstrate ability to use Taylor Theorem, the Mean value Theorem, and use L'Hôpital's Rule to compute limits of functions.</p>
PMTT13	Differential Equations	<p>Upon the successful completion of the course, students will be able to</p> <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 terms 'exponential growth/decay', 'proportionate growth rate' and 'doubling/halving time' when applied to population models, and the terms 'exponential decay', 'decay constant' and 'half-life' when applied to radioactivity</p>
PMTT14	Graph Theory	<p>Upon the successful completion of the course, students will be able to</p> <p>Course Outcomes:</p> <p>CO1: State all of the technical definitions covered in the course (such as a graph, tree, planar graph, colouring, digraph, generating function, linear extension, and other terms).</p> <p>CO2: State all of the relevant theorems covered in the course.</p> <p>CO3: Formulate graph theoretic models to solve real world problems (e.g., scheduling problems).</p> <p>CO4: Analyze combinatorial objects satisfying certain</p>

		properties and answer questions related to existence (proving the existence or non-existence of such objects), construction (describing how to create such objects in the case they exist), enumeration (computing the number of such objects), and optimization (determining which objects satisfy a certain extremal property).
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Code	Course Name	Course Outcomes
M.Sc.Mathematics – II Semester		
PMTT21	Algebra	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Students will have a working knowledge of important mathematical concepts in abstract algebra such as definition of a group, order of a finite group and order of an element.</p> <p>CO2: Students will be introduced to and have knowledge of many mathematical concepts studied in abstract mathematics such as permutation groups, factor groups and Abelian groups.</p> <p>CO3: Students will actively participate in the transition of important concepts such homomorphisms & isomorphisms from discrete mathematics to advanced abstract mathematics.</p> <p>CO4: Students will gain experience and confidence in proving theorems. A blended teaching method will be used requiring the students to prove theorems give the student the experience, knowledge, and confidence to move forward in the study of mathematics.</p>
PMTT22	Real Analysis-II	Upon the successful completion of the course, students will be able to

		<p>CO1: Investigate the ideas of continuity and inverse images of open and closed sets, functions continuous on compact sets</p> <p>CO2: Differentiate the concepts of connectedness and implement them on various sets.</p> <p>CO3: Examine the derivatives of functions and apply few theorems based on it.</p> <p>CO4: Investigate properties of monotonic functions.</p> <p>CO5: Learn the properties of Riemann- Stieltjes integral.</p>
PMTT23	TOPOLOGY	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Know how the topology on a space is determined by the collection of open sets, by the collection of closed sets, or by a basis of neighbourhoods at each point, and you know what it means for a function to be continuous.</p> <p>CO2: Know the definition and basic properties of connected spaces, path connected spaces, compact spaces, and locally compact spaces.</p> <p>CO3: Know what it means for a metric space to be complete, and you can characterize compact metric spaces.</p> <p>CO4: Familiar with the Urysohn lemma and the Tietze extension theorem, and you can characterize metrizable spaces.</p> <p>CO5: Familiar with the construction of the fundamental group of a topological space and applications to covering spaces and homotopy theory.</p>
PMTT24	Optimization Techniques	<p>CO1: The students will be able to analyze the real life systems with limited constraints</p> <p>CO2: Identify the mathematical nature of a given optimization problem</p>

		<p>CO3: Analyze a range of classes of optimization problems</p> <p>CO4: Identify solution methods for the optimization problems studied</p> <p>CO5: The students will be able to depict the systems in a mathematical model form.</p>
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Code	Course Name	Course Outcomes
M.Sc.Mathematics – III Semester		
PMTT31	Complex Analysis	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Explain and apply Cauchy's integral formula and some of its consequences</p> <p>CO2: explain the convergence of power series and develop analytical capabilities in Taylor or Laurent series in a given domain</p> <p>CO3: Define the fundamental concepts of complex numbers and its properties, Exponential, logarithmic, trigonometric and hyperbolic complex functions .</p> <p>CO4: Describe Holomorphic and harmonic complex functions and list different examples.</p> <p>CO5: State Complex integral on a path – Cauchy theorem</p>

		and Cauchy integral formula name zeros and singularities of a Complex function and the Residue theorem .
PMTT32	Measure Theory	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Master in an abstract context, the fundamental theorems of integration learned during the previous courses of analysis for the case of the Euclidean spaces, harmonizing the latter with the example of the outer Lebesgue measure.</p> <p>CO2: Build a measure starting from a countable additive set function defined on a semi-algebra of subsets or starting from a sequence of suitably chosen measures.</p> <p>CO3: Integrate a measurable function with respect to a measure</p>
PMTT33	Classical Dynamics	<p>Upon the successful completion of the course, students will be able to</p> <p>Course Outcomes:</p> <p>CO1: Be able to solve the Lagrange's equations for simple configurations using various methods.</p> <p>CO2: Understand the concept of Hamilton Jacobi Theory.</p> <p>CO3: Be able to understand the concept canonical Transformations</p> <p>CO4: To develop skills in formulating and solving physics problems</p> <p>CO5: Able to get idea of dynamical systems are of relatively recent origin, the concept of motion in phase-space and its geometrical depiction is simple.</p>
PMTT34	Calculus Of Variations And Integral Equations	<p>Upon the successful completion of the course, students will be able to</p> <p>CO1: Determine asymptotes for rational expressions (we will not go into these graphs in much detail)</p> <p>CO2: Apply the techniques from the previous section to graph a fourth degree polynomial or higher</p>

		<p>CO3: On successful completion of the course students will be able to recognize difference between Volterra and Fredholm Integral Equations, First kind and Second kind, homogeneous and inhomogeneous etc.</p> <p>CO4: They apply different methods to solve Integral Equations.</p>
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Code	Course Name	Course Outcomes
M.Sc.Mathematics – IV Semester		
PMTT41	Functional Analysis	<p>CO1: To learn to recognize the fundamental properties of normed spaces and of the transformations between them.</p> <p>CO2: To be acquainted with the statement of the Hahn-Banach theorem and its corollaries. To understand the notions of dot product and Hilbert space.</p> <p>CO3: To apply the spectral theorem to the resolution of integral equations and Sturm-Liouville problems.</p> <p>CO4: The learner will gain knowledge normed linear space, Banach spaces, Hahn-Banach theorem(open and closed) and (general and structure) banach algebra.</p>
PMTT42	Differential Geometry	<p>CO1: After completing this course, students should be able to: Determine and calculate curvature of curves in different coordinate systems.</p> <p>CO2: Treat geodesic curves and parallel translation Calculate and analysis curvature of surfaces in different settings.</p> <p>CO3: Know the concept of tensor and recognize tensors that are used in mechanics, image processing and theory of relativity.</p> <p>CO4: Apply geometry of curves and surfaces to computer aided graphics.</p>

<p>Elective Papers 1</p>	<p>Algebraic Number Theory</p>	<p>CO1: Demonstrate knowledge and understanding of topics including, but not limited to divisibility, prime numbers, congruence, quadratic reciprocity, Diophantine equations.</p> <p>CO2: Learn methods and techniques used in number theory.</p> <p>CO3: Write programs/functions to compute number theoretic functions.</p> <p>CO4: Use mathematical induction and other types of proof writing techniques.</p>
<p>Elective Papers 2</p>	<p>Automata Theory</p>	<p>CO1: Acquire a fundamental understanding of the core concepts in automata theory and formal languages.</p> <p>CO2: An ability to design grammars and automata (recognizers) for different language classes.</p> <p>CO3: An ability to identify formal language classes and prove language membership properties.</p> <p>CO4: An ability to prove and disprove theorems establishing key properties of formal languages and automata.</p> <p>CO5: To solve the sums based on automata and grammar.</p>
<p>Elective paper 3</p>	<p>Probability Theory And Statistics</p>	<p>CO1: Able to understand the concepts of various parameter estimation methods, like method of moments, maximum likelihood estimation and confidence intervals</p> <p>CO2: Able to apply the appropriate Chi-Squared test for independence and goodness of fit</p> <p>CO3: Students will frame problems using multiple mathematical and statistical representations of relevant structures and relationships and solve using standard techniques.</p> <p>CO4: The learner to know constructing the probability distribution of a random variable based on the real-world situation and compute mean and variance and</p>

		<p>many</p> <p>Distributions</p>
Elective paper 4	Matlab & Latex	<p>CO1: Able to use Matlab for interactive computations.</p> <p>CO2: Familiar with memory and file management in Matlab.</p> <p>CO3: Able to generate plots and export this for use in reports and presentations.</p> <p>CO4: Cooperating and working with others using subversion</p> <p>CO5: Debugging and optimising their programs</p>
Elective paper 5	Fuzzy Sets And Their Applications	<p>CO1: Be able to distinguish between the crisp set and fuzzy set concepts through the learned</p> <p>CO2: Differences between the crisp set characteristic function and the fuzzy set membership function.</p> <p>CO3: Be able to draw a parallelism between crisp set operations and fuzzy set operations through the use of characteristic and membership functions respectively.</p> <p>CO4: Become aware of the use of fuzzy inference systems in the design of intelligent</p>
Elective paper 6	Neural Networks	<p>CO1: Understand the differences between networks for supervised and unsupervised learning.</p> <p>CO2: Design single and multi-layer feed-forward neural networks.</p> <p>CO3: Develop and train radial-basis function networks.</p> <p>CO4: Program linear and nonlinear models for data mining.</p> <p>CO5: Analyze the performance of neural networks</p>
Elective Paper 7	Stochastic Process	<p>CO1: The student has basic knowledge about stochastic processes in the time domain.</p> <p>CO2: The student has acquired more detailed knowledge about Markov processes with a discrete</p>

		<p>state state space, including Markov chains, Poisson processes and birth and death presses.</p> <p>CO3: The student also knows about queuing systems and Brownian motion, in addition to mastering the fundamental principles of simulation of stochastic processes and the construction of Markov chain Monte Carlo (MCMC) algorithms.</p> <p>CO4: The student is able to formulate simple stochastic process models in the time domain and provide qualitative and quantitative analyses of such models.</p>
Elective paper 8	Fluid Dynamics	<p>CO1: Solve hydrostatic problems.</p> <p>CO2: Describe the motion of fluids.</p> <p>CO3: Identify derivation of basic equations of fluid mechanics and apply</p> <p>CO4: Make dimensional analysis and similitude</p>
Elective paper 9	Non Linear Differential Equations	<p>CO1: After completed course, the students are expected to be able to.</p> <p>CO2: Give account for existence and uniqueness of the solutions of ordinary differential equations solutions.</p> <p>CO3: Make use of the phase plane to analyse two-dimensional systems with emphasis on equilibrium, existence of limit cycles and linearisation.</p> <p>CO4: Summarise theorems that related to the existence of periodical solutions, and apply them to simple systems.</p> <p>CO5: Explain important terms in asymptotic theory, such as, order symbols, asymptotic sequences and asymptotic series, and give account for truncation and convergence of asymptotic series.</p>
Elective paper 10	Financial Mathematics	<p>CO1: On successful completion of this course students will be able to:</p> <p>CO2: Demonstrate understanding of basic concepts in linear algebra, relating to linear equations, matrices,</p>

		<p>and optimization.</p> <p>CO3: Demonstrate understanding of concepts relating to functions and annuities.</p> <p>CO4: Employ methods related to these concepts in a variety of financial applications.</p> <p>CO5: Apply logical thinking to problem solving in context.</p>
Elective paper 11	Control Theory	<p>CO1: Be able to understand Reconstruction Kernel, streaming Function</p> <p>CO2: Able to analyze the stability of linear systems</p> <p>CO3: Problem solving skills are developed in linear time invariant systems</p>
Elective paper 12	Fractal Analysis	<p>CO1: Understand the contraction mappings on the space of Fractals</p> <p>CO2: Able to analyze fractal dimensions</p> <p>CO3: Understand The Structured Walk Technique and the Divider Dimension</p> <p>CO4: The learner will be able to understand the basic concepts of fractals and measure recognize the space of fractals and fractal dimension</p> <p>CO5: Find the Hausdorff, box-counting and other dimensions understand the self – similar sets properties of fractals recognize the concepts fractal interpolation.</p>
Elective paper 13	Tensor Analysis And Special Theory Of Relativity	<p>CO1: Use tensor notation in relativity theory.</p> <p>CO2: Apply the concepts of length contraction and time dilation as well as use Lorentz transformations.</p> <p>CO3: Solve simple kinematical problems.</p> <p>CO4: Analyze Maxwell's equations and use their relativistic invariance</p>

Elective paper 14	Mathematical Biology	<p>CO1: Formulate and solve mathematical models of evolution in terms of optimisation and game theory problems;</p> <p>CO2: Use techniques from stochastic processes to describe population genetics;</p> <p>CO3: Use techniques from partial differential equations to describe spread of genes, disease and other biological material;</p> <p>CO4: Explain how these techniques are applied in scientific studies and applied in ecology and epidemiology.</p>
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M.Sc. Biochemistry

Programme Specific Outcomes (PSOs)

On completion of M.Sc. Biochemistry programme, Students will be able to

PSO1	enrich the knowledge in the advanced concepts and principles of Biochemistry
PSO2	strengthen the theoretical knowledge in biochemistry to secure a successful career
PSO3	utilize the knowledge attained from the programme to work as Biochemists in emerging modern clinical laboratories and scientific government organizations
PSO4	communicate appropriately and effectively with people in the field of Biochemistry and other allied backgrounds
PSO5	develop hands on experience and laboratory experiments perceived will be constructive to pursue research

Course Code	P21BCT11	CHEMISTRY OF BIOPOLYMERS	L	T	P	C
CORE I			5	-	-	4

Upon completion of this course, the students will be able to

CO	Course Outcomes	Knowledge Level
CO1	understand the foundation of life and structure and functions of carbohydrates.	K1,K2
CO2	attain knowledge on the structure, properties, role and classification of lipids and fatty acids.	K1,K2,K3
CO3	illustrate the structure, properties, role and classification of amino acids and proteins.	K1,K2,K3
CO4	understand the types of Nucleic acids, its structure and biological importance.	K1,K2,
CO5	know the basic concept of the various types, functions, requirements and deficiency diseases of Vitamins.	K1,K2,K3

Course outcome

Course Code	P21BCT12	ENZYMES AND ENZYME TECHNOLOGY	L	T	P	C
CORE - II			5	-	-	4

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	know the classification and properties of enzymes and coenzymes.	K1,K2
CO2	understand the enzyme kinetics and Inhibition.	K1,K2,K3
CO3	attain knowledge the enzyme regulation and lysosome.	K1,K2
CO4	gain knowledge on enzyme immobilization and their uses.	K1,K2
CO5	learn about the commercial production of enzymes and their applications.	K1,K2,K3

Course Code	P21BCT13	CELLULAR BIOCHEMISTRY	L	T	P	C
CORE- III			5	-	-	4

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	understand the structural organization and function of cell organelles	K1,K2
CO2	know about membrane assembly and membrane transport	K1,K2,K3
CO3	recognize host parasite interaction and induced disease	K1,K2
CO4	employ the knowledge on receptor and signaling pathways	K1,K2,K3
CO5	thoroughly understand the cell division and cell cycle	K1,K2

Course Code	P21BCT14	BIOENERGETICS AND METABOLISM	L	T	P
CORE IV			5	-	-

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	learn the concepts of thermodynamics and electron transport chain.	K1,K2
CO2	acquire knowledge on carbohydrate metabolism and their regulation.	K1,K2,K3
CO3	know the biosynthesis and metabolism of lipid.	K1,K2
CO4	understand the metabolism of amino acid and nucleic acid.	K1,K2
CO5	acquire deep knowledge on the principles of metabolic regulation	K1,K2,K3

Course Code	P21BCP11	PRACTICAL – BIOCHEMICAL TECHNIQUES AND BIOCHEMICAL ANALYSIS	L	T	P	C
CORE V			-	-	6	4

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	acquire knowledge on preparation of enzyme and their effect various factors.	K1,K2
CO2	demonstrate the serum enzyme activity through assays	K1,K2,K3
CO3	gain knowledge about lipid analysis.	K1,K2,K3
CO4	learn and understand about the separation of lipids	K1,K2

CO5	understand and describe aminoacid separation	K1,K2
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Course Code	P21BCT21	MOLECULAR ENDOCRINOLOGY	L	T	P	C
CORE VI			5	-	-	4

Course

Outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	know about the hormone biosynthesis and their behavior.	K1, K2, K3
CO2	thoroughly understand the anatomy and biochemical action of pituitary hormones.	K1, K2
CO3	gain knowledge about the regulation of thyroid hormone.	K1, K2, K3
CO4	illustrate the anatomy of pancreas and its hormonal action.	K1, K2, K3
CO5	acquire knowledge on the biosynthesis, secretion and mechanism of action of adrenal hormones.	K1, K2

Course Code	P21BCT22	CLINICAL BIOCHEMISTRY	L	T	P	C
CORE VII			5	-	-	4

Course

outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	acquire deep knowledge on the disorders of carbohydrate and lipid metabolism.	K, K2, K3
CO2	recognize the disorders of protein and nucleic acid metabolism.	K1, K2, K3
CO3	understand the liver function and gastric function test.	K1, K2
CO4	know about renal function test and renal disorder.	K1, K2

CO5	know about the serum enzyme level and mineral metabolism.	K1, K2, K3
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Course Code	P21BCT23	IMMUNOBIOLOGY	L	T	P
CORE VIII			4	-	-

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	list the types of immunity and their immune response against Antigens.	K1, K2
CO2	know about the importance of immune antigen, antibody reaction and comple	K1, K2, K3
CO3	Illustrate the interaction of T and B lymphocytes and processing of Antigen.	K1, K2, K3
CO4	know about preparation of vaccines, immune reactions and immune tolerance.	K1, K2
CO5	gain knowledge on transplantation immunology, auto immune di and Immunoglobulin disorder.	K1, K2

Course Code	P21BCT24	BIOTECHNOLOGY	L	T	P	C
CORE IX			4	-	-	4

Course Outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	attain the concepts of genetic engineering techniques and isolation of nucleic acid.	K1, K2, K3

CO2	describe about vectors and cloning techniques	K1, K2, K3
CO3	know about construction of genomic libraries and blotting techniques.	K1, K2, K3
CO4	learn about gene transfer techniques and their applications.	K1, K2
CO5	gain knowledge about bioethics, applications of Recombinant technology.	K1, K2, K3

Course Code	P21BCP22	PRACTICAL- IMMUNOBIOLOGY AND CLINICAL BIOCHEMISTRY	L	T	P	C
CORE X			-	-	6	4

Course

Outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	gain knowledge on different methods for identification of antigens.	K1, K2
CO2	interpret antigen and antibody reaction	K1, K2, K3
CO3	examine blood urea, sugar, uric acid, creatinine.	K1, K2, K3
CO4	learn and understand the urine urea, uric acid and sugar.	K1, K2, K3
CO5	understand the procedure to analyze the urine component.	K1, K2, K3

Course Code	P21BCN211	WOMEN HEALTH	L	T	P	C
NME			4	-	-	4

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	know about women's health status and reproductive health	K1, K2
CO2	gain knowledge on welfare program and policy	K1, K2, K3
CO3	illustrate the importance of hygiene	K1, K2, K3
CO4	discuss the nutritional status of adolescent, pregnancy and lactation women	K1, K2, K3
CO5	understand and discuss about the occupational health hazards of women	K1, K2, K3

Course Code	P21BCS22	INDUSTRIAL FERMENTATION PRODUCTS	L	T	P	C
SUPPORTIVE COURSE-II			2	-	-	2

COURSE OUTCOME

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	know about women's health status and reproductive health	K1, K2
CO2	gain knowledge on welfare program and policy	K1, K2, K3
CO3	illustrate the importance of hygiene	K1, K2, K3
CO4	discuss the nutritional status of adolescent, pregnancy and lactation women	K1, K2, K3

CO5	understand and discuss about the occupational health hazards of women	K1, K2, K3
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Course Code	P21BCT31	PHARMACEUTICAL BIOCHEMISTRY	L	T	P
CORE-XI			5	-	-

Course Outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	learn the biopharmaceutical properties of drugs	K1,K2
CO2	discuss the importance of drug designing	K1,K2
CO3	gain knowledge on metabolism of drugs	K1,K2,K3
CO4	understand and explain the conjugation pathways of drugs	K1,K2,K3
CO5	define the key principles of toxicology and treatment of poisoning	K1,K2

Course Code	P21BCT32	MOLECULAR BIOLOGY	L	T	P	C
CORE - XII			5	-	-	4

Upon completion of this course, the students will be able to

CO	Course Outcomes	Knowledge Level
		Level
CO1	know the structure of chromatin, and replication	K1,K2
CO2	gain knowledge on the transcription and translation process	K1,K2,K3
CO3	gain knowledge on genetic code and protein sorting	K1,K2
CO4	understand the recombination mechanisms in bacteria	K1,K2,
CO5	list and explain the types of mutation	K1,K2,K3

Course Code	P21BCT33	PLANT BIOCHEMISTRY	L	T	P	C
CORE - XIII			4	-	-	4

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	understand the structure, composition and functions of plant cell	K1,K2
CO2	gain in-depth knowledge on the process of photosynthesis	K1,K2
CO3	learn nitrogen fixation and role of secondary Metabolites	K1,K2,K3
CO4	illustrate the role of plant growth regulators and photomorphogenesis.	K1,K2,K3
CO5	know about plant disease resistance mechanism and biochemical changes.	K1,K2,K3

Course Code	P21BCT34	BASIC MICROBIOLOGY AND GENETICS	L	T
CORE - XIV			4	-

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	list the historical perspective in microbiology and explain the classification of microbes	K1,K2
CO2	know the morphology of microbes	K1,K2,K3
CO3	attain knowledge about the nutritional requirements of microbes and describe their growth pattern	K1,K2
CO4	understand the concepts of Mendelian genetics	K1,K2
CO5	illustrate the concepts of sex determination and linkage	K1,K2,K3

Course Outcome

Course Code	P21BCT35	ENVIRONMENTAL TOXICOLOGY	L	T	P
CORE - XV			4	-	-

Upon completion of this course, the students will be able to

CO	Course Outcomes	Knowledge Level
CO1	know the concepts of ecotoxicology and its environmental significance	K1,K2
CO2	gain in depth knowledge on Xenobiotic metabolism, Phase I and Phase II reactions	K1,K2,K3
CO3	illustrate the concepts in toxicity testing	K1,K2,K3
CO4	acquire knowledge on pesticide toxicity and Bio pesticides	K1,K2,K3
CO5	understand the concepts of food toxicology occupational toxicology	K1,K2,K3

Course Code	P21BCP33	PRACTICAL PLANT BIOCHEMISTRY, MICROBIOLOGY AND MOLECULAR BIOLOGY	L	T	P
CORE -XVI			-	6	4

Course Outcome

Upon completion of this course, the students will be able to

CO	Course Outcomes	Knowledge Level
CO1	gain knowledge on the estimation of alkaloid, phenol, flavonoid, beta carotene and ascorbic acid content	K1,K2
CO2	understand the importance of the sterilization and inoculation techniques	K1,K2,K3
CO3	attain indepth knowledge on gene transfer techniques	K1,K2,K3

CO4	acquire knowledge on isolation and separation of DNA	K1,K2
CO5	know the principles of PCR and electrophoresis	K1,K2,K3

Course Code	P21BCE411	CHOICE - I	L	T	P	C
ELECTIVE - I		BIOPHYSICAL METHODOLOGY	4	-	-	4

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	know the principle and techniques of chromatography.	K1, K2
CO2	comprehend about types and applications of centrifuges.	K1, K2, K3
CO3	list the types and application of microscopy.	K1, K2, K3
CO4	learn about importance of radioactive isotopes.	K1, K2
CO5	gain the knowledge on types, principle, instrumentation and applications of spectroscopy.	K1, K2

Course Code	P21BCE412	CHOICE - II	L	T	P	C
ELECTIVE- I		BIOPLASTICS	4	-	-	4

COURSE OUTCOME

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	understand the types of bioplastics and their Impacts on environment	K1, K2
CO2	illustrate the applications of bioplastics, biocomposites	K1, K2,K3
CO3	attain knowledge about Biomaterials in Medical and Dental applications.	K1, K2
CO4	understand about Surface modification of biomaterials for enhancement of biocompatibility	K1, K2
CO5	know about the characterization method of biomaterials	K1,K2,K3

Course Code	P21BCE421	CHOICE - I	L	T	P	C
ELECTIVE-II	RESEARCH METHODOLOGY AND BIOSTATISTICS	4	-	-	4	

COURSE OUTCOME

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	gain in depth knowledge on the research objectives, methods and significance.	K1, K2
CO2	illustrate scientific writing and its characteristics	K1, K2, K3
CO3	know the concepts in measures of central tendency and distribution	K1, K2, K3
CO4	illustrate the measures of symmetry.	K1, K2, K3
CO5	acquire knowledge on tests of statistical significance.	K1, K2, K3

Course Code	P21BCE422	CHOICE -II	L	T	P	C
ELECTIVE - II		BIOETHICS, BIOSAFETY AND IPR	4	-	-	4

COURSE OUTCOME

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	discuss the concepts, benefits and Issues in recombinant DNA technology.	K1, K2
CO2	gain knowledge on bioethics, transgenic plants and animals.	K1, K2, K3
CO3	understand the biosafety levels and guidelines.	K1, K2, K3
CO4	list the IPR types and applications.	K1, K2, K3
CO5	know the importance of patenting	K1, K2, K3

Course Code	P21BCV11	CHARACTERIZATION TECHNIQUES OF NANOMATERIALS	Total Hours	C
SEMESTER - I			30	2

Course Outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	understand the classifications of Nano materials	K1, K2
CO2	know the techniques of spectroscopy	K1, K2, K3
CO3	comprehend the techniques and equipment on X ray techniques	K1, K2, K3
CO4	understand the types and applications of Electron spectroscopy	K1, K2, K3
CO5	knowledge on properties, models and mechanisms of nano materials and its techniques	K1, K2, K3

Course Code	P21BCV41	BIOFERTILIZER	L	T	P	C
SEMESTER - IV			-	-	-	2

Course outcome

Upon completion of this course, the students will be able to		
CO	Course Outcomes	Knowledge Level
CO1	attain knowledge on different types of fertilizers	K1,K2
CO2	know the preparation of algal, fungal and bacterial biofertilizers	K1,K2,K3
CO3	gain knowledge about manures and green manuring	K1,K2
CO4	know about applications of biofertilizer	K1,K2,K3
CO5	understand the techniques in mass production of biofertilizers	K1,K2

B.A.ENGLISH

PROGRAMME SPECIFIC OUTCOMES(PSOs)

At the end of the programme, the students will be able to

PSO	know and appreciate the location of literature within humanities, establish connections across frontiers of disciplines, critically engage with culture, gender and marginality, become acquainted with narration and representation.
PSO2	distinguish the genres of literature (drama, poetry and prose, fictional and non-fictional) and various approaches to reading literature with acuity and insight (e. g. Realism, Romanticism, Naturalism, Impressionism, Expressionism, Modernism, Post-Modernism, Structuralism, Post-structuralism etc.)
PSO3	demonstrate command of written academic English, including the ability to a) Organize and present material in a cogent fashion, b) formulate and defend original arguments, c) employ effectively the language of their discipline.
PSO4	appreciate the interconnectedness and interdisciplinary of all knowledge and demonstrate curiosity, humility and courage reflecting a commitment to reading and critical inquiry
PSO5	acquire vital employability skills and employment opportunities in the fields like teaching, media, journalism, content writing, freelance writing, film, drama etc.,

COURSE CODE	U21ENT11	AGE OF SHAKESPEARE AND MILTON	L	T	P	C
CORE I			5	-	-	4

Course Outcomes

At the end of the course, the students will be able to:

K1, K2	CO1	know the poetic tactics of the classical writers
K1, K2	CO2	understand the difference between Old English and Middle English
K2, K4	CO3	be aware of the salient features of aphoristic style
K2, K6, K3	CO4	discover and to apply the creative power behind art and literature
K4, K6	CO5	critically analyze the life and works of great writers and will be able to create literary pieces on their own

COURSE CODE	U21ENT12	ADVANCED ENGLISH GRAMMAR	L	T	P	C
CORE II			6	-	-	4

Course Outcome

At the end of the course, the students will be able to:

K1, K2	CO1	Acquire knowledge of linguistic conventions for reading, writing and speaking.
K1, K2	CO2	Use targeted grammatical structures appropriately in oral and written production.
K5, K4	CO3	Analyze the grammatical structure of sentences within English texts.
K5, K1	CO4	Communicate effectively in both spoken and written Standard English.
K6, K3	CO5	Make inferences and predictions based on comprehension of a text.

COURSE CODE	U21ENA11	SOCIALHISTORYOFENGLAND	L	T	P	C
ALLIED-I			5	-	-	4

Course Outcomes

At the end of the course the students will be able to:

K1, K2	CO1	Provide a basic knowledge of the political and social history of England.
K1, K2	CO2	Understand different movements that originated in England.
K2, K4	CO3	Acquaint with the literary movements, favored genres and the evolution and development of literary forms.
K2, K6, K3	CO4	Familiarize with terms, practices and theoretical foundations of the disciplines.
K4, K6	CO5	analyze texts from these cultures; To gain some understanding of their traditions, historical aspects and values

COURSE CODE	U21ENT21	AGE OF DRYDEN AND POPE	L	T	P	C
CORE III			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1, K2	CO1	understand the sense of rationalism and sensibility of the writers
K1, K2	CO2	recognize and understand the figurative language
K2, K3	CO3	apply the technical nuances of Neo-Classical dramas
K5, K2, K3	CO4	comprehend the artistic style of the writers and adopt the style in writing
K6, K3	CO5	appreciate the intense zeal of the writers and stimulate the creativity of the students

COURSE CODE	U21ENT22	INDIAN WRITING IN ENGLISH	L	T	P	C
CORE-IV			6	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1, K2	CO1	understand the social, and political controversies in India during the colonial and post-colonial periods
K1, K2	CO2	acquire knowledge about Indian cultural ethos and its uniqueness
K5, K4	CO3	evaluate the unique characteristics of Indian writing in English
K5, K1	CO4	appreciate the spirit of the Indian writers to preserve the noble values of Indian society
K6, K3	CO5	acquire literary acumen for facing the SET/ NET/TET and other competitive examinations with confidence

COURSE CODE	U21ENA22	HISTORY OF ENGLISH LITERATURE	L	T	P	C
ALLIED-II			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1, K2	CO1	Acquaint with factual contents.
K1, K2	CO2	Strengthen the aesthetic sense.
K5, K4	CO3	Develop a critical perspective in students.
K5, K1	CO4	Express, to find out and analyze the period and the authors in the period they belong to.
K6, K3	CO5	Realize the influence of writers in creating new trends.

COURSE CODE	U21ENT31	AGEOFWORDSWORTH	L	T	P	C
COREV			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2	CO1	Understand the sense of rationalism and sensibility of the writers
K1,K2	CO2	recognize and understand the figurative language
K2,K3	CO3	apply the technical nuances of dramas
K5,K2,K3	CO4	comprehend the artistic style of the writers and adopt the style in writing
K6,K3	CO5	appreciate the intense zeal of the writers and stimulate the creativity of the students

COURSE CODE	U21ENA33	LITERARY GENRES AND TERMS	L	T	P	C
ALLIED-III			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K2, K4	CO1	instigate to have an eminent craving on Literature
K2,K5	CO2	develop an understanding of the forms of literature
K6,K5	CO3	familiarize with the terms of Literature
K3,K2, K5	CO4	get a comprehensive knowledge of the literary works produced all over the world in different languages and different genres
K5,K6	CO5	Develop their skills and understand the greatness of Literature.

COURSE CODE	U21ENA33	LITERARY GENRES AND TERMS	L	T	P	C
ALLIED-III			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K2, K4	CO1	instigate to have an eminent craves on Literature
K2,K5	CO2	develop an understanding of the forms of literature
K6,K5	CO3	familiarize with the terms of Literature
K3,K2, K5	CO4	get a comprehensive knowledge of the literary works produced all over the world in different languages and different genres
K5,K6	CO5	Develop their skills and understand the greatness of Literature.

COURSE CODE	U21ENE311	CHOICE-I	L	T	P	C
ELECTIVE-I			JOURNALISM AND MASS COMMUNICATION	4	-	-

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	Demonstrate practical skill of various type of media writing, reviews, reports,
K3,K4,K5	CO2	Make programme and discussions.
K2,K4,K3	CO3	demonstrate their familiarity with the new media, its techniques, practices of social media and hypermedia
K1,K2,K3,K4	CO4	Critically analyze how the media reflects, represents and influences the contemporary world.
K4,K5,K6	CO5	Demonstrate some awareness of the literary influence and literary history.

COURSE CODE	U21ENE312	CHOICE-II	L	T	P	C
ELECTIVE I		TRAVEL WRITING	4	-	-	3

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	To investigate environmental (in)justice, and ecological crisis through an exciting variety of Travel literary texts.
K3,K4,K5	CO2	to enjoy reading, and who want to think about the cultural, Artistic, and philosophical issues involved in human beings' relationships with the living things around them.
K2,K4,K3	CO3	To compare travel literary texts with attention to their contexts.
K1,K2,K3,K4	CO4	To consider issues of environmentalism and sustainability from cultural, historical, and ethical perspectives.
K4,K5,K6	CO5	To recognize how the present-day landscapes and cultures have been shaped by reading and practicing Travel Writing.

COURSE CODE	U21ENT41	AMERICAN LITERATURE	L	T	P	C
CORE-VI			4	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K2,K4	CO1	learn the literary works & culture of the Americans
K2, K5	CO2	understand the literary activities of the writers of American descent
K6,K5	CO3	gain a perception of literary trends set by the American writers
K3,K2,K5	CO4	understand the character, flavor and ethos of the American literature
K5,K6	CO5	appreciate the positive approaches of the American Writers toward equality and emancipation and enable them to practice and to be an instructor.

COURSE CODE	U21ENT42	AGE OF TENNYSON	L	T	P	C
CORE-VII			4	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2	CO1	understand the sense of rationalism and sensibility of the writers
K1,K2	CO2	Recognize and understand the figurative language
K2,K3	CO3	apply the technical nuances of dramas
K5,K2,K3	CO4	comprehend the artistic style of the writers and adopt the style in writing
K6, K3	CO5	Appreciate the intense zeal of the writers and stimulate the creativity of the students

COURSE CODE	U21ENA44	TRANSLATION: BASIC CONCEPTS AND PRACTICE	L	T	P	C
ALLIED-IV			4	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6, K2,K4	CO1	Analyze and evaluate the works for content, style, the structure of Indian writers.
K2, K5	CO2	have a broad knowledge of the regional Indian writers, Understand the variety of regional writings and understand the cultural diversity reflected in them.
K6,K5	CO3	evaluate the unique characteristics of Indian writing in English
K3,K2,K5	CO4	appreciate the spirit of the Indian writers to preserve the noble values of Indian society
K5,K6	CO5	identify and describe the unique literary tendencies Evident in the different translated texts from the different regions of India.

COURSE CODE	U21ENE421	CHOICE-I	L	T	P	C
ELECTIVEII		COMPARATIVE LITERATURE	3	-	-	3

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2	CO1	equip the students with literary concepts with special referenceto Comparative Literature
K1,K2	CO2	help them prepare for various competitive exams
K2,K3	CO3	keep and updates them with the increasing demand for English
K5,K2,K3	CO4	develop their overall confidence and personality
K6,K3	CO5	expand the knowledge of the students about the development of Comparative Literature

COURSE CODE	U21ENE422	CHOICE-II	L	T	P	C
ELECTIVEII		CHILDREN'S LITERATURE	3	-	-	3

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	display working knowledge of classic and contemporary children's literature
K3,K4,K5	CO2	identify and describe distinct literary characteristics of literature, including techniques of illustration and format of children's books
K2,K4,K3	CO3	Analyze literary works from various genres for their structure and meaning, using correct terminology
K1,K2,K3,K4	CO4	write analytically about children's literature using MLA guidelines
K4,K5,K6	CO5	effectively communicate ideas related to the literary works during class and group activities

Outcome Mapping

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	S	M
CO2	S	S	S	S	M	S	S	S	S	M	S	M
CO3	S	S	S	S	M	S	S	S	S	S	M	M
CO4	S	S	S	S	M	S	S	S	S	M	M	S
CO5	S	S	S	S	S	S	S	S	S	S	M	S

StronglyCorrelating(S) - 3Marks

ModeratelyCorrelating (M) - 2marks

WeaklyCorrelating(W) - 1Mark

NoCorrelation(N) - 0mark

COURSE CODE	U21ENT51	INTRODUCTION TO ENGLISHLANGUAGEANDPH ONETICS	L	T	P	C
COREVIII			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K2, K4	CO1	commentonlinguisticchoicesinwritingforspecificaudiences,purpose s,contexts and cultures
K2, K5	CO2	develop an understanding of language issues and debates, andrespond criticallyto theseissues
K6,K5	CO3	analyzetheoriesandremembertheconceptsinspeechsounds
K3,K2,K5	CO4	comprehendandevaluatevarioustheories,conceptsoflanguageandling uistics
K5,K6	CO5	developtheirskills asinterpretersand producersofmeaning

COURSE CODE	U21ENT52	TWENTIETH CENTURY BRITISH LITERATURE	L	T	P	C
COREIX			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K2,K4	CO1	strengthen the knowledge of Twentieth-Century Writers
K2,K5	CO2	familiarize with the contemporary writers
K6,K5	CO3	develop critical perspective
K3,K2,K5	CO4	analyze the periods of the authors
K5,K6	CO5	acquaint with the important aspects and movements of the respective period

COURSE CODE	U21ENT53	WOMEN'S WRITING IN ENGLISH	L	T	P	C
COREX			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2	CO1	learn how and on what grounds women's writings can be considered as a separate genre.
K1,K2	CO2	Read and understand canonical texts written by Women writers across different ages.
K3,K4	CO3	Differentiate between sex and gender and how the latter is a social construction.
K4,K5	CO4	be aware of the issues and concerns of the women writers of the developed, developing and under-developed countries
K3,K6	CO5	demonstrate awareness of cultural and intercultural concerns relating to women's writing

COURSE CODE	U21ENT54	INTRODUCTION TO LITERARY CRITICISM	L	T	P	C
COREXI			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K6,K1,K2	CO1	provide a critical understanding of the developments in literary criticism from the beginning to the end of the 19th century
K2,K1,K3	CO2	Familiarize selected texts/critics which are prescribed for the detailed study whose contribution to this area constitutes a significant benchmark in each era.
K6,K1,K2,K4	CO3	provide a conceptual framework for developing an understanding of the function and practice of traditional modes of literary criticism
K3,K4,K5,K6	CO4	Learn the history of literary criticism and various literary theories. Apply critical and technical theory and vocabulary to describe and analyze, and formulate an argument about literary and other texts.
K5,K4,K5,K6	CO5	Think about the non-fixity of the meaning of literary texts. Develop skill in applying various literary theories in interpreting a specific text.

COURSE CODE	U21ENT55	SHAKESPEARE	L	T	P	C
COREXII			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	understand the magnitude of the Shakespearean world
K3,K4,K5	CO2	introspect the complexities of Shakespeare's plays
K2,K4,K3	CO3	attain a comprehensive knowledge of the plays of Shakespeare
K1,K2,K3,K4	CO4	analyze the stylistic features of Shakespeare
K4,K5,K6	CO5	relish the sublimity of Shakespearean language and expression through creative writing

COURSE CODE	U21ENE531	MARGINAL WRITING	L	T	P	C
ELECTIVE III			3	-	-	3

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	understand the concept of Marginal Writings with a positive perspective
K3,K4,K5	CO2	gain insight into the key ideas of Marginal Writings
K2,K4,K3	CO3	recognize Marginal Writings as a social and cultural construct
K1,K2,K3,K4	CO4	analyze societal representations of Marginal Writings at moral, social, and political levels
K4,K5,K6	CO5	recognize contributions of Marginal Writings in the literary world

COURSE CODE	U21ENS53	WRITING FOR THE WEB	L	T	P	C
SKILL BASED III			2	-	-	2

Course Outcomes

Upon completion of this course, the students will be able to

K2,K3,K4	CO1	demonstrate their ability to observe events, gather information, write news reports and news releases and report on events
K3,K2,K5	CO2	Gain first-hand experience in designing the News Letters.
K4,K2,K3	CO3	understand the difference between communication and media theories and would have gained the expertise to handle this area in their profession
K5,K4,K6	CO4	grasp the complex relationship between communication/media theories and a diverse set of individual, social, and professional practices
K6,K2,K3	CO5	know the processes and practice of writing for the media and to have placement in Media

COURSE CODE	U21ENT61	INTRODUCTION TO WORLD CLASSICS	L	T	P	C
COREXIII			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K1,K2,K4	CO1	introduce the Background of World literature
K3,K4,K5	CO2	inculcate interests to focus on Contemporary literature
K2,K4,K3	CO3	deepen the knowledge of contemporary world culture through literature
K1,K2,K3,K4	CO4	enhance the aesthetic sense through admiring the beauty of life and literature
K4,K5,K6	CO5	ignite the mind to compare the glory of Indian Writings

COURSE CODE	U21ENT62	NEW LITERATURES IN ENGLISH	L	T	P	C
COREXIV			5	-	-	4

Course Outcomes

Upon completion of this course, the students will be able to

K2, K1	CO1	Possess the knowledge of Post-colonial Literature.
K3,K4	CO2	Understand the ideas of colonized writers.
K4,K2	CO3	Figure out the importance of knowing Postcolonial theory.
K5,K4	CO4	Demonstrate the nuances of the authors of the different region and apply in their analysis.
K6,K5	CO5	Gather the ideas of different landscapes and the culture.

B.COM WITH COMPUTER APPLICATION

Programme Specific Outcomes(PSO)

After the successful completion of B.Com(Computer Applications) Program, the students are expected to	
PSO1	Know and apply the various business management and computer application concepts to solve the real-world problems.
PSO2	Acquire the knowledge on object-based computer applications in various business fields.
PSO3	Solve the business applications related issues of using oracle and object-oriented programming languages.
PSO4	Analyze the real-business problems by using the different applications of procedure-oriented language Programs.
PSO5	enrich the practical knowledge on applications of accounting and programming languages in business ventures.

COURSE CODE	U21CCT11	FINANCIAL ACCOUNTING-I	L	T	P	C
COREI			6	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	recall Accounting Concepts and Conventions and use Accounting rules to record business transactions in the form of Journal, Ledger, subsidiary books and preparation of Trial Balance.	K1
2	understand the steps involved in locating errors and prepare them to Understand the preparation of final accounts for sole traders.	K2
3	outline the concepts of Bills of exchange, Average due date and Account Current	K2
4	Examine the concepts of consignment and joint venture.	K4
5	analyze the bank reconciliation statement, Receipts and payments, Income and expenditure and Balance sheet and accounting for professionalsto enhance the knowledge.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21CCA11	BUSINESSECONOMICS	L	T	P	C
ALLIED-I			5	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	understand the Business systems, the reason for existence of Firms, consumer preference and application of utility analysis and knowing role of business economist.	K1, K2, K3
2	understand and estimate production function and forms of production function and laws	K1, K2, K3
3	understand basic concepts of demand and supply and its determinants, the determinant of elasticity and applications of different forecasting techniques.	K1, K2, K3
4	Understand cost function, Analysis of cost and concepts of relevant costs and revenues.	K1, K2, K3
5	Compare and contrast four basic market types, concepts of monopolistic and oligopoly competition and its effect of non-price factors on products and services.	K1, K2, K3
K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create		

COURSE CODE	U21CCT21	FINANCIAL ACCOUNTING-II	L	T	P	C
CORE-III			5	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	describe the concepts based on depreciation and its methods in books of accounts.	K1
2	Outline about the nature of Investment and Royalty excluding Sublease.	K2
3	Identify the essential characteristics of single entry system.	K3
4	Apply the basic concept of departmental and branch accounting.	K4
5	Familiarize the procedure relating to hire purchase and installment in books of accounts	K2
K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6 -Create		

COURSE CODE	U21CCP22	PROGRAMMING IN C-LAB	L	T	P	C
COREIV			-	-	5	4

Course outcomes: At the end of the course, students would be able to:

1	Explain about C programming languages.	K1,K2,K3
2	Design the solution for the given problem.	K1,K2,K3
3	Write the code for the given problem.	K1,K2,K3
4	Understand the use of arrays and pointers in C.	K1,K2,K3
5	Write the C program for simple applications of real life problem using structures and unions.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCA22	BUSINESS COMMUNICATION	L	T	P	C
ALLIED- II			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	Outline the importance of effective business communication	K2
2	Understand the intricacies of responding to business related queries	K2
3	Categorize effective correspondence with banks, insurance and agencies	K3
4	Examine effective response to company secretarial correspondence	K4
5	Analyze new innovative and ineffective ideas for business communication	K4
K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6 -Create		

COURSE CODE	U21CCT31	BUSINESSSTATISTICS	L	T	P	C
CORE-V			5	-	-	4

Courseoutcomes: At theend ofthe course, students wouldbeable to:

1	acquireknowledgeabout averagestobeusedin BusinessResearch	K1,K2,K3
2	Gainknowledge aboutStandard Deviation,Skewness.	K1,K2,K3
3	Gainknowledge about the applicationof Correlationand Regression	K1,K2,K3
4	get anindept hknowledgeabout Index Numbers	K1,K2,K3
5	Acquire knowledgein Measuresof TrendanditsapplicationinBusinessResearch.	K1,K2,K3
K1-RememberingK2-UnderstandingK3-Applying		

COURSE CODE	U21CCA33	VISUALBASICPROGRAMMINGLAB	L	T	P	C
ALLIEDIII			-	-	5	4

Courseoutcomes: At theend ofthe course, students wouldbeable to:

1	Demonstrate proficiency nprogram design.	K1,K2,K3
2	design,create,build,and debugVisualBasicapplications.	K1,K2,K3
3	exploreVisualBasic,,sIntegratedDevelopmentEnvironment (IDE).	K1,K2,K3
4	Writ and applyloop structuresto performrepetitivetasks.	K1,K2,K3
5	writeand applyprocedures, sub-procedures,andfunctionsto create manageablecode.	K1,K2,K3
K1-RememberingK2-Understanding K3-Applying		

20.76/5=4.15

COURSE CODE	U21CCE311	CHOICE-I	L	T	P	C
ELECTIVE –I		COMPUTER NETWORKS	4	-	-	3

Course outcomes: At the end of the course, students would be able to:

1	describe the functions of each layer in OSI and TCP/IP model.	K1, K2, K3
2	Explain the functions of Application layer and Presentation Layer paradigms and Protocols	K1, K2, K3
3	Describe the Session layer design issues and Transport layer services.	K1, K2, K3
4	Classify the routing protocols and analyze how to assign the IP Addresses for the given network.	K1, K2, K3
5	describe the functions of data link layer and explain the protocols.	K1, K2, K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE312	CHOICE-II	L	T	P	C
ELECTIVE –I		TRAINING AND DEVELOPMENT	4	-	-	3

Course outcomes: At the end of the course, students would be able to:

1	analyze the training strategies adopted by companies in real situations	K1, K2, K3
2	Identify training needs of an individual by conducting Training Need Analysis	K1, K2, K3
3	Differentiate between the applicability of various training strategies and select a strategy based upon the result of TNA	K1, K2, K3
4	develop a training and development module	K1, K2, K3
5	evaluate and assess the cost and benefit of a training and development programme.	K1, K2, K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE313	CHOICE-III	L	T	P	C
ELECTIVE –I		BUSINESSINTELLIGENCESTRATEGIES ANDPROCESS	4	-	-	3

CourseOutcomes

Uponthecompletionofthe course,the students willbe able to

1	understandtheconceptualframeworkofbusiness intelligence	K1,K2,K3
2	formulate strategies in relation to business performancemeasurement	K1,K2,K3
3	appreciatetheimportanceof textandwebmining data	K1,K2,K3
4	analyze andapplyvariousbusinessintelligence methods	K1,K2,K3
5	tackletheissuesinbusinessintelligence	K1,K2,K3

COURSE CODE	U21CSS31	SBE-I	L	T	P	C
SBE-1		COMPUTERSKILLSFOROFFICE MANAGEMENT	2	-	-	2

Courseoutcome:Attheend ofthe course,students would beable to:

Number	Courseout come	KnowledgeLevel (AccordingtoBloom’sTaxonomy)
CO1	Recallthe Fundamentals ofofficeautomationand MSwordp reparation	K1,K2,K3
CO2	IdentifythecomponentsofMicrosoft Word	K1,K2,K3
CO3	ExplaintheprocedureonMicrosoftExcelshort-cutkeys	K1,K2,K3
CO4	ExplaintheprocedureonMicrosoftAccessshort-cutkeys	K1,K2,K3
CO5	IdentifythecomponentsofMicrosoftAccess	K1,K2,K3
K1-Remembering K2–Understanding K3–Applying		

COURSE CODE	U21CCT41	COST ACCOUNTING	L	T	P	C
CORE-VI			4	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	recall various concepts of costing and costing methods	K1
2	analyze the various elements of costing	K4
3	explain the labour wage payments system	K2
4	outline the cost under process costing system	K2
5	Examine about operational costing, contract costing and Reconciliation of Cost and Financial Statements.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6 -Create		

COURSE CODE	U21CCP43	RELATIONAL DATABASE MANAGEMENT SYSTEM LAB	L	T	P	C
CORE VII			-	-	4	4

Course outcomes: At the end of the course, students would be able to:

1	understand the basic concepts of data system, operational data and storage structures of the data	K1,K2,K3
2	Understand the relation approach and its key relational algebra.	K1,K2,K3
3	Aware about embedded SQL.	K1,K2,K3
4	Gain knowledge on hierarchical approach for knowing the detailed description of the data.	K1,K2,K3
5	Aware about mbedded SQL.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCA44	BUSINESSMATHEMATICS	L	T	P	C
ALLIED- IV			4	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	understand the number system	K1,K2,K3
2	understand the set theory	K1,K2,K3
3	know the calculations of indices and surds	K1,K2,K3
4	understand the calculations of interest , annuities and depreciation	K1,K2,K3
5	know the applications of probability distributions and matrices	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE421	CHOICE- I	L	T	P	C
ELECTIVE -II			ELEMENTS OF E-COMMERCE	3	-	-

Courseoutcomes: At the end of the course, students would be able to:

1	understand basic concepts of e-commerce	K1,K2,K3
2	Understand various methods on Architectural aspects of E-Commerce.	K1,K2,K3
3	gain essential knowledge on security aspects of e-commerce	K1,K2,K3
4	gain application knowledge on e-commerce in business.	K1,K2,K3
5	gain conceptual knowledge on multimedia in e-commerce	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE422	CHOICE– II	L	T	P	C
ELECTIVE –II		DIGITALMARKETING	3	-	-	3

Courseoutcomes: At theendofthecourse, studentswould beable to:

1	identify and assess the impact of digital technology in transforming the business environment and also the customer journey;	K1,K2,K3
2	explain the way marketers think, conceptualize, test continuously to optimize their product search on digital platforms;	K1,K2,K3
3	illustrate the measurement of effectiveness of a digital marketing campaign;	K1,K2,K3
4	Demonstrate their skills in digital marketing tools such as SEO, Social media, and Blogging for engaging the digital generation;	K1,K2,K3
5	understand the concept of AI in Digital Marketing;	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE423	CHOICE– III	L	T	P	C
ELECTIVE –II		INTERNATIONAL LOGISTICS MANAGEMENT	3	-	-	3

CourseOutcomes:

At the end of the course, students would be able to:

1	understand the knowledge about the fundamentals and basic concepts of business logistics and supply chain	K1,K2,K3
2	Enlighten with the knowledge freight structure and practices in shipping	K1,K2,K3
3	master over the procedure and principles of ocean transportation	K1,K2,K3
4	understand the applicability of inventory management and warehousing Functions	K1,K2,K3
5	apply the strategies for transportation and packaging	K1,K2,K3

COURSE CODE	U21MSS42	MANAGERIALSKILLS	L	T	P	C
SBE-II			2	-	-	2

Courseoutcome: Attheend ofthe course,students wouldbeable to:

Number	Courseoutcome	KnowledgeLevel (AccordingtoBloom'sTaxonomy)
CO1	analysethetrainingstrategiesinmanagerialskills	K1,K2,K3
CO2	identifytrainingneeds oneffectivetime management	K1,K2,K3
CO3	Handson experience indecision makingapproachesand strategies.	K1,K2,K3
CO4	Developatrainingon teambuilding approachandleadership skills	K1,K2,K3
CO5	Evaluation ofconflict management and remediestorelief on	K1,K2,K3
K1-RememberingK2-UnderstandingK3-Appling		

COURSE CODE	U21CCN42	COMMERCEPRACTICAL	L	T	P	C
NME-II			-	-	2	2

CourseOutcomes

Uponthecompletionofthe course,thestudents willbe able to

1	Star uptheir ownBusiness.	K1,K2,K3
2	thorough knowledge of finance and commerce. and financewit thepractical exposure helps the students to stand in organizationinthefieldoffinanceand commerce	K1,K2,K3
3	acquirepracticalknowledgeon writingcheques	K1,K2,K3
4	Acquiretheskillsrequired forpreparation ofagend aandminutesofmeeting	K1,K2,K3
5	demonstrateon takingLIC Policy	K1,K2,K3

COURSE CODE	U21CCT51	MANAGEMENT ACCOUNTING	L	T	P	C
CORE-VIII			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	Outline the various concepts relating to management accounting	K2
2	Analyze financial statements using ratio analysis	K4
3	Evaluate the working capital management of companies	K5
4	Compare various alternatives using marginal costing and decision making	K2
5	Analyze new budget and budgetary control for organizations	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21CCT52	AUDITING	L	T	P	C
CORE IX			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	Define the important concepts and rules relating to auditing	K1
2	Outline the techniques and applicability of internal audit	K2
3	Analyze the evaluation of assets and liabilities in business	K4
4	Analyze the accounts and auditing the joint stock companies	K4
5	Examine about investigation and auditing of computerized accounts	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE	U21CCT53	INCOMETAXLAWAND PRACTICE	L	T	P	C
CODE						
COREX			5	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	Outline the various terminologies related to income tax	K1
2	Understand the method of calculating and levying tax	K2
3	Apply the various tax laws and available provisions in tax computations	K3
4	Evaluate these two off and carry forward of losses while calculating personal income	K5
5	Analyze self-assessment of income and tax computation	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6 –Create		

COURSE	U21CCP54	MOBILEAPPLICATIONS-LAB	L	T	P	C
CODE						
CORE-XI			-	-	5	4

Courseoutcomes: At the end of the course, students would be able to:

1	Demonstrate the android features and create, develop using android.	K1,K2,K3
2	Demonstrate and Understanding anatomy of an Android application	K1,K2,K3
3	Apply the android geolocation based services	K1,K2,K3
4	Apply the UI Toolkit interface.	K1,K2,K3
5	demonstrate the Linux security and implement ADL interface	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCP55	PROGRAMMING IN C++-LAB	L	T	P	C
CORE- XII			-	-	5	4

Course outcomes: At the end of the course, students would be able to:

1	Compare the different types of languages and find the importance of object-oriented programming language	K1,K2,K3
2	know and understand the C++ statements and motivate the students to make use of the statements	K1,K2,K3
3	Identify the class structure and develop the program.	K1,K2,K3
4	Develop the program by applying the concept of OOPs	K1,K2,K3
5	apply the data file operation technique and evaluate the program in a practical manner.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE531	CHOICE-I	L	T	P	C
ELECTIVE -III		FUNDAMENTALS OF INVESTMENT	3	-	-	3

Course outcomes: At the end of the course, students would be able to:

1	List the role and function of the Investment Management	K1,K2,K3
2	demonstrate an awareness of the fundamental analysis	K1,K2,K3
3	Evaluate and create strategies to understand technical analysis.	K1,K2,K3
4	develop and construct Portfolio	K1,K2,K3
5	Describe the different components of investment management and its implication in real time business life	K1,K2,K3

COURSE CODE	U21CCE532	CHOICE-II	L	T	P	C
ELECTIVE –III		ARTIFICIALINTELLIGENCEIN BUSINESS	3	-	-	3

Courseoutcomes: At theend ofthe course, students wouldbeable to:

1	identifyhow theAIisbeing leveragedbystart-ups asasuccesstool	K1,K2,K3
2	analyseand interpretthe applicabilityof AIin HRfunctions	K1,K2,K3
3	Explain howalgorithmsis changingtheboard roomlandscape	K1,K2,K3
4	discussthecustomer services provided byvariousbanks usingAI	K1,K2,K3
5	Demonstrate theroleof AIin transformingthe retailsector	K1,K2,K3
K1-RememberingK2-UnderstandingK3-Applying		

COURSE CODE	U21CCE533	CHOICE-III	L	T	P	C
ELECTIVE – III		E-CUSTOMERRELATIONSHIP MANAGEMENT	3	-	-	3

CourseOutcomes:

Afterthesuccessfulcompletionofthecourse,the studentswillbeable to:

1	comprehendthe conceptsrelatingtoCustomerRelationship managementpractices	K1,K2,K3
2	analyzeCustomerInformationDatabasetounderstandthecustomer behaviour	K1,K2,K3
3	Graspanideaof customer relationship managementprocess	K1,K2,K3
4	appreciate the various Models of Customer Relationship Management	K1,K2,K3
5	understandthee-CRMsolutions forbetter customerrelationship management	K1,K2,K3

COURSE CODE	U21CCS53	DESKTOPPUBLISHINGLAB(DTP)	L	T	P	C
SkillBasedElective-I			-	-	2	2

Courseoutcomes: At the end of the course, students would be able to:

1	Identify the emerging technology in designing.	K1,K2,K3
2	Understand of designing and development tool.	K1,K2,K3
3	Adopt rapidly changing multimedia technology.	K1,K2,K3
4	Apply effectively the techniques in Photoshop.	K1,K2,K3
5	Master in digital design graphic tool for earnings.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCT61	CORPORATE ACCOUNTING	L	T	P	C
CORE-XIII			4	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	develop the skill of preparing entries for issue of shares	K1,K2,K3
2	know the accounting entries for underwriting of shares and redemption of preference shares	K1,K2,K3
3	Knowledge in calculation and valuation of shares and goodwill of companies	K1,K2,K3
4	know the provisions of acquisition of the business	K1,K2,K3
5	Gain the knowledge in internal and external reconstruction in companies	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCT62	BUSINESSTAXATION	L	T	P	C
CORE-XIV			5	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	Recall various concepts relating to Indirect tax regime in India	K1
2	Analyze the concept and applicability of GST in businesses	K4
3	Compare the GST regime with other indirect tax laws prior to it	K2
4	Illustrate GST system in own business and other prototypes	K2
5	Examine the custom law and related duties and taxes	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6 -Create		

COURSE CODE	U21CCT63	OPERATING SYSTEM	L	T	P	C
CORE-XV			5	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	Describe the important computer system resources and the role of operating system in the management policies and algorithms.	K1,K2,K3
2	Understand the process management policies and scheduling of processes by CPU	K1,K2,K3
3	Evaluate the requirement for process synchronization and coordination handled by operating system	K1,K2,K3
4	Describe and analyze the memory management and its allocation policies.	K1,K2,K3
5	Identify, use and evaluate the storage management policies with respect to different storage management technologies.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCT64	FINANCIALMANAGEMENT	L	T	P	C
COREXVI			4	-	-	4

Courseoutcomes: At the end of the course, students would be able to:

1	Outline various concepts relating to finance	K2
2	List the various techniques of financial planning	K2
3	Analyze various sources and forms of finance	K4
4	Examine the various dimensions of capital market and their components	K4
5	List the capitalization concept and related theories for decision making	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21CCP66	WEBTECHNOLOGY-LAB-PRACTICAL	L	T	P	C
COREXVII			-	-	5	4

Courseoutcomes: At the end of the course, students would be able to:

1	write PHP scripts to handle HTML forms.	K1,K2,K3
2	Write regular expressions including modifiers, operators, and metacharacters.	K1,K2,K3
3	Create PHP programs that use various PHP library functions, and that manipulate files and directories.	K1,K2,K3
4	analyze and solve various database tasks using the PHP and MySQL language.	K1,K2,K3
5	analyze and solve common Web application tasks by writing PHP programs.	K1,K2,K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21CCE641	CHOICE-I	L	T	P	C
ELECTIVE – IV		BUSINESSLAW	3	-	-	3

Courseoutcomes: At the end of the course, students would be able to:

1	Assess the various elements related to business law and contract	K5
2	Interpret different types of contract and its features	K2
3	Explain about the agency system related to creation and termination of agency	K5
4	Compare between rights and duties of indemnity, guarantee	K5
5	Examine the distinction between sale and agreement to sell and its features	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6 –Create		

COURSE CODE	U21CCE642	CHOICE-II	L	T	P	C
ELECTIVE – IV		CORPORATE GOVERNANCE	3	-	-	3

Courseoutcomes: At the end of the course, students would be able to:

1	Explain the concept and importance of corporate governance in a business setup;	K1,K2,K3
2	Explain the concept of corporate governance in organisations and its essence for management.	K1,K2,K3
3	Analyse the role of board of directors and shareholder in corporate management.	K1,K2,K3
4	Assess the problems in corporate governance on the basis of major corporate governance failures.	K1,K2,K3
5	Describe corporate governance framework in India.	K1,K2,K3
K1-Remembering K2–Understanding K3–Applying		

COURSE CODE	U21CCE643	CHOICE-III	L	T	P	C
ELECTIVE – IV		INTERNATIONAL FINANCIAL REPORTING STANDARDS	3	-	-	3

Course Outcomes

Upon the completion of the course, the students will be able to

1	Explain the concept of Conversion of final accounts to IFRS	K1, K2, K3
2	make Practical Analysis of published financial statements for at least 2 types of stakeholders	K1, K2, K3
3	make Presentation on recent developments/exposed draft in IFRS	K1, K2, K3
4	prepare notes to accounts for non-current assets and Assignment on social reporting	K1, K2, K3
5	prepare the Consolidated Financial Statement of any two existing companies. Disclosure of change in equity in the annual reports of any two select companies.	K1, K2, K3

COURSE CODE	U21CCS64	PERSONAL SELLING AND SALES MANSHIP	L	T	P	C
Skill Based Elective-II			2	-	-	2

Course Outcomes

Upon the completion of the course, the students will be able to

1	Prepare themselves for personal selling	K1, K2, K3
2	Identify and understand of theories of Selling	K1, K2, K3
3	Understand and identify the motives of buying	K1, K2, K3
4	Have thorough Knowledge on Selling Process	K1, K2, K3
5	Understand the procedure in Sales planning and controlling	K1, K2, K3
K1-Remembering K2-Understanding K3-Applying		

COURSE	U21CCV51	E-FILING	L	T	P	C
CODE						
VALUE ADDED COURSE			2	-	-	2

Course Outcomes:

Upon the completion of the course, the students will be able to

1	learn the conceptual understanding about filing of returns and e-filing	K1,K2,K3
2	understand the completion of the course, the students will to Acquire knowledge about Income Tax and filing of different tax Returns	K1,K2,K3
3	make Presentation on recent developments in E-filing	K1,K2,K3
4	understand GST and its mechanism, different GST Returns and due dates of filing the returns Course Outcomes After successful completion of the course	K1,K2,K3
5	Become expert in GST and different GST Returns and their due dates.	K1,K2,K3

B.Com

Program Specific Outcomes (PSOs)

After the successful completion of B.COM Program, the students are expected to	
PSO1	have strong base on the course relevant to the area of commerce which helps to choose their career
PSO2	acquire knowledge and skills which build confidence to identify their career opportunities in multiple dimensions.
PSO3	Nurture intellectual, personal, interpersonal and social skills with a focus on relevant professional career particularly, to maximize professional growth.
PSO4	Empower necessary competencies and decision making skills to foster the innovative thinking to become an entrepreneur.
PSO5	Become expert in the field of communication with ethical consciousness.
PSO6	Equip with the practical skills to work as accountants, audit assistants, tax consultants, and computer operators as well as other financial supporting services.
PSO7	Develop advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in Business.
PSO8	get placement in Higher Education Institutions and can make research in the field of Finance, Banking and Commerce.

COURSE CODE	U21COT11	FINANCIAL ACCOUNTING-I	L	T	P	C
COREI			6	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	recall Accounting Concepts and Conventions and use Accounting rules to record business transactions in the form of Journal, Ledger, subsidiary books and preparation of Trial Balance.	K1
2	Understand the steps involved in locating errors and prepare them to Understand the preparation of final accounts for sole traders.	K2
3	Outline the concepts of Bills of exchange, Average due date and Account Current	K2
4	Examine the concepts of consignment and joint venture.	K4
5	analyze the bank reconciliation statement, Receipts and payments, Income and expenditure and Balancesheet and accounting for professionals to enhance the knowledge.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT12	BUSINESS ORGANIZATION AND MANAGEMENT	L	T	P	C
COREII			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	understand the concepts of business and its forms of organizations involved in sole trader, partnership firms, companies and co-operative societies and public enterprise.	K2
2	Analyze the business factors which are involved in sources of finance.	K4
3	Explain the functioning of stock exchanges SEBI, DEMAT of shares.	K2
4	Remember office functions, layout and accommodation.	K1
5	Outline office equipment and EDP.	K2
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COA11	BUSINESSECONOMICS	L	T	P	C
ALLIED-I			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	Understandthe Businesssystems,there asonfor existenceof Firms, consumer preference and application of utility analysis and knowing role of business economist.	K1,K2,K3
2	Understandand estimate production function,stagesof productionand forms of production function and laws	K1,K2,K3
3	Understandbasic conceptsof demandand supplyandits determinants,the determinants of elasticityand applications ofdifferent forecasting techniques.	K1,K2,K3
4	Understand cost function, Analysis cost and concepts ofrelevant costs and revenues.	K1,K2,K3
5	compare and contrast four basic market types, concepts of monopolistic and oligopoly competition and its effect of non-price factors on products and services.	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT21	FINANCIALACCOUNTING-II	L	T	P	C
CORE-III			4	1	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	describethethe conceptsbasedondepreciationanditsmethods inbooksof accounts.	K1
2	Outlineabout thenatureof InvestmentandRoyalexcludingSublease.	K2
3	Identifythe essential characteristics ofsingleentrysystem.	K3
4	Applyth basicconcepts ofdepartmentaland branchaccounting.	K4
5	Familiarize theprocedure relating tohirepurchase andinstallmentin booksof accounts	K2
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT22	PRINCIPLES OF MARKETING	L	T	P	C
CORE-IV			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	Define the various concepts and terms related to marketing	K1
2	Explain about various marketing functions	K2
3	Understand terms of consumer behaviour and examine about different concepts related to consumers.	K2
4	Identify the marketing mix and its elements	K1
5	Understand different provisions related to trends in merging markets.	K2
K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create		

COURSE CODE	U21COA22	BUSINESS COMMUNICATION	L	T	P	C
ALLIED-II			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	Outline the importance of effective business communication	K2
2	Understand the intricacies of responding to business related queries	K2
3	Categorize effective e-correspondence with banks, insurance and agencies	K3
4	Examine effective e-sponseto company secretarial correspondence	K4
5	Analyze new innovative and effective ideas for business communication	K4
K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create		

COURSE CODE	U21COT31	BUSINESS STATISTICS	L	T	P	C
CORE-V			3	2	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	acquireknowledgeaboutaveragestobeusedinBusinessResearch	K1,K2,K3
2	Gainknowledge aboutStandard Deviation,Skewness.	K1,K2,K3
3	gain knowledge about the application of Correlation and Regression	K1,K2,K3
4	get anindepthknowledgeabout IndexNumbers	K1,K2,K3
5	Acquireknowledge inMeasures ofTrendandits applicationin Business Research.	K1,K2,K3,K6
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COA33	PRINCIPLESOFINSURANCE	L	T	P	C
ALLIED-III			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	Recallthe differentconcepts ofinsuranceandits working	K1
2	Explaintheconcept ofagentanditsworking system	K2
3	Evaluatethefunctionsof agentsand variousformsof underwriting	K5
4	AnalyzeTheVariousActuarialAspectsRelatingToInsuranceCompanies	K4
5	Listthebasicprinciples ofinsuranceandvarious typesof it.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE311	CHOICE-I	L	T	P	C
ELECTIVE-I		HUMANRESOURCEMANAGEMENT	4	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	understandtherecentHRMconceptsanditschallenges	K1,K2,K3
2	know the job analysis for placing the suitable person at the suitable place	K1,K2,K3
3	gain the benefits of training and development to the employees ofan organisation with a view to attaining goals of the organization	K1,K2,K3
4	gainbasic knowledge of assessing and techniques of performance appraisal	K1,K2,K3
5	understandCompensationand Maintenance ofCompensation system	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE312	CHOICE-II	L	T	P	C
ELECTIVE-I		TRAININGANDDEVELOPMENT	4	-	-	3

Courseoutcomes:Attheendofthecourse,studentswouldbeableto:

1	Analysethetraining strategiesadoptedby companiesinreal situations	K1,K2,K3
2	Identifytraining needsofanindividualby conductingTraining Need Analysis	K1,K2,K3
3	differentiate between the applicability of various training strategies and select a strategy based upon the result of TNA	K1,K2,K3
4	Developatraining anddevelopment module	K1,K2,K3
5	Evaluateandassess thecostandbenefit sofatrainingand development programme.	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT41	COST ACCOUNTING	L	T	P	C
CORE-VI			3	1	-	4

Course outcomes: At the end of the course, students would be able to:

1	recall various concepts of costing and costing methods	K1
2	analyze the various elements of costing	K4
3	explain the labour wage payments system	K2
4	outline the cost under process costing system	K2
5	examine about operational costing, contract costing and Reconciliation of Cost and Financial Statements.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT42	BUSINESS ENVIRONMENT	L	T	P	C
CORE-VII			4	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	understand the concept, significance and changing dimensions of Business Environment	K1,K2,K3
2	appreciate the importance and impact of changing laws and regulations on a business firm	K1,K2,K3
3	learn about emerging dimensions in socio-cultural environment and its relevance for a business firm.	K1,K2,K3
4	gain insights on role of economic systems, economic planning, government policies, public sector and development banks, economic reforms, liberalization and its impact on business.	K1,K2,K3
5	gain insights on patent laws, policy on research and development and new technological developments in Business Environment	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COA44	BUSINESSMATHEMATICS	L	T	P	C
ALLIED-IV			2	2	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	understandthenumbersystem	K1,K2,K3
2	understandthesetheory	K1,K2,K3
3	Knowthecalculationsofindicesandsurds	K1,K2,K3
4	Understand the calculations of interest , annuities and depreciation	K1,K2,K3
5	Knowtheapplicationsofprobabilitydistributionsand matrices	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE421	CHOICE-I	L	T	P	C
ELECTIVE-III		ELEMENTSOFE-COMMERCE	3	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	understandbasicconceptsoncommerce	K1,K2,K3
2	Understand variousmethodson Architecturalaspectofe-Commerce.	K1,K2,K3
3	gainessentialknowledgeonsecurityaspectofe-commerce	K1,K2,K3
4	Gainapplicationknowledge onecommerce inbusiness.	K1,K2,K3
5	Gainconceptual knowledge onmultimediaine-commerce	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE422	CHOICE-II	L	T	P	C
ELLECTIVE-III		DIGITAL MARKETING	3	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	identifys and assess the impact of digital technology in transformingthebusinessenvironmentandalsothecustomer journey;	K1,K2,K3
2	explain the waymarketers think, conceptualize, test continuously to optimize their product search on digital platforms;	K1,K2,K3
3	illustrate the measurement of effectiveness of a digital marketing campaign;	K1,K2,K3
4	demonstrate their skills in digital marketing tools such as SEO,Social media, and Blogging for engaging the digital generation;	K1,K2,K3
5	understandtheconceptofAIinDigital Marketing;	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT51	MANAGEMENTACCOUNTING	L	T	P	C
CORE-VIII			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	outlinethevariousconceptsrelatingtomanagementaccounting	K2
2	analyzefinancialstatementsusingratioanalysis	K4
3	evaluatetheworkingcapitalmanagementof companies	K5
4	comparingvariousalternatives usingmarginalcostinganddecision making	K2
5	analyzenewbudgetandbudgetarycontrolfororganizations	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT52	AUDITING	L	T	P	C
CORE-IX			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	definetheimportantconceptandrulesrelatingtoauditing	K1
2	outlinethetechniques andapplicabilityofinternal audit	K2
3	analyzetheevaluationofassetsandliabilitiesin business	K4
4	analyzethe accounts andauditingthejointstockcompanies	K4
5	examineaboutinvestigationandauditingofcomputerizedaccounts	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT53	INCOMETAXLAWANDPRACTICE	L	T	P	C
CORE-X			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	outlinethevariousterminologiesrelatedtoincometax	K1
2	understandthemethodofcalculatingandlevying tax	K2
3	applythevarious tax laws and availableprovisions in taxcomputations	K3
4	evaluatethesetoffandcarryforwardoflosseswhilecalculatingpersonalincome	K5
5	analyzeself-assessmentofincomeandtaxcomputation	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT54	ENTREPRENEURIAL DEVELOPMENT	L	T	P	C
CORE-XI			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	recall the importance and role of entrepreneurship as an economic activity	K1
2	explain the various processes of setting up a startup	K2
3	outline the various institutional services to entrepreneur	K2
4	analyze the various financial institutions available to support entrepreneurs	K4
5	list the various subsidies and incentives available for entrepreneurs	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT55	BANKING THEORY, LAW AND PRACTICE	L	T	P	C
CORE-XII			5	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	understand the banking legislations and relationship between banker and customer.	K1,K2,K3
2	know the various types of bank accounts.	K1,K2,K3
3	gain knowledge of negotiable instruments used in banks.	K1,K2,K3
4	know the statutory provisions of the banker.	K1,K2,K3
5	know the principles and various forms of lending by the banks.	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE531	CHOICE-I	L	T	P	C
ELECTIVE-III		FUNDAMENTALSOFINVESTMENT	3	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	explainthebasicsofinvestmentenvironmentanddifferent investment avenues available.	K1,K2,K3
2	analysethetypes offixedincome securities	K1,K2,K3
3	assesstheapproaches toequityanalysis	K1,K2,K3
4	apply the techniques portfolio analysis and financial derivatives.	K1,K2,K3
5	advisehowtoprotecttheinvestors.	K1,K2,K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE532	CHOICE-II	L	T	P	C
ELECTIVE-III		ARTIFICIALINTELLIGENCEFOR BUSINESS	3	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	identifyhowtheAIisbeingleveragedbystart-upsasasuccess tool	K1,K2,K3
2	analyseandinterpret the applicabilityofAIinHRfunctions	K1,K2,K3
3	explainhowalgorithms ischangingtheboardroom landscape	K1,K2,K3
4	discussthecustomerservicesprovidedbyvariousbanksusing AI	K1,K2,K3
5	demonstratetheroleofAIintransformingtheretailsector	K1,K2,K3
K1-RememberingK2-UnderstandingK3-Applying		

COURSE CODE	U21COS53	COMPANY LAW	L	T	P	C
SBEI			2	-	-	2

Course outcomes: At the end of the course, students would be able to:

1.	know the basic concepts of joint stock companies	K1, K2, K3
2.	understand various types of shares of companies	K1, K2, K3
3.	know the provisions applicable to directors of a company	K1, K2, K3
4.	understand the various types of meetings conducted in a company	K1, K2, K3
5.	understand the provisions applicable for winding up of companies	K1, K2, K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21COT61	CORPORATE ACCOUNTING	L	T	P	C
CORE-XIII			6	-	-	4

Course outcomes: At the end of the course, students would be able to:

1	develop the skill of preparing entries for issue of shares	K1, K2, K3
2	know the accounting entries for underwriting of shares and redemption of preference shares	K1, K2, K3
3	knowledge in calculation and valuation of shares and goodwill of companies	K1, K2, K3
4	understand the provisions of acquisition of the business	K1, K2, K3
5	gain the knowledge in internal and external reconstruction in companies	K1, K2, K3
K1-Remembering K2-Understanding K3-Applying		

COURSE CODE	U21COT62	BUSINESSTAXATION	L	T	P	C
CORE-XVI			6	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	recallvariousconceptrelatingtoIndirecttaxregimeinIndia	K1
2	analyzethe conceptandapplicabilityofGSTinbusinesses	K4
3	comparetheGSTregime withotherindirecttax lawsprioroit	K2
4	illustrateGSTsysteminownbusinessandotherprototypes	K2
5	examinethecustomlawandrelateddutiesandtaxes	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT63	FINANCIALMARKETSAND INSTITUTIONS	L	T	P	C
CORE-XV			5	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	definethebasicconceptsoffinancial market	K1
2	analyzetheworkingand componentsofcorporatesecuritiesmarket	K4
3	explainthefunctioningofstockexchanges inIndia	K4
4	explaintheroleofbanksandintermediariesinfinancialmarket	K4
5	applyvarioustrends and newmodesinfinancing	K3
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT64	FINANCIALMANAGEMENT	L	T	P	C
CORE-XVI			4	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	outlinevariousconcepts relatingto finance	K2
2	listthevarioustechniquesoffinancialplanning	K2
3	analyzevarioussourcesandformsoffinance	K4
4	examinethevariousdimensionsofcapitalmarketandtheircomponents	K4
5	listthecapitalizationconceptandrelatedtheoriesfordecision making	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COT65	FINANCIALSERVICES	L	T	P	C
CORE-XVII			4	-	-	4

Courseoutcomes:At the end of the course,students would be able to:

1	To give an idea about fundamentals of financial services and players in financial sectors	K2
2	To create an awareness about merchant banking, issue management, capital markets and role of SEBI	K2
3	To provide knowledge about leasing and hire purchase concepts	K4
4	To make them understand about different types of insurance and IRDA Act.	K4
5	To provide knowledge about mutual funds and various funding models.	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze; K5-Evaluate; K6-Create		

COURSE CODE	U21COE641	CHOICE-I	L	T	P	C
ELECTIVE- IV		BUSINESSLAW	3	-	-	3

Courseoutcomes: At the end of the course, students would be able to:

1	assessthevariouslementsrelatedbusinesslawandcontract	K5
2	interpretedifferent typeofcontractandits features	K2
3	explainabouttheagencyssystemrelatedtcreationandterminationofagency	K5
4	comparebetweenrightsanddutiesofindemnity, guarantee	K5
5	examinethedistinctbetweensaleandagreementtosellandits features	K4
K1-Remember;K2-Understand;K3-Apply;K4-Analyze;K5-Evaluate;K6-Create		

COURSE CODE	U21COE642	CHOICE-II	L	T	P	C
ELLECTIVE- IV		CORPORATEGOVERNANCE	3	-	-	3

Courseoutcomes:At the end of the course,students would be able to:

1	explain the concept and importance of corporate governance in a business setup;	K1,K2,K3
2	explain the concept of corporate governance in organisations and its essence for management;	K1,K2,K3
3	analysetheroleofboardofdirectorsandshareholdersin corporate management;	K1,K2,K3
4	assess the problems incorporategovernance on the basis of major corporate governance failures;	K1,K2,K3
5	describecorporategovernanceframeworkinIndia;	K1,K2,K3
K1-RememberingK2-UnderstandingK3-Applying		

Bio-Chemistry

CourseCode	U21BCT11	BIOMOLECULES	L	T	P	C
Core	I			5	-	-
Course outcome	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	understand the foundation of life and structure and functions of carbohydrates	K1, K2			
	CO2	attain knowledge in structure, properties, role and classification of amino acids and proteins	K1, K2, K3			
	CO3	know the structure, properties, role and classification of Lipids and fatty acids	K1, K2, K3			
	CO4	learn the types of nucleic acids and its structure and biological importance.	K1, K2, K3			
CO5	gain knowledge on various types, functions, requirements and deficiency diseases of vitamins	K1, K2, K3				

CourseCode	U21PHA11	PHYSICS FOR BIOLOGY	L	T	P	C
Allied	I			5	-	-

Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	analyze and understand the techniques of spectroscopy.	K1, K2			
	CO2	understand the basic principle of emission spectroscopy and mass spectroscopy.	K1, K2, K3			
	CO3	recognize the principles of thermodynamics.	K1, K2, K3			
	CO4	realize and learn the various types of radioisotopes	K1, K2, K3			
CO5	gather the knowledge on biological hazards of radiation and safety.	K1, K2, K3				

Course Code	U21BCT21	FUNDAMENTALS OF CELL BIOLOGY	L	T	P	C
Core	III		5	-	-	4
Course outcomes	Upon completion of this course, the students will be					
	CO	Course Outcomes	Knowledge Level			
	CO1	acquire knowledge on structure and functions of cell organelles	K1, K2			
	CO2	understand membrane organelles, nucleus and chromosomes	K1, K2, K3			
	CO3	gain knowledge on cell cycle	K1, K2, K3			
	CO4	understand the cell communication and its regulation	K1, K2, K3			
	CO5	understand the stages in cancer and learn about apoptosis	K1, K2, K3			

Course Code	U21BCT21	FUNDAMENTALS OF CELL BIOLOGY	L	T	P	C
Core	III		5	-	-	4
Course outcomes	Upon completion of this course, the students will be					
	CO	Course Outcomes	Knowledge Level			
	CO1	acquire knowledge on structure and functions of cell organelles	K1, K2			
	CO2	understand membrane organelles, nucleus and chromosomes	K1, K2, K3			
	CO3	gain knowledge on cell cycle	K1, K2, K3			
	CO4	understand the cell communication and its regulation	K1, K2, K3			
	CO5	understand the stages in cancer and learn about apoptosis	K1, K2, K3			

Course Code	U21BCT22	NUTRITIONAL BIOCHEMISTRY	L	T	P	C
Core	IV		5	-	-	4
Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	explain the functions, and groups of food and its analysis	K1, K2			
	CO2	discuss the binomial classification, functions and requirements of the carbohydrates, proteins	K1, K2, K3			
	CO3	describe the classification and features of vitamins and minerals	K1, K2, K3			
	CO4	recognize the concepts of BMR, RDA, energy and its requirements, know about the balanced diet formulation.	K1, K2, K3			
	CO5	acquire knowledge on the nutritional challenges of the future and food adulterations	K1, K2, K3			

Course Code	U21BCA22	STATISTICS FOR BIOLOGY	L	T	P	C
Allied	II		5	-	-	4
Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	acquire information on collection of data and representation in diagram and graph	K1, K2			
	CO2	understand the problems in measures of central tendency and distribution	K1, K2, K3			
	CO3	recognize the measures of symmetry	K1, K2, K3			
	CO4	familiarize on correlation and regression.	K1, K2, K3			
	CO5	receive elaborate knowledge on tests of statistical significance.	K1, K2, K3			

Course Code	U21BCT31	PLANT PHYSIOLOGY AND BIOCHEMISTRY	L	T	P	C
Core	V		5	-	-	4
Course Outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	explain photosynthetic cycles and its factors	K1, K2			
	CO2	understand the hormones of plant and their biological importance	K1, K2, K3			
	CO3	illustrate the concept of plants nutrition and its deficiency	K1, K2, K3			
	CO4	recognize the physiology and reproduction of plants	K1, K2, K3			
	CO5	discuss the tissue culture and secondary metabolites	K1, K2, K3			

Course Code	U21CHA33	CHEMISTRY	L	T	P	C
Allied	III		5	0	0	4
Course Outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	gain the knowledge on the handling of chemical and errors in chemical analysis,	K1, K2			
	CO2	understand about the chemical bonding and hybridization	K1, K2			
	CO3	learn the calculations of preparing standard solutions	K1, K2			
	CO4	discuss and appreciate the advanced concepts and rate equation in chemical kinetics.	K1, K2, K3			
	CO5	know the importance of Biomolecules in chemistry	K1, K2, K3			

Course Code	U21BCT41	INTERMEDIARY METABOLISM	L	T	P	C
Core	VI		4	-	-	4
Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	define the concepts of metabolism and energetics	K1, K2			
	CO2	gain knowledge on various cycles of carbohydrate metabolism and their energetics	K1, K2, K3			
	CO3	recognize the amino acid metabolism cycles and their energetics	K1, K2, K3			
	CO4	know and understand Lipid metabolism cycles and their energetics.	K1, K2, K3			
	CO5	illustrate the key concepts in metabolism of Nucleic acids	K1, K2, K3			

Course Code	U21BCE421	NANOMATERIALS	L	T	P	C
Elective	II		3	-	-	3
Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	learn the fundamentals and classification of nanomaterials	K1			
	CO2	understand the structure and bonding in nanomaterials	K2			
	CO3	gain knowledge on the synthesis of nanomaterials from different sources	K1, K2			
	CO4	learn the techniques to characterize nanomaterials	K3			
	CO5	acquire knowledge on the applications of nanomaterials	K2			

CourseCode	U21BCT51	GENERALMICROBIOLOGY			L	T	P	C
Core	VIII				5	-	-	4
Course outcomes	Upon completion of this course, the students will be able to							
	CO	Course Outcomes	Knowledge Level					
	CO1	explain basics of microorganisms and microscope and its types	K1, K2					
	CO2	gain knowledge on various cell organelles of micro-organisms and its structure	K1, K2, K3					
	CO3	describe nutrition, photosynthesis, metabolism of bacteria	K1, K2, K3					
	CO4	illustrate the factors involved in spoilage, poisoning of food and foodborne diseases	K1, K2, K3					
	CO5	know the methods of fermentation and applications of microbe in industry	K1, K2, K3					

CourseCode	U21BCT52	IMMUNOLOGY			L	T	P	C
Core	VIII				5	-	-	4

Course outcomes	Upon completion of this course, the students will be able to							
	CO	Course Outcomes	Knowledge Level					
	CO1	understand the history and development of immunology and contributions of various scientists	K1, K2					
	CO2	define antigens and antibodies	K1, K2, K3					
	CO3	illustrate antigen-antibody reaction	K1, K2, K3					
	CO4	define hypersensitivity and explain its types.	K1, K2, K3					
	CO5	explain the concepts of immunodeficiency	K1, K2, K3					

CourseCode	U21BCT53	PHARMACOLOGY			L	T	P	C
Core	VIII				5	-	-	4
Course outcomes	Upon completion of this course, the students will be able to							
	CO	CourseOutcomes	KnowledgeLevel					
	CO1	know about the basics of pharmacology	K1, K2					
	CO2	understand the drug receptors and its mechanisms	K1, K2, K3					
	CO3	acquire knowledge on the metabolism of drugs	K1, K2, K3					
	CO4	understand chemotherapy and drug's mechanism	K1, K2, K3					
	CO5	discuss drug abuse and its adverse effects	K1, K2, K3					

CourseCode	U21BCP53	GENERAL			L	T	P	C
Core	XII	MICROBIOLOGY AND IMMUNOLOGY			-	-	5	4
Course outcomes	Upon completion of this course, the students will be able to							
	CO	CourseOutcomes	KnowledgeLevel					
	CO1	understand hematology and blood grouping methods.	K1, K2					
	CO2	empathize on various immunological techniques	K1, K2, K3					
	CO3	gain expertise in aseptic technique	K1, K2, K3					
	CO4	learn different staining techniques	K1, K2, K3					
	CO5	acquire knowledge in various plating techniques	K1, K2, K3					

CourseCode	U21BCT61	PRINCIPLES OF ENZYME TECHNOLOGY	L	T	P	C
CORE	XIII		5	-	-	4
Course outcomes	Upon completion of this course, the students will be					
	CO	Course Outcomes	Knowledge Level			
	CO1	understand the basics and characterization and purification of enzymes.	K1, K2			
	CO2	gain knowledge on enzyme kinetics and enzyme inhibition	K1, K2, K3			
	CO3	learn about enzyme assay and their regulation	K1, K2, K3			
	CO4	learn the mechanism of action of enzymes with examples	K1, K2, K3			
	CO5	illustrate the applications of enzymes and its immobilization techniques	K1, K2, K3			

Course Code	U21BCT62	MEDICAL BIOCHEMISTRY	L	T	P	C
CORE	XIV		5	-	-	4

Course outcomes	Upon completion of this course, the students will be					
	CO	Course Outcomes	Knowledge Level			
	CO1	describe various mechanism disorders of carbohydrates	K1, K2			
	CO2	discuss about the lipid metabolism disorders	K1, K2, K3			
	CO3	realize the disorders of protein and amino acid metabolism	K1, K2, K3			
	CO4	know and understand about the nucleic acid metabolism	K1, K2, K3			
	CO5	analyze and realize the facts of tissue function tests	K1, K2, K3			

B.Sc.BIOTECHNOLOGY

1. Program Specific Outcomes (PSOs)

On completion of B.Sc. Biotechnology Programme, the students will be able to

PSO1	enrich the knowledge in the basic concepts and principles of Biotechnology.
PSO2	apply the theoretical and practical knowledge of Biotechnology in gaining a successful career.
PSO3	work as entrepreneurs and techno managers with strong ethics and communications skills.
PSO4	interact effectively with people in the field of Biotechnology and allied industries in designing, developing, and providing solutions for product/ processes/ Technology/Development.
PSO5	be proficient with basic laboratory skills and hands on training required for higher studies and research.

Course Code	U21BTT11	CELL AND MOLECULAR BIOLOGY				L	T	P	C
CORE-I						6	-	-	4
Course Outcomes		Upon completion of this course, the students will be able to							
		CO1	comprehend the structure and function of the plant cell.					K2	
		CO2	understand the importance of cell cycle.					K2	
		CO3	gain knowledge in the organization of chromosomes and replication of DNA					K3	
		CO4	illustrate the mechanisms in the process of transcription.					K4	
		CO5	analyse the factors required for the translation and posttranslational modifications					K2	

CODE	U21BTT12	THEORY-GENETICS				L	T	P	C
CORE II						5	-	-	4
Course Outcomes		Upon completion of this course, the students will be able to							
		CO1	describe the classical concepts of Mendelian genetics across life-forms.					K2	
		CO2	understand the concepts of multiple alleles and sex-linked disorders.					K2	
		CO3	illustrate the chromosome organization and pedigree analysis.					K3	
		CO4	compare and contrast the chromosomal traits in different chromosomal disorders.					K4	
		CO5	know about population genetics and learn the ways to prevent chromosome disorders.					K2	

Course Code	U21BOA11	TAXONOMY AND PLANT PHYSIOLOGY		L	T	P	C
Allied -I				5	-	-	4
Course Outcomes		Upon completion of this course, the students will be able to					
		CO1	list the terminologies in taxonomy.				K2
		CO2	illustrate the key concepts in Bentham and Hooker classification.				K3
		CO3	understand the different types of water, solute and mineral uptake in plants.				K2
		CO4	understand and demonstrate the process of photosynthesis.				K3
		CO5	compare the role of different regulatory substances in plant growth.				K4

CODE	U21BTT21	BIOCHEMISTRY		L	T	P	C
CORE III				5	-	-	4
Course Outcomes		At the end of the course, the student will be able to					
		CO1	understand about the classification of carbohydrates - Properties, structure and biological functions				
		CO2	know amino acids - structure, classification, physical and chemical properties.				
		CO3	illustrate the structure and functions of nucleic acids				
		CO4	gain knowledge on lipids - classification and biological				
		CO5	know the importance of vitamins and their deficiency problems				

Course Code	U21BTP21	PRACTICAL-BIOCHEMISTRY				L	T	P	C
COREIV					-	-	5	4	
Course Outcomes		Upon completion of this course, the students will be able to							
	CO1	analyse the role of chemical constituents required for the estimation of biomolecules.						K4	
	CO2	illustrate the principle behind the estimation of protein, DNA and RNA.						K3	
	CO3	organize the laboratory setup for oil analysis using iodine and acid number.						K5	
	CO4	learn about the basic procedure of paper chromatography.						K5	
	CO5	learn about the basic preparation of buffers and the principles of basic instruments.						K3	

Course Code	U21ZOA22	ANIMAL PHYSIOLOGY				L	T	P	C
ALLIED II					5	-	-	4	
Course Outcomes		Upon completion of this course the students will be able to							
	CO1	know about the role of enzymes in digestion						K2	
	CO2	acquire knowledge on respiration and functions of respiratory pigments						K2	
	CO3	differentiate the blood components and apply them to find each component						K3	
	CO4	gain knowledge on nervous system and functions of neurotransmitters						K2	
	CO5	evaluate the concepts of reproductive system and understand its functioning						K5, K2	

Course Code	U21BTT31	DEVELOPMENTAL BIOLOGY			
	COREV	L	T	P	C
Course outcomes		Upon completion of this course, the students will be able to			
	CO1	gather knowledge on gametogenesis	K1, K2		
	CO2	acquire information on egg and cleavage	K1, K2, K3		
	CO3	recognize the importance of gastrulation	K1, K2, K3		
	CO4	explain the process of oogenesis	K1, K2, K3		
	CO5	describe regeneration and human reproduction	K1, K2, K3		

Course Code	U21CHA33	CHEMISTRY			
	ALLIED	L	T	P	C
Course Outcomes		Upon completion of this course, the students will be able to			
	CO1	gain the knowledge on the handling of chemicals and errors in chemical analysis	K1, K2		
	CO2	learn about bonding and chemical hybridization	K1, K2		
	CO3	acquire knowledge on preparing standard solutions	K1, K2		
	CO4	understand the advanced concepts and rate equations in chemical kinetics.	K1, K2, K3		
	CO5	learn the importance of chemistry in Bio molecules	K1, K2, K3		

Course Code	U21BTE311	ENDOCRINOLOGY			L	T	P	C
ELECTIVE-I					4	-	-	3
Course	Upon completion of this course, the students will be able to							
	CO1	understand the hormone classification and function of hormones					K1	
	CO2	know the structure of Pituitary glands and its hormone function					K2	
	CO3	comprehend the gastrointestinal hormones functions on the regulation of macromolecules metabolism					K2	
	CO4	learn the importance of adrenal and thyroid hormones					K2	
	CO5	get deep knowledge on ovarian cycles and sex hormones					K2	

Course Code	U21BTE312	NUTRITIONAL BIOCHEMISTRY			L	T	P	C
ELECTIVE -II					4	-	-	3
Course outcome	Upon completion of this course, the students will be able to							
	CO1	gather information on food and its nutrition.					K1	
	CO2	know the nutrients value and its importance in prevention of disease.					K1	
	CO3	acquire knowledge on diabetes mellitus and its effect in our body.					K2	
	CO4	recognise the importance of balanced diet.					K2	
	CO5	realise the facts behind the significance of nutrients.					K2	

CODE	U21BTN311	VERMITECHNOLOGY		L	T	P	C
NMEI				2	-	-	2
Course Outcome		Upon completion of this course, the students will be able to					
	CO1	gain basic knowledge about Vermicomposting.				K2	
	CO2	illustrate the economic importance of vermicompost				K3	
	CO3	evaluate the role of earthworms in soil fertility				K6	
	CO4	appraise the role of earthworms in land improvement.				K6	
	CO5	get the knowledge of vermiwash and its applications				K6	

Course Code	U21CHA43	PRACTICAL-CHEMISTRY		L	T	P	C
ALLIEDIV				-	-	4	4
Course outcome		Upon completion of this course, the students will be able to					
	CO1	know the procedure for titration of acid and bases.				K1, K2	
	CO2	gain knowledge in the oxidation and reduction agents and perform titrations.				K1, K2, K3	
	CO3	illustrate the methods to prepare standard solutions				K1, K2, K3	
	CO4	learn and illustrate the concepts in iodometry titrations				K1, K2, K3	
	CO5	explain and compare the principle behind different titration reactions				K1, K2, K3	

CODE	U21BTE421					L	T	P	C
ELECTIVE II		SEED TECHNOLOGY				3	-	-	3
Course Objectives		Upon completion of this course the students will be able to							
	CO1	understand the basics of seed processing						K2	
	CO2	learn the techniques of seed drying						K4	
	CO3	illustrate the process of seed processing machines.						K3	
	CO4	learn the seed treatment techniques						K3	
	CO5	gain knowledge on the techniques of Seed storage						K3	

Course Code	U21BTE422					L	T	P	C
Elective II		BIOFERTILIZER				3	-	-	3
Course Outcomes		On Successful completion of the course, the students will be able to							
	CO1	know about the basics and history of biofertilizers.						K2	
	CO2	illustrate the preparation of biofertilizers.						K3	
	CO3	gain knowledge on the preparation of different types of manures.						K2	
	CO4	gain knowledge on the types of manures according to the plant type.						K2, K3	
	CO5	learn and compare the strategies for mass production of biofertilizers.						K4	

Course Code	U21BTN421	INTELLECTUAL PROPERTY RIGHTS				L	T	P	C
NMEII						2	-	-	2
Course Outcomes		On Successful completion of the course, the students will be able to							
	CO1	know the importance of IP and IP in India					K2		
	CO2	know about patent and its importance					K2, K3		
	CO3	acquire the knowledge on copyrights and its procedure					K2		
	CO4	understand about Trademarks and Registration of Trademarks					K3		
	CO5	know about the procedure for registration of Novel Products					K2		

CODE	U21BTT51	IMMUNOLOGY				L	T	P	C
CORE VIII						5	-	-	4
Course Outcomes		At the end of the course, the student will be able to							
	CO1	know about types of immunity and antigen and antibodies involved in immune reaction					K2		
	CO2	describe the functions of Lymphoid organs					K2		
	CO3	illustrate the structure and function of MHC					K3		
	CO4	understand hypersensitivity reactions and learn about auto immune disorders and immune deficiency					K4		
	CO5	understand the mechanism of antigen and antibody reaction and also know the immunotechniques for diagnosis of diseases.					K2		

Course Code	U21BTT52	PRINCIPLES OF ANIMAL BIOTECHNOLOGY	L	T	P	C
CORE	IX		5	-	-	4
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	explain the fundamentals of animal cell and tissue culture.				K2
	CO2	get knowledge about various IVF techniques				K3
	CO3	develop basic skills for the transfer of DNA into host cells				K5
	CO4	understand the gene therapy and its application in medicine				K3
	CO5	acquire knowledge in transgenic animals and its applications				K3

Course Code	U21BTT53	BASICS OF PLANT BIOTECHNOLOGY	L	T	P	C
CORE	X		5	-	-	4
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	know the organisation of genome in plants				K2
	CO2	learn the mechanism of T-DNA transfer into a plant cell and to know about different plant viral vectors for gene transfer				K3
	CO3	acquire knowledge on construction of libraries, genetically modified plants with novel traits				K2
	CO4	compare plant growth hormones and gene expression in different plants.				K4
	CO5	illustrate the techniques of culturing tissues and protoplast isolation				K3

Course Code	U21BTP54	BIOINSTRUMENTATION	L	T	P	C
CORE	XI		5	-	-	4
Course Outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	understand the fundamentals of microscope and its working principle.	K1, K2			
	CO2	realize the use of Colorimetry and spectroscopy. Acquire knowledge on centrifuge and its types	K1, K2, K3			
	CO3	recognize the importance of chromatographic techniques and Empathize on electrophoretic techniques	K1, K2, K3			
	CO4	explain the fundamentals of Biochemical techniques	K1, K2, K3			
	CO5	estimate and separate the lipid molecules	K1, K2, K3			

Course Code	U21BTP55	IMMUNOLOGY, PRINCIPLES OF ANIMAL BIOTECHNOLOGY AND BASICS OF PLANT BIOTECHNOLOGY	L	T	P	C
CORE	XII		-	-	5	4
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	explain the procedure of immuno-assays and blood grouping.	K2			
	CO2	understand the different types of media used in animal cell culture	K2			
	CO3	illustrate the staining techniques in animal tissue culture.	K3			
	CO4	learn and understand the basic techniques of microbial isolation from soil	K2			
	CO5	gain knowledge on isolation of azobacter and phosphate solubilizing bacteria	K2			

Course Code	U21BTE511	FORESTRY			
Elective	III	L	T	P	C
		3	-	-	3
Course Outcomes	Upon completion of this course the students will be able to				
	CO1	learn about silviculture and the characteristics of different types of forests			K2
	CO2	understand the multipurpose of trees in different industries and the scope of agroforestry			K3
	CO3	acquire knowledge on forests soils and learn the importance of forests in soil conservation			K2
	CO4	learn the damages that occur in forests and ways to prevent the damages			K3
	CO5	attain knowledge on the forest economics and the forest laws in India			K2

Course Code	U21BTE512	BIODIVERSITY CONSERVATION			
Elective	III	L	T	P	C
		3	-	-	3
Course Outcomes	Upon completion of this course the students will be able to				
	CO1	learn the fundamentals of Biodiversity-In-situ and Ex-situ conservation			K2
	CO2	know the value of Biodiversity and importance of ecosystem service			K3
	CO3	explain the global climate changes and bio diversity acts.			K2
	CO4	illustrate remote sensing and its techniques.			K3
	CO5	compare in-situ and ex-situ conservation techniques.			K4

CourseCode	U21BTS531	MEDICAL LAB TECHNOLOGY	L	T	P	C
SBE	III		2	-	-	2
Course Outcome	Upon completion of this course, the students will be able to					
	CO1	know the methods of sample collection, specimen preservation and estimation methods				K2
	CO2	estimate biomolecules and body fluids using several biochemical tests				K5
	CO3	understand the methods in histopathology and sample freezing techniques				K2
	CO4	learn the principles of diagnosis and apply the technique to perform tests				K2
	CO5	develop skills in handling different types of PCR for molecular diagnosis				K1, K2, K3

Course Code	U21BTS532	FOOD PROCESSING TECHNOLOGY	L	T	P	C
SBE	III		2	-	-	2
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	gain knowledge and understanding on different foods and milk products				K1
	CO2	understand the food preservation techniques and quality factors				K3
	CO3	understand the factors responsible for food deterioration and ways to prevent food spoilage.				K2
	CO4	understand the preparation of pickle, jam, jellies and squash.				K4
	CO5	gain knowledge on food safety and regulations of government.				K2

Course Code	U21BTT61	ENVIRONMENTAL BIOTECHNOLOGY	L	T	P	C
CORE	XIII		5	-	-	4
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	illustrate the classification and conservation of natural resources				K3
	CO2	compare the eco-friendly bioremediation techniques that can solve environmental problems.				K4
	CO3	gain knowledge on biofertilizers and crop productivity.				K2
	CO4	compare the potential use of different biopesticides on plants against pests and know production of biofertilizers and biopesticides				K4
	CO5	evaluate the role of genetically engineered organisms for treatment of waste.				K6

Course Code	U21BTT62	FERMENTATION TECHNOLOGY	L	T	P	C
CORE	XIV		5	-	-	4
Course Outcomes	On successful completion of the course, the students will be able to					
	CO1	describe the media formulations, microbial growth kinetics and isolation techniques.				K2
	CO2	acquire knowledge on bioreactor selection, upstream & fermentation processes, and its role in manufacturing bio-products				K3
	CO3	learn and describe the down-stream process in fermentation.				K2, K3
	CO4	gain knowledge about production of commercial products using microbes.				K3
	CO5	learn the techniques in enzyme immobilization.				K3

Course Code	U21BTT63	BIOINFORMATICS				L	T	P	C
CORE	XV					5	-	-	4
Course Outcomes	Upon completion of this course the students will be able to								
	CO1	learn about history of bioinformatics and computer hardware and software					K2		
	CO2	gain knowledge to use internet and search engines					K3		
	CO3	gain the knowledge about gene sequence analysis, Multiple sequence alignment					K3		
	CO4	gain knowledge in using various biological database tools					K3		
	CO5	know and analyze about evolution and construction of the Phylogenetic tree					K4		

Course Code	U21BTT64	BIOSTATISTICS				L	T	P	C
CORE	XVI					5	-	-	4
Course Outcomes	Upon completion of this course the students will be able to								
	CO1	understand the fundamentals of statistics, methodology and classification of data.					K2		
	CO2	know the methods of collecting data and the different types of sampling and sampling designs					K3		
	CO3	understand and analyze the measures of central tendency					K4		
	CO4	classify variables and measures of dispersion.					K3		
	CO5	learn to use correlation analysis, regression analysis and analysis of variance.					K2		

Course Title & Code	U21BTP65	ENVIRONMENTAL BIOTECHNOLOGY, FERMENTATION TECHNOLOGY AND BIOINFORMATICS	L	T	P	C
CORE	XVII		-	-	5	4
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	acquire basic techniques in plant biotechnology.				K2
	CO2	understand the different types of media used in microbial isolation				K2
	CO3	demonstrate the production of wine and alcohol.				K3
	CO4	know the basics of phylogenetic analysis				K2
	CO5	analyze sequences using BLAST and FASTA				K4

Course Code	U21BTE641	BIOSAFETY AND IPR	L	T	P	C
ELECTIVE	IV		3	-	-	3
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	gain awareness about biosafety and its levels				K2
	CO2	analyze the guidelines of biosafety.				K4
	CO3	acquire adequate knowledge in the use of genetically modified organisms and its effect on human health.				K2
	CO4	illustrate the concepts of IPR				K3
	CO5	learn the process for applying patent				K3

Course Code	U21BTE642	FOODBIOTECHNOLOGY			L	T	P	C
Elective	IV				3	-	-	3
Course Outcomes	Upon completion of this course the students will be able to							
	CO1	gain knowledge importance and applications of Food Bio technology					K2	
	CO2	learn about the importance of enzymes used in food industry					K3	
	CO3	apply the techniques and methods for the preparation of culture media, sterilization, inoculation and staining					K4	
	CO4	knowledge on fermentation process and its application					K3	
	CO5	understand the knowledge in production of single cell protein and its uses.					K2	

Course Code	U21BTS61	MUSHROOM CULTIVATION			L	T	P	C
SBE	V				2	-	-	2
Course Outcomes	Upon completion of this course, the students will be able to							
	CO1	easily differentiate edible and Poisonous mushroom					K2	
	CO2	differentiate the various types of mushroom based on occurrence, colour and morphology.					K3	
	CO3	compare the germination and life cycle of different mushrooms.					K5	
	CO4	explain the nutritional benefits of mushrooms.					K2	
	CO5	evaluate the medicinal properties of mushrooms.					K6	

Course Code	U21BTS62	SINGLECELLPROTEIN	L	T	P	C
SBE	VI		2	-	-	2
Course outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	understand the advantages and disadvantages of algal mass	K1, K2			
	CO2	learn the production of SCP	K1, K2, K3			
	CO3	acquire knowledge on spirulina cultivation	K1, K2, K3			
	CO4	illustrate the steps of spirulina cultivation	K1, K2, K3			
	CO5	gather information regarding natural production, mass cultivation and process	K1, K2, K3			

Course Code	U21BTV51	DIARY TECHNOLOGY	L	T	P	C
Value Added Programme			30	-	-	2
Course Outcomes	Upon completion of this course the students will be able to					
	CO1	list the benefits of milk and milk products.	K1			
	CO2	know the salient features of milk.	K2			
	CO3	illustrate the ways to produce hygienic dairy products	K3			
	CO4	compare the benefits of traditional and modern dairy products	K4			
	CO5	understand the right way to store and preserve dairy products	K5			

BACHELOR OF BUSINESS ADMINISTRATION

PROGRAMME SPECIFIC OUTCOMES:

PSO1	Get familiarized with the core concepts of Business and Management
PSO2	Able to apply leadership principles to manage in a diverse and global business environment
PSO3	Exposure to real business situations through field work, Industrial visits and projects
PSO4	Demonstrate the ability to identify and evaluate ethical business practices
PSO5	Develop Managerial and Job Readiness Skills to take up career in Corporates.

Expected Course Outcomes:

On the successful completion of the course, student will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	examine and explain the management evolution and how it will affect future managers.	K1
CO2	estimate the conceptual framework of planning and decision-making in day to day life.	K2
CO3	explain the various managerial functions to achieve the goals and objectives of the organization.	K1
CO4	analyze the theories of motivation, leadership and communication in a variety of circumstances and management practices in organizations.	K4
CO5	identify and explain the importance of the management process and identify some of the key skills required for the contemporary management practice.	K3

K1-Remember; K2 -Understand; K3 -Apply; K4 -Analyze;

COURSE CODE	U21BAT12	BUSINESS COMMUNICATION	L	T	P	C
CORE-II			5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	learn and apply effective written communication techniques.	K3
CO2	review and refine communication skills.	K4
CO3	develop and deliver effective presentations of letters.	K6
CO4	develop and draft circulars.	K6
CO5	develop skills in report writing.	K6

K3-Apply; K4-Analyze; K6 –Create

COURSE CODE	U21BAT21	FINANCIAL ACCOUNTING	L	T	P	C
CORE-III			5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	recall the accounting concepts and understand the rules of the double entry system, journalizing and posting to the ledger in the business transactions.	K1
CO2	interpret the trial balance; identify the errors and reconcile the bank statement by cash book.	K2
CO3	summarize the trading, profit & loss account and balance sheet with the support of financial and accounting transactions.	K5
CO4	illustrate the different methods of depreciation.	K3

K1-Remember; K2-Understand; K3-Apply; K5 -Evaluate

COURSE CODE	U21BAT31	ORGANISATIONAL BEHAVIOUR	L	T	P	C
	CORE-V		5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the implications of organizational behaviour on the process of management	K2
CO2	analyze the individual behaviour and identify the Determinants of Personality	K4
CO3	know about the qualities of leadership	K2
CO4	understand the theories of motivation	K2
CO5	evaluate the organizational change.	K5

K2-Understand; K4-Analyze; K5-Evaluate;

COURSE CODE	U21BAA33	BUSINESS STATISTICS	L	T	P	C
	ALLIED-III		5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, student will be able to

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	know the basic concepts of statistics	K1
CO2	apply the data presentation tools of statistics	K3
CO3	evaluate the measures of statistics	K5
CO4	understand and compute the sampling distributions	K2
CO5	summarize methods of correlation analysis	K4

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate;

COURSE CODE	U21BAE31	COST ACCOUNTING	L	T	P	C
ELECTIVE -I			4	-	-	3

Expected Course Outcomes:

On the successful completion of the course, student will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the concept of cost accounting, Recognize the relationship of cost and management accounting along with the elements of cost concepts.	K2
CO2	describe the cost sheets for store control through economic order quantity, pricing and material issues.	K5
CO3	describe the methods of Remuneration and Incentive Schemes to labours	K5
CO4	understand the Collection, Classification, Allocation, Apportionment and Absorption of overheads.	K2
CO5	apply the process costing and preparation of cost sheet	K3

K2-Understand; K3 -Apply; K5 -Evaluate;

COURSE CODE	TALENT AND KNOWLEDGE MANAGEMENT	L	T	P	C
ELECTIVE		4	-	-	3

Expected Course Outcomes:

On the successful completion of the course, student will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the concept Branding & Brand Awareness, Equity	K2
CO2	help the students acquire knowledge on Brand Advertisement	K5
CO3	know pros and cons of brand extension	K5
CO4	Analyse Brand personality and equity	K4
CO5	Develop the critical and analytical skills of students in brand	K3

K2-Understand; K3 -Apply; K4: Analyse K5-Evaluate;

COURSE CODE	U21BAT41	RESEARCH METHODOLOGY	L	T	P	C
	CORE-VI		4	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand the fundamental concepts of research, types and research process.	K2
CO2	summarize the sampling design and scaling techniques.	K2
CO3	construct a method for data collection and able to edit, code, classify and tabulate the collected data.	K3
CO4	analyze the collected data to prove or disprove the hypothesis.	K4
CO5	interpret the data and prepare a research report.	K3

K2-Understand; K3-Apply; K4 -Analyze;

COURSE CODE	U21BAT42	PERSONALITY DEVELOPMENT	L	T	P	C
	CORE-VII		4	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the determinants of personality	K2
CO2	apply the basic Theories of Motivation	K3
CO3	understand the Career Planning	K2
CO4	evaluate the memory skills	K5
CO5	create positive thinking	K6

K2-Understand; K3-Apply; K5 -Evaluate; K6 -Create

COURSE CODE	U21BAA44	GSTREGISTRATIONANDFILING(PRACTICAL)	L	T	P	C
ALLIED-IV			-	-	4	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the basic concepts of GST	K2
CO2	apply GST rates in various transactions	K3
CO3	calculate GST calculations in accounting software Tally	K5
CO4	evaluate of Tax input credit available to goods	K5
CO5	apply the practical knowledge dealings if interstate transactions of GST	K2

K2-Understand; K3 -Apply; K5 -Evaluate;

COURSE CODE	U21BAE41	MANAGEMENT INFORMATION SYSTEM	L	T	P	C
ELECTIVE-II			3	-	-	3

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	apply modern tools, techniques and technology functionally and productively in Professional Activities	K3
CO2	analyze, Design, Construct, Implement and Maintain, Usable, Reliable and Cost-Effective Information Systems (IS) that support Operational, Managerial and Strategic activities of Organizations.	K4
CO3	Study and evaluate existing manual and automated business processes and identify opportunities for re-engineering and/or automation.	K3
CO4	Coordinate confidently and competently with the user community in IS requirements analysis/design activities, provide guidance and technical support to end-user computing activities.	K1

COURSE CODE	U21BAE42	BRANDMANAGEMENT	L	T	P	C
ELECTIVE -II			4	-	-	3

Expected Course Outcomes:

On the successful completion of the course, student will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the concept Branding & Brand Awareness, Equity	K2
CO2	help the students acquire knowledge on Brand Advertisement	K5
CO3	know pros and cons of brand extension	K5
CO4	analyse Brand personality and equity	K2
CO5	Develop the critical and analytical skills of students in brand	K3

K2-Understand; K3-Apply; K5-Evaluate;

COURSE CODE	U21BAT51	PRODUCTION MANAGEMENT	L	T	P	C
CORE-VIII			5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, student will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the production system	K2
CO2	enumerate the production processes and production planning and control	K5
CO3	describe the plant layout system	K2
CO4	outline management issues in work and method study	K1
CO5	discuss the quality control, Total Quality Management, Benchmarking	K4

K1-Remember; K2 -Understand; K4-Analyze; K5 -Evaluate

COURS ECODE	U21BAT52	MANAGEMENTACCOUNTING	L	T	P	C
	CORE-IX		5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessful completionofthecourse,student willbe ableto:

Number	Courseoutcome	Knowledge Level(According to Bloom’sTa xonomy)
CO1	understandtheconceptofmanagementaccounting	K2
CO2	measurethefinancialstatements byusingvariousfinancialratios.	K5
CO3	producevarioustypesofbudgets	K3
CO4	simplifythefund flowand cash flow statements bycalculatingfundsandcash from operations	K5
CO5	understandthemarginal costingforcost volumeprofit	K2

K2-Understand;K3 -Apply; K5 -Evaluate;

COURSE CODE	U21BAT53	MARKETINGMANAGEMENT	L	T	P	C
	CORE-X		5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessful completionofthecourse,student willbe ableto:

Number	Courseoutcome	KnowledgeLevel (AccordingtoBloom’s Taxonomy)
CO1	recognizethesignificanceof marketinganditsroleineconomicdevelopment	K1
CO2	recognize how market strategy works, market segmentationandproductmixhaveanimpactonbuyingbeha viour	K2
CO3	understandProductlifecycle(PLC)andstrategies	K3
CO4	apply marketing concepts, pricing for the development ofmarketingfunction.	K3
CO5	demonstratethecriticalthinkingskillsandanalyzethedistr ibutionchannels	K3

K1-Remember; K2-Understand; K3– Apply

COURSE CODE	U21BAT54	HUMANRESOURCE MANAGEMENT	L	T	P	C
	CORE-XI		5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessfulcompletionofthecourse, studentswill beable to:

Number	Courseoutcome	KnowledgeLevel (AccordingtoBloom'sTaxonomy)
CO1	analyzetheprocessofJoband itsimportanceasa foundationofhuman resourcemanagement practice.	K3
CO2	anderstandthe Humanresourceplanning	K4
CO3	apply the policies and practice of the primary areas of humanresourcemanagement,includingstaffing,trainingandcompensation.	K3
CO4	understandthewageandsalaryadministration	K4
CO5	understandtheemployee grievancehandlingsystem	K2

K2-Understand; K3-Apply;K4-Analyze

COURSE CODE	U21BAT55	BUSINESSLAW	L	T	P	C
	CORE-XII		5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessfulcompletionofthecourse, studentswill beable to:

Number	Courseoutcome	KnowledgeLevel (According to Bloom'sTaxonomy)
CO1	Develop an understanding of business law in the globalcontext	K1
CO2	Knowtherelevantlegalterms ofthecontractAct	K2
CO3	Constructtherelationshipofethics andlawinagency	K3
CO4	Applybasicprinciples of lawto thesaleofgoods	K4
CO5	Understandtherules,andregulationsrelatedtopartnershipand companyform ofbusiness	K5

K1-Remember; K2 -Understand;K3-Apply; K4-Analyze;K5- Evaluate

COURSE CODE	U21BAE53	STRATEGICMANAGEMENT	L	T	P	C
ELECTIVE -III			3	-	-	3

ExpectedCourseOutcomes:

Onthesuccessfulcompletionofthecourse, studentwill beable to:

Number	Courseoutcome	KnowledgeLevel (According to Bloom'sTaxonomy)
CO1	synthesizeknowledgefromotherbusinesscoursesintoacomprehensive understanding	K1
CO2	provide a basic understanding of the nature anddynamicsofthestrategyformulationprocesses	K2
CO3	encourage students to think critically andstrategically	K3
CO4	developtheabilityto identifystrategicissues anddesignappropriatecoursesof action.	K3
CO5	enabletoevaluatestrategiesbasedonthebusiness	K5

K1-Remember;K2-Understand;K3-Apply;K5 -Evaluate

COURSE CODE	U21BAE52	INTERNATIONALBUSINESS	L	T	P	C
ELECTIVE -III			4	-	-	3

Onthesuccessfulcompletion ofthecourse,student willbeableto:

Number	Courseoutcome	KnowledgeLevel (AccordingtoBlo om's Taxonomy)
CO1	understandthebasicconcept Internationaltrade	K2
CO2	Studyand evaluatethe tradeand tariff policies	K5
CO3	knowthenuancesofinternationaltrade	K3
CO4	analyzetherolwofinternational institutions	K4
CO5	developa strategyforinternational trade	K5

K2-Understand;K3-Apply;K4:Analyse K5-Evaluate;

COURSE CODE	U21BAS53	ENTREPRENEURSHIP DEVELOPMENT (PRACTICALS)	L	T	P	C
	SBE-III		-	-	2	2

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	define who is an Entrepreneur and what his or her characteristic features are, what skills made them successful	K1
CO2	foster the students in the areas of entrepreneurial growth and equip them with different entrepreneurial development programmes.	K2
CO3	identify the different institutions that support entrepreneurs	K4
CO4	discriminate the benefits Regulations governing SSI	K5
CO5	understand the concepts of Women Entrepreneurs	K2

K1-Remember; K2 -Understand; K4-Analyze; K5 -Evaluate

COURSE CODE	U21BAT61	FINANCIAL MANAGEMENT	L	T	P	C
	COREXIII		5	-	-	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	use business finance terms and concepts while communicating.	K3
CO2	explain the financial concepts used in making a financial management decision.	K4
CO3	use effective methods to promote respect and relationship for financial deals.	K3
CO4	utilize the information to maximize and manage finance.	K1

COURSE CODE	U21BAT62	TOTALQUALITYMANAGEMENT	L	T	P	C
CORE-XIV			5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessfulcompletionofthecourse, studentswill beable to:

Number	Courseoutcome	KnowledgeLevel (According to Bloom’sTaxonomy)
CO1	understandthebasic conceptsofTQM	K2
CO2	knowtheStrategicqualityplanning	K1
CO3	evaluate the traditional tools and new management toolsofquality	K5
CO4	applythe QualityFunctionDevelopment	K3
CO5	understandtheQualityauditingIMS	K2

K1-Remember;K2-Understand; K3-Apply; K5-Evaluate;

COURSE CODE	U21BAT65	SKILL ENHANCEMENT &EMPLOYABILITYORIENTATIO N	L	T	P	C
COREXVII			4	-	-	5

ExpectedCourseOutcomes:

Onthesuccessful completionofthecourse,student willbe ableto:

Number	Courseoutcome	KnowledgeLevel (AccordingtoBlo om’s Taxonomy)
CO1	developingandsustainingemployabilityskills	K2
CO2	improveeffectivecommunicationskills	K5
CO3	developeffectivewrittencommunications kills	K5
CO4	enablestudentstoincreaseknowledgeonselfma nagement	K2
CO5	buildabaseforlearningcritical&creativethinkingskills	K3

COURSE CODE	U21BAE61	SERVICEMARKETING	L	T	P	C
ELECTIVE IV			3	-	-	3

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the basic concepts of service marketing	K3
CO2	examine the nature of services, and distinguish between products and services	K4
CO3	identify the major elements needed to improve the marketing of services	K3
CO4	understand the pricing in services	K1
CO5	develop an understanding of the roles of relationship marketing and customer service in adding value to the customer's perception of a service	K2

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze

COURSE CODE	U21BAE62	CONSUMER BEHAVIOUR	L	T	P	C
ELECTIVE -IV			3	-	-	3

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	understand the basic concepts of Consumer Behaviour	K1
CO2	identify the motives of consumer behaviour through consumer research	K2
CO3	frame strategies for the consumer by learning the attitudes of consumer	K4

CO4	applystrategicknowledgebased onthelifestyleofconsumer	K3
CO5	develop consumerdecision-makingmodel	K6

B.Sc Maths

ProgrammeSpecificOutcomes:

PSO. No	uponcompletionofthiscoursethestudentswillbeableto	PO MAPPED
PSO-1	perceivetherelevanceofthesubjectinvariousfields suchasscience,technology,businessandindustries.	PO-3
PSO-2	interpretthegraphicalandnumericaldataandapplytheanalytical, theoretical and computational skills to solve problems.	PO-1 PO-2 PO-3
PSO-3	acquaint with the knowledge on the effects of changing conditions in real life systems to construct mathematical models and excel in various decision making tasks	PO-2 PO-3
PSO-4	understand mathematical ideas and foundations of mathematicstodevelopproficiencyinMathematics	PO-4
PSO-5	engageinactivitiesdirectlybenefitingthebroadercommunity and acquire job oriented knowledge	PO-3 PO-5

COURSE CODE	U21MTT11	CALCULUS			
	CORE-I	L	T	P	C
		5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto:		Cognitive Level
CO1	identifyareas inMathematics andstudyof functionexpansion	K1
CO2	understandtheconceptsofRadiusofCurvature,CartesianForm, p - r equations	K2
CO3	applytheconceptofchangeofvariablesindoubleandtriple integrals.	K3
CO4	applydouble,tripleintegraltofindtheareaandvolume respectively.	K3
CO5	applytheBetaandgammafunctiontosolvethemultiple integrals.	K4

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTT12	CLASSICAL ALGEBRA	L	T	P	C
	CORE-II		6	-	-	4

Course Outcome:

On the successful course completion, students will be able to:		Cognitive Level
CO1	knowledge in Binomial, Exponential, Logarithmic series and summation of series	K1
CO2	knowledge in method to find an approximate root of the equations	K2
CO3	apply the all test to find the convergence or divergence of an infinite series.	K3
CO4	find the number of positive and negative roots of polynomial equation	K3
CO5	analyze the relation between roots and coefficients of the polynomial equations	K4

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21PHA11	ANCILLARY PHYSICS	L	T	P	C
	ALLIED I		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Analyze center of gravity	K4
CO2	Learn about modulus, viscosity and surface tension of materials	K2
CO3	Study the characteristics of diode and transistor	K1
CO4	Understand about aberration and different properties of lenses	K2
CO5	Gain knowledge about atomic model and basic nuclear properties	K2

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21MTT21	ANALYTICAL GEOMETRY 3D	L	T	P	C
CORE III			5	-	-	4

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	familiarize the concept of direction cosines and projections	K1
CO2	identify different forms of equation of plane.	K1
CO3	analyze the symmetric form of equation of a line and the angle between a line and a plane.	K3
CO4	acquire the knowledge of coplanar lines, skew lines and its properties.	K3, K4
CO5	apply concept of a sphere and circle to determine their equations.	K4

K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6 – Create

COURSE CODE	U21PHA22	PHYSICS PRACTICAL	L	T	P	C
ALLIED II			-	-	5	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Able to Estimate Errors	K3
CO2	Analyze dimensional change of bar	K4
CO3	Determine viscosity of liquid	K4
CO4	Study the characteristics of diode and ICs	K3
CO5	Determine surface tension of liquid	K4

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21MTT31	VECTOR CALCULUS, FOURIER SERIES AND FOURIER TRANSFORM	L	T	P	C
CORE-V			5	-	-	4

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	demonstrate the operator of vector	K1
CO2	apply double and triple integration	K2
CO3	demonstrate the Fourier Transforms	K3
CO4	analyse half range series	K3
CO5	integrate equations of Fourier Transforms	K4

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTA33	ANCILLARY MATHEMATICAL STATISTICS-I	L	T	P	C
CORE-V			5	-	-	4

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	calculate mean, median and mode.	K1
CO2	be familiar with the elementary statistical methods of analysis of data and interpret them.	K1, K2
CO3	understand the concept of correlation and regression.	K3
CO4	relate Binomial, Poisson and Normal distributions.	K3
CO5	develop problem solving skill on applying statistical methods to real problems.	K4

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE311	CHOICE I	L	T	P	C
ELECTIVE I			NUMERICAL METHODS	4	-	-

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understand the equations using different methods under different conditions and numerical solutions of system algebraic equation	K1
CO2	apply various interpolation methods and finite difference concepts	K3
CO3	analyse differentiation and integration whenever and wherever routine methods are not applicable	K4

COURSE CODE	U21MTE312	CHOICEII	L	T	P	C
	ELECTIVEI	STOCHASTICPROCESS	4	-	-	3

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	rememberrandomvariableswithProbabilisticcondition	K1
CO2	understandMarkovchains,Markovprocessandalternate approach	K2
CO3	applythe conceptsinBirthandDeathDistributionProcess	K3
CO4	identifythetypeofthe DifferentialEquationsforAWiener Process -Kolmogorov Equation	K3
CO5	provethesamplingdistributiontheory	K3,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTE313	CHOICEIII	L	T	P	C
	ELECTIVEI	PRINCIPLESOFEXPERIMENTAL DESIGN	4	-	-	3

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	acquireskillsinstatisticalanalysis.	K1
CO2	calculatevaluessthroughdesigns.	K2
CO3	applytheconceptsthrough models.	K3
CO4	comparingresultsin Latinsquaredesign.	K3,K4
CO5	calculatingstandard errors.	K3,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTT42	SEQUENCEANDSERIES	L	T	P	C
COREVII			4	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandthefundamentalprinciplesof Analysis	K2
CO2	identifyconvergence anddivergenceof series	K2
CO3	applyvarious tests to findthelimit of aseries	K3
CO4	distinguishbetweenabsoluteconvergenceandordinary convergenceofaSeries.	K4
CO5	computetheradiusof convergenceofthepower series.	K4,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6– Create

COURSE CODE	U21BAT22	BUSINESSENVIRONMENT	L	T	P	C
CORE-IV			5	-	-	4

ExpectedCourseOutcomes:

Onthesuccessfulcompletionofthecourse, studentswill beable to:

Number	Courseoutcome	KnowledgeLevel (According to Bloom’sTaxonomy)
CO1	develop an understandingof the business environment	K2
CO2	explaintheGovernmentandpolitical environment	K2
CO3	understandtherelationsofsocietyandculturetothebusiness	K3
CO4	comprehendtheeconomicalenvironmentalfactorsthatareconduciveto the businesses	K4
CO5	have a simple and basic comprehension of the internationalscenarioabouttheborderlessbusinessworldduetot echnologicalchanges	K2

K2-Understand; K3-Apply; K4 -Analyze;

COURSE CODE	U21MTT41	STATICS	L	T	P	C
COREVI			4	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandtheactionofforcesonrigid bodies.	K1
CO2	analyzetheconceptofparallelforgesand moments.	K2
CO3	computeequationofcentral orbit.	K3
CO4	understandtheconceptoffriction.	K2
CO5	computeequationofequilibriumof strings.	K3

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTT42	SEQUENCEANDSERIES	L	T	P	C
COREVII			4	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandthefundamentalprinciplesof Analysis	K2
CO2	identifyconvergence anddivergenceof series	K2
CO3	applyvarious tests to findthelimit of aseries	K3
CO4	distinguishbetweenabsoluteconvergenceandordinary convergenceofaSeries.	K4
CO5	computetheradiusof convergenceofthepower series.	K4,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTA44	ANCILLARY MATHEMATICAL STATISTICS - II	L	T	P	C
	ALLIEDIV		4	-	-	4

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understand Theoretical Continuous Distributions	K2
CO2	estimate the parameters of population on the basis of given information, Correlation and regression.	K3
CO3	make decision using t-test and F-test, z-test.	K4
CO4	analyze the association between two or more groups and populations.	K4
CO5	evaluate sampled distributions	K5

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE421	CHOICE I	L	T	P	C
	ELECTIVE-II		PROGRAMMING IN C & C++	3	-	-

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understand the concepts and Programming	K2
CO2	discuss the representation and appropriate use of primitive data types	K1
CO3	describe the object-oriented programming approach in connection with C++	K2
CO4	apply the concepts of object-oriented programming	K3
CO5	evaluate the process of data file manipulations using C++	K5

K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE422	CHOICEII	L	T	P	C
ELECTIVE-II		AUTOMATA THEORY	3	-	-	3

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understand basic concepts in Lattices, formal language and automata theory	K2
CO2	demonstrate abstract models of computing, including deterministic (DFA), non-deterministic (NFA), Push Down Automata (PDA)	K3
CO3	apply theoretical knowledge to relate practical problems to languages and automata	K4
CO4	analyze the logic and methods behind grammars and recognizers for different formal languages	K5
CO5	formalize the structure of a given formal language using regular expressions and context-free grammars and implementation of a lexical analyzer.	K5

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE423	CHOICEIII	L	T	P	C
ELECTIVE-II		KNOWLEDGE FOR INDUSTRY	3	-	-	3

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	know the reason for adopting Industry knowledge 4.0 and Artificial Intelligence	K1
CO2	understand the need for digital transformation	K2
CO3	apply the industry 4.0 tools	K3
CO4	analyze the applications of Big Data	K4
CO5	examine the applications and security of IoT Applications	K4

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTT51	DYNAMICS	L	T	P	C
CORE- VIII			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	determinethepathandrangoofaprojectileinany direction.	K1
CO2	understandtheconceptofenvelopingparabola.	K2
CO3	knowledgeaboutcollisionofelasticbodies.	K2
CO4	computeequationofsimpleharmonicequation.	K3
CO5	understandthemotionunderthecentralforces.	K2,K4

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTT52	ABSTRACTALGEBRA	L	T	P	C
CORE-IX			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	Knowledgeofelementaryconcepts inAbstractAlgebra	K1
CO2	Useappropriatetechniquesandreasoningtoprovethe properties of groups	K2
CO3	Understanding theconcept ofhomomorphismand isomorphism in groups	K1,K2
CO4	Extendtheresultsofgroupsto rings	K3
CO5	Extendtheresultsofringstofields	K4

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6-Create

COURSE CODE	U21MTT53	REALANALYSIS	L	T	P	C
CORE-X			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto:		Cognitive Level
CO1	Understandthefundamentalpropertiesofrealnumberstothe formal development of real analysis	K2
CO2	Extendedrealnumberssysteminthecomplexfielddeveloping the theory of real analysis	K3
CO3	Demonstrateanunderstandinglimitandhowtheyare use beingsequencesandseries.	K3
CO4	Analysisvariousmathematicalproofsofbasicresultsin connectedness.	K4
CO5	Evaluatevariousmathematicalproofsofbasicresultsin continuity.	K4,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6– Create

COURSE CODE	U21MTT54	OPERATIONSRESEARCHI	L	T	P	C
CORE-XI			-	5	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandtheapplicationofORandframeaLPPProblemwith solution – graphic and through solver add in excel	K1
CO2	analyzeandinterpretresultsoftransportationandproblemusing appropriate method	K2
CO3	evaluatesimplemodel ofL.P.P.	K3
CO4	solutionsofassignmentandproblemusingappropriatemethod	K3
CO5	evaluate the dynamics of inventory managements principles, concepts of customer demand, distribution and product transformation process	K4,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6– Create

COURSE CODE	U21MTT55	THEORY OF NUMBERS	L	T	P	C
	CORE-XII		5	-	-	4

Course Outcome:

On the successful course completion, students will be able to:		Cognitive Level
CO1	Understand factual knowledge including the mathematical notation and terminology of number theory.	K2
CO2	Construct mathematical proofs of statement and find counter examples to false statements in Number Theory.	K2
CO3	Apply theoretical knowledge to problem of computer security	K3
CO4	Analyze the logic and methods behind the major proofs in number theory	K4
CO5	Determine multiplicative inverses, modulus and use to solve linear congruences	K5

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE531	CHOICE-I	L	T	P	C
	ELECTIVE III	FUZZY SETS AND FUZZY NUMBERS	3	-	-	3

Course Outcome:

On the successful course completion, students will be able to:		Cognitive Level
CO1	understand concepts between classical sets and fuzzy sets.	K1
CO2	understand the membership functions.	K1
CO3	understand and Apply of basic operations on fuzzy sets.	K1, K3
CO4	analyze the properties and principles of fuzzy sets.	K4
CO5	evaluate arithmetical ability on fuzzy numbers.	K5

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6- Create

COURSE CODE	U21MTE532	CHOICE-II	L	T	P	C
ELECTIVEIII		MATHEMATICALMODELLING	3	-	-	3

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understand basic definitions from Mathematical Modelling through Ordinary Differential Equations of Firstorder	K2
CO2	understandMathematicalModellingthroughOrdinary Differential Equations of First order problems	K2,K3
CO3	apply Mathematical Modelling through Ordinary DifferentialEquationsofFirstorderto applications	K2,K3
CO4	understand simple models through Difference Equations	K2
CO5	evaluatemodelsthroughGraphs	K2,K3,K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTS53	MATHEMATICALAPTITUDE	L	T	P	C
SKILLBASED ELECTIVE III			2	-	-	2

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandthebasicconceptsofQuantitativeAbility	K2
CO2	understandthebasicconceptsofLogicalReasoning Skills.	K2
CO3	acquiresatisfactorycompetencyinuseofVerbal Reasoning	K2
CO4	solvecampusplacementsaptitudepaperscoveringQuantitative Ability, Logical Reasoning and Verbal Ability	K3,K4
CO5	competeinVarious competitiveexams	K3,K4

K1-Remember;K2-Understand;K3-Apply,K4-Analyse,K5-Evaluate;K6-create

COURSE CODE	U21MTT61	LINEARALGEBRA	L	T	P	C
COREXIII			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	understandVectorSpace,QuotientspaceDirectsum,linear span and linear independence, basis and inner product.	K1,K2
CO2	applythelineartransformations,rank,nullity.	K3
CO3	findthecharacteristiccequation,eigenvaluesandeigen vectors of a matrix.	K3
CO4	proveCayley-Hamiltontheorem,Schwartzinequality, Gramschmidt orthogonalisation process.	K3
CO5	evaluatethesystemofsimultaneouslinearequations.	K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6– Create

COURSE CODE	U21MTT62	COMPLEXANALYSIS	L	T	P	C
COREXIV			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	remembersums,products,quotients,conjugate,modulus,and argument of complex numbers and exponentials andintegral powers of complex numbers	K1
CO2	understand the significance of differentiability for complex functionsandbefamiliarwiththeCauchy-Riemannequations.	K2
CO3	findresiduesandevaluatecomplexintegrals,realintegralsusing the residue theorem.	K3
CO4	applyCauchy’sresiduefunctionsandproblem.	K3,K4
CO5	determinewhetheragivenfunctionis analytic.	K5

K1-Remember;K2 -Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6– Create

COURSE CODE	U21MTT63	OPERATIONRESEARCHIII	L	T	P	C
COREXV			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		CognitiveLevel
CO1	rememberthe natureandfeatureofOperations Research	K1
CO2	findthereplacementperiodofequipmentthatsuddenly/gradually	K2
CO3	findEOQproblemswith pricebreaks	K2,K3
CO4	find inventory decisions costs using deterministic inventory problems with no shortages /with shortages	K3
CO5	understandandevaluateofCPMandPERT DefinebasiccomponentsofNetworkandfind critical path	K1,K3,K5

K1-Remember;K2-Understand;K3-Apply;K4-Analyze; K5-Evaluate;K6- Create

COURSE CODE	U21MTT64	GRAPHTHEORY	L	T	P	C
COREXVI			5	-	-	4

CourseOutcome:

Onthesuccessfulcoursecompletion,studentswillbeableto		Cognitive Level
CO1	rememberandunderstandthetheoreticalknowledge of graph theory to solve problems.	K1,K2
CO2	understand theories and concepts to test and validate intuition and independent mathematical thinking in problem solving.	K2
CO3	applynetworksusingthemainconceptsofgraph theory.	K3
CO4	usedefinitionsingraphtheorytoAnalyzeexamples and to distinguish examples from non-example.	K4
CO5	evaluategraphtheoryinacoherentandtechnically accurate manner.	K5

COURSE CODE	U21MTT65	DISCRETE MATHEMATICS	L	T	P	C
COREXVII			5	-	-	4

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understanding of some Logic truth tables	K2
CO2	prove/define basic normal forms	K3
CO3	to analyse the concepts of free and bound variable formulas	K4
CO4	understanding the concepts of Grammars	K4
CO5	basic concepts of Languages and basic definitions of Automata	K6

K1-Remember; K2-Understand; K3-Apply, K4-Analyse, K5-Evaluate; K6-create

COURSE CODE	U21MTE641	CHOICE-I	L	T	P	C
ELECTIVE-IV			ASTRONOMY	3	-	-

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understanding about natural science	K2
CO2	knowledge about the celestial objects	K3
CO3	to analyse the equation of time and seasons	K4
CO4	categorize various means in solving Time	K4
CO5	basic concepts of calendar and conservation Time	K6

COURSE CODE	U21BAA22	COMPUTER APPLICATIONS-TALLY(PRACTICALS)	L	T	P	C
ALLIED-II			-	-	5	4

Expected Course Outcomes:

On the successful completion of the course, students will be able to:

Number	Course outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	use Tally to create personal business documents following current professional and/or industry standards.	K2
CO2	create scientific and technical documents incorporating the billing procedures	K2
CO3	develop entries for creation of vouchers.	K3
CO4	Design bills for implementation of taxation aspects.	K4
CO5	design and construct financial statements after considering taxes and GST.	K5

K1-Remember; K2 -Understand; K3-Apply; K4-Analyze; K5-Evaluate;

COURSE CODE	U21MTS64	OPERATIONS RESEARCH LAB	L	T	P	C
SKILL BASED ELECTIVE-IV			2	-	-	2

Course Outcome:

On the successful course completion, students will be able to		Cognitive Level
CO1	understand the basic concepts and application of operations research in various fields	K1
CO2	know principles of construction of mathematical models of conflicting situations.	K2
CO3	analyze the relationship between a linear program and its dual	K3
CO4	techniques constructively to make effective decisions in business and solve problems in industry	K4
CO5	build and solve all problems by using software.	K4

K1-Remember; K2-Understand; K3-Apply, K4-Analyze, K5-Evaluate; K6-create

B.Sc.FOODS&NUTRITION

Course Code	U21FNT11	FOODSCIENCE	L	T	P	C
CORE-I			5	-	-	4

COURSE OUTCOMES:

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	energy requirements and the Recommended Dietary Allowances.
K2	CO2	nutritive value, understand the cooking quality factors, and develop skills in the preparation and storage of milk and egg products.
K3	CO3	nutritional classification, understand the changes in pigments and acquire skills in preserving nutrients and pigments in the processing and storage of vegetables and fruits.
K4	CO4	determine the smoking point of any cooking oils and the stages of sugar cookery
K5	CO5	Assess the effect of the addition of acid, fat, salt, water, and sugar on the texture of flesh food quality.

Course Code	U21FNP11	FOODSCIENCE PRACTICAL	L	T	P	C
CORE-II			-	-	6	4

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	fundamentals of cereals, pulses, fruits & vegetable processing, equipment, and products.
K2	CO2	Demonstrate the different methods of cooking.
K3	CO3	Choose Appropriate Cooking Method to Conserve Nutrients.
K4	CO4	Evaluate the basic methods and principles involved in cooking.
K6	CO5	evaluate the change of pigment during cooking

Course Code	U21FNT22	HUMANPHYSIOLOGY	L	T	P	C
CORE-IV			5	-	-	4

COURSE OUTCOMES:

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Understand the Structure and Functions of the various organs systems of the body.
K2	CO2	Compare the digestive and excretory systems and infer the mechanisms of digestion and excretion in human beings.
K3	CO3	Relate the Structure with Functions of the tissues and organs.
K4	CO4	Comprehend the Mechanism of Action of Organs.
K4	CO5	Discuss the role of hormones and functions of human reproductive System.

Course Code	U21FNT31	NUTRITION THROUGH LIFECYCLE	L	T	P	C
CORE-V			5	-	-	4

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Physiological changes and hormones are involved during pregnancy and lactation.
K3	CO2	Plan a healthy food choice for physical, physiological, psychological aspects in infancy.
K4	CO3	the students will be able to relate nutrient needs to developmental stages and plan diets that will adequately meet nutritional needs During childhood.
K4	CO4	the student will learn the impact of growth and development in Arriving at the nutritional needs of adolescents.
K5	CO5	Determine nutrient requirements during old age.

Course Code	U21FNT41	THERAPEUTIC NUTRITION	L	T	P	C
CORE-VI				4	-	-

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Plan and prepare a standardized hospital diet for the needed patients.
K2	CO2	Understand the concept, purpose, and principles of diet therapy and the role and types of dietitians.
K3	CO3	Delineate various deficiency disorders concerning their prevalence, causes, symptoms, and preventive measures.
K4	CO4	Discuss the kinds of commercial formulas available for oral and enteral feedings.
K5	CO5	Compare the food exchange list in the control of diabetes and complications.

Course Code	U21FNP42	THERAPEUTIC NUTRITION PRACTICAL	L	T	P	C
CORE VII				-	-	4

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Design the principles of meal planning, diet therapy, therapeutic diets, and nutrition support.
K3	CO2	Make appropriate dietary modifications for various disease conditions based on the pathophysiology.
K4	CO3	Demonstrate the method to plan and prepare a diet for various diseases.
K5	CO4	Evaluate the concept of food groups and exchanges for planning and preparing a balanced diet for various age groups and physiological conditions.
K6	CO5	Create skill development in planning therapeutic diets using food exchange lists.

Course Code	U21FNT61	NUTRITIONANDFITNESS	L	T	P	C
CORE-XIII			5	-	-	4

COURSEOUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Outline the self-responsibility for personal health and wellness.
K4	CO2	Analyze the role of nutrition in sports.
K2	CO3	Discuss the various parameters used to find health status.
K3	CO4	Evaluate the effect of exercise on various nutrient metabolisms.
K2	CO5	Compare different exercise methods and learn their application.

Course Code	U21FNT62	FAMILYRESOURCEMANAGEMENT	L	T	P	C
CORE-XIV			5	-	-	4

COURSEOUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	improve their ability in the management of family Resources
K2	CO2	understand and apply the basic principles of art in Interior decoration.
K2	CO3	understand the elementary principles of planning a house and its interior arrangement.
K3	CO4	to use the principles of design in day-to-day life.
K5	CO5	the importance of management in family and personal living.

Course Code	U21FNT63	FUNCTIONALFOODSANDNUTRA	L	T	P	C

CORE-XV	CEUTICALS	5	-	-	4
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COURSEOUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Analyze the photochemical compounds, physiological compounds and functional of natural as basis well of as various synthetic
K5	CO2	Compare functional food and nutraceuticals in plant sources to evaluate the potential health benefit of plant-based bioactive components
K4	CO3	Assess pro-biotics, prebiotics, and symbiotics and evaluate the potential health benefits.
K4	CO4	Explain the regulatory issues related to nutraceuticals and functional foods.
K5	CO5	Evaluate the Consumer acceptability and marketing of potentially available functional food Products

Course Code	U21FNT64	NUTRITION IN SPECIAL CON	L	T	P	C
	CORE-XVI	DITION	5	-	-	4

Course outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	prevention of public health/social health problems in the country.
K5	CO2	workable knowledge to treat common illnesses at home.
K4	CO3	combat various National nutritional emergencies
K4	CO4	epidemic diseases.
K5	CO5	difficulties involved in feeding children with special needs.

Course Code	U21FNE312	BAKERYANDCONFECTIONERY	L	T	P	C
ELECTIVE-I			4	-	-	3

COURSEOUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	understand the bakery science and its application on processing.
K3	CO2	identify the basic ingredients to prepare bakery and confectionery products.
K4	CO3	assess various methods in the preparation of modified bakery products.
K4	CO4	choose the appropriate bakery equipment based on the specific needs.
K6	CO5	check faults and provide remedies for bakery products.

Course Code	U21FNE421	FOODHYGIENEANDSANITATION	L	T	P	C
ELECTIVEII			3	-	-	3

COURSEOUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Classify the common kinds of physical/chemical contamination and simple measures to prevent food poisoning.
K2	CO2	Explain how high standards of personal hygiene for food handlers can be achieved.
K1	CO3	Define integrated practices for economic control of pests
K6	CO4	Design food hygiene and sanitation measures to control the spread of microorganisms.
K5	CO5	Criteria to fulfil water safety and environmental requirements.

Course Code	U21FNE422	L	T	P	C
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ELECTIVESII	COMMUNICATIONANDMEDIASKILLS	3	-	-	3
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Courseoutcomes

Onsuccessfulcompletionofthecourse,thestudentswillbeabletogainknowledgeabout

K2	CO1	Understandingofcommunication,modelsofcommunication.
K3	CO2	AcquireskillsinthePreparationofvisualaids.
K2	CO3	Collectfirst-handinformationinvisitingmediacentres.
K3	CO4	Abletoorganizeexhibitionsatthevillagelevel.
K4	CO5	Abletoeffectivelyusemoderncommunicationtechnologies.

Course Code	U21FNE423	DIETFORDISEASES	L	T	P	C
	ELECTIVESII		3	-	-	3

COURSEOUTCOMES

Onsuccessfulcompletionofthecourse,thestudentswillbeabletogainknowledgeabout

K2	CO1	Planandprepareastandardizedhospitaldietfortheneededpatients.
K2	CO2	Understandtheconcept,purpose,andprinciplesofdiettherapyandtheroleandtypesofdieticians.
K3	CO3	Applyvariousdeficiencydisordersconcerningtheirprevalence,causes,symptoms,andpreventivemeasures.
K4	CO4	Discusskindsofcommercialformulasavailablefororalandenteral feedings.
K4	CO5	Comparethefoodexchangelistinthecontrolofdiabetesandcomplications.

Course Code	U21FNE531	FOODSAFETYANDQUALITYCONTROL	L	T	P	C
	ELECTIVESIII		3	-	-	3

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Discuss different food safety and quality aspects.
K2	CO2	gain knowledge on food safety and food laws and study about quality
K4	CO3	Identify objectives, Importance, functions of quality control, stages of quality control.
K3	CO4	Apply safety principles related to the food industry.
K4	CO5	Analyze basic principles of HACCP, SQF, and ISO and sanitation.

Course Code	U21FNE643	FASHION DESIGN	L	T	P	C
ELECTIVE-IV			3	-	-	3

Course outcomes

On successful completion of the course, the students will be able to gain knowledge about

K3	CO1	Identify the role and functions of clothing and recognize the factors affecting selection and evaluation of clothing.
K2	CO2	Explain the concept of fashion, its terminology, sources, and factors affecting it.
K2	CO3	Describe the global fashion industry and its leading designers.
K4	CO4	Classify and illustrate various components of the garment.
K3	CO5	Apply the knowledge of elements and principles in design interpretation.

B.A.Tamil

COURSE CODE	U21TAT11	CORE – I : rkfhy ,yf;fpak;	L	T	P	C
CORE I			5	-	-	4

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the poetic tactics of the modern writers
K1, K2	CO 2	understand the notable features of literary genres and flow of writing
K2, K4	CO 3	aware of the salient features of texts
K2, K3	CO 4	apply and attempt to write creatively
K4,	CO5	critically analyze the works of great writers and will be able to create literary pieces on their own

COURSE CODE	U21TAT12	ed;D}y; vOj;jjpfhuk; (le;J ,ay;fs;)	L	T	P	C
CORE II			6	-	-	4

Course Outcome

At the end of the course, the students will be able to:

K1, K2	CO1	acquire knowledge of linguistic conventions for reading, writing and speaking.
K1, K2	CO2	use targeted grammatical structures appropriately in oral and written production.
K5, K4	CO3	analyse the grammatical structure of sentences in Tamil texts.
K5, K1	CO4	communicate correctly in spoken and written Standard Tamil.
K3	CO5	make inferences and predictions based on comprehension of a text.

COURSE CODE	U21TAA11	jkpo; ,yf;fpa tuyhW	L	T	P	C
ALLIED I rhHG ghlk;			5	-	-	4

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the poetic tactics of the classical works
K1, K2	CO 2	understand the difference between classical Tamil literature and modern literature
K2, K4	CO 3	aware of the salient features of literature through the ages
K2, K3	CO 4	know the trend of literature
K4, K6	C05	critically analyze the literature with historical background

COURSE CODE	U21TAT22	ed;D}y; - nrhy; mjpfhuk; - 5 ,ay;fs;	L	T	P	C
CORE IV			5	-	-	4

Course Outcome

At the end of the course, the students will be able to:

K1, K2	CO1	acquire knowledge of linguistic conventions for reading, writing and speaking.
K1, K2	CO2	use targeted grammatical structures appropriately in oral and written production.
K5, K4	CO3	analyse the grammatical structure of sentences in Tamil texts.
K5, K1	CO4	communicate correctly in spoken and written Standard Tamil.
K3	CO5	make inferences and predictions based on comprehension of a text.

COURSE CODE	U21TAT31	kJiu ika ,yf;fpak;	L	T	P	C
CORE V				5	-	-

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the poetic tactics of the Tamil writers to highlight the significance of Madurai city which not only serves as the capital of Pandya kingdom but also remains as the seat of Tamil sangam since Sangam Age.
K1, K2	CO 2	understand the notable features of literary genres and flow of writing
K2, K4	CO 3	aware of the salient features of texts
K2, K3	CO 4	apply and attempt to appreciate creatively
K4,	C05	critically analyze the works of great writers

COURSE CODE	U21TAE311	ehl;Lg;Gwtpay;	L	T	P	C
ELECTIVE – I tpUg;gg; ghlk; -I				4	-	-

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the emotions of common people.
K1, K2	CO 2	understand the notable features of significant events through folk literature.
K2, K4	CO 3	aware of their lifestyle, beliefs and cultural tradition.
K2, K3	CO 4	apply and attempt to know the value of folk tradition.
K4,	CO5	critically analyze the life of people.

COURSE CODE	U21TAT42	fhg;gpa ,yf;fpak;	L	T	P	C

CORE VII Kjd;ikg; ghlk; - VII		4	-	-	4
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COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the trend analysis of growth of Tamil Epic literature
K1, K2	CO 2	develop critical thinking of literary genres and content handled in Tamil epic tradition
K2, K4	CO 3	will get knowledge about the growth of Tamil Epic literature.
K2, K3	CO 4	analyze and interpret epics written in Tamil.
K4,	CO5	critically analyze the works of great writers

COURSE CODE	U21TAE421	xg;gpay; ,yf;fpak;	L	T	P	C
ELECTIVE - II tpUg;gg; ghlk; - II			3	-	-	3

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the historical background of the literary works of Tamil and other languages..
K1, K2	CO 2	understand the difference between classical Tamil literature and modern literature
K2, K4	CO 3	aware of the salient features of literature through the ages: and Develop critical thinking of literary genres of Tamil and other languages..
K2, K3	CO 4	know the trend of literature of Tamil and other languages
K4, K6	CO5	critically analyze the literature Interpret and appreciate the format and purpose of literature at different periods of same language and also in different languages..

COURSE CODE	U21TAT61		L	T	P	C
CORE XIII		rq;f ,yf;fpak; Sanga Ilakkiyam	5	-	-	4
Kjd;ikg; ghlk; - XIII						

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the poetic tactics of the ancient writers
K1, K2	CO 2	understand the notable features of literary genres and flow of writing at sangam age.
K2, K4	CO 3	aware of the salient features of classical texts
K2, K3	CO 4	attempt to appreciate the nuances of ancient literatures
K4,	CO5	critically analyze the works of great writers

COURSE CODE	U21TAT62		L	T	P	C
CORE XIV		jkpo; ePjp ,yf;fpak; Tamil-Neethilakiyam	5	-	-	4
Kjd;ikg; ghlk; - XIV						

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the values adhered by people all through the life for moral well-being
K1, K2	CO 2	understand the noble ethics taught through literature.
K2, K4	CO 3	aware of the values and ethics upheld by Tamil society through Literature
K2, K3	CO 4	attempt to appreciate the suitability of values insisted by ancient scholars
K4	CO5	critically analyze the works of great writers

COURSE CODE	U21TAS61		L	T	P	C
SBE-I		fy;ntl;bay;	2	-	-	3
jpwd;rhH tpUg;gg; ghlk;						

COURSE OUTCOMES

Upon completion of this course the students will be able to

K1, K2	CO1	know the historical background of the Inscriptions.
K1, K2	CO 2	understand the growth of Inscriptions in temples from time to time.
K2, K4	CO 3	aware of the salient features of temple culture through

1. Program Specific Outcomes:

PSO1	Demonstrate, solve, and comprehend major topics in all physics fields.
PSO2	Students will show mastery of mathematics and the mathematical principles required for a thorough grasp of physics.
PSO3	Design, carry out, record, and analyze the outcomes of Physics experiments using critical thinking and scientific knowledge.
PSO4	Provide essential foundations, as well as a thorough understanding of underlying principles and contemporary advances.
PSO5	Ability to plan and carry out their own creative ideas in the form of projects, product development, and design.

COURSE CODE	U21PHT11	PROPERTIES OF MATTER AND SOUND	L	T	P	C
	CORE-I		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Evaluate modulus of different materials	K3
CO2	Acquire knowledge on properties of liquids	K2
CO3	Understand the physics of sound and its applications	K2
CO4	Learn about different methods of producing Ultrasonic waves and its applications	K1
CO5	Apply the theories in building acoustics	K3

K1-Remember K2-Understand K3-Apply K4-Analyze
K5-Evaluate

COURSE CODE	U21PHT21	MECHANICS	L	T	P	C
	CORE-III		5	-	-	4

CourseOutcomes (CO):

CO	Learningoutcome	Remarks
CO1	Learnaboutlawsinvolvedinmechanics	K1
CO2	Understandtheforcesimposedonadynamicrigidbody	K2
CO3	Determinegravitationalfieldandpotentialvalue	K3
CO4	Applyconservation lawsin collision experiments.	K3
CO5	Understandthe concepts ofstaticandhydrodynamics	K2

K1-Remember K2-Understand K3-Apply K4-Analyze
K5-Evaluate

COURSE CODE	U21PHT22	HEATANDTHERMODYNAMICS	L	T	P	C
	CORE-IV		5	-	-	4

CourseOutcomes (CO):

CO	Learningoutcome	Remarks
CO1	Understand the basics of thermodynamics and theirapplications	K2
CO2	Learnthebasicsoflowtemperatureandhowtoconstruct a successful experiment using low temperature.	K2
CO3	Learnexperimental Methods ToDetermineThetransmissionofheat.	K2
CO4	Understandthekinetictheoryof gas	K2
CO5	Analyzethelawsofthermodynamicsandmaxwell'sThermodynamical relations	K4

K1-Remember K2-Understand K3-Apply K4-Analyze
K5-Evaluate

COURSE CODE	U21PHT31	OPTICS AND SPECTROSCOPY	L	T	P	C
	CORE-V		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Learn about various lens and its aberrations	K1
CO2	Acquire knowledge about interference and interferometers	K2
CO3	Understand about the diffraction phenomenon and resolving power in optical instruments	K3
CO4	Study about polarization	K2
CO5	Apply different spectroscopic techniques to obtain information about the molecule	K2

K1-Remember K2-Understand K3-Apply K4-Analyze
K5-Evaluate

COURSE CODE	U21PHT41	ELECTRICITY AND ELECTROMAGNETISM	L	T	P	C
	CORE-VI		4	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Study about magnetic field produced in electric circuits	K1
CO2	Learn about capacitor and its type	K1
CO3	Acquire knowledge about electromagnetic induction	K2
CO4	Analyse and solve electrical circuits with dc and ac source	K4
CO5	Gain knowledge about Maxwell Equation	K2

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHP42	PRACTICAL-II	L	T	P	C
	CORE-VII		-	-	4	4

CourseOutcomes(CO):

CO	Learningoutcome	Remarks
CO1	Abletocharacterizediodes	K3
CO2	Determinedispersiveandresolvingpower ofprism	K4
CO3	DeterminewavelengthofSodiumvaporlight	K4
CO4	Analyzeworkingof differentflipflop	K3
CO5	Verifybridges and LCRconnections	K4

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHE431	CHOICE-I	L	T	P	C
	ELECTIVE-II	MEDICALPHYSICS	3	-	-	3

CourseOutcomes (CO):

CO	Learningoutcome	Remarks
CO1	Understands BasicAnatomicalTerminology	K2
CO2	Appliesmedicalphysicstoknowthedifferentaspects ofthe body	K3
CO3	Analyzetheperformance oftransducer	K4
CO4	Learn about Electro Cardio Graph(ECG)and itsapplication	K3
CO5	StudyaboutEEG andEMGand itsapplication	K3

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT51	ATOMIC AND NUCLEAR PHYSICS	L	T	P	C
	CORE-VIII		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Acquire knowledge on the fundamental principles governing the structure of the atom	K1
CO2	Gain knowledge in atomic physics to follow courses at the Advanced level.	K2
CO3	Obtain knowledge about fine structure of spectral lines	K2
CO4	Understanding on the basics of nuclear physics that treats atomic nuclei as self-bound many-body quantum systems	K2
CO5	Learn about nuclear reaction and radioactivity	K1

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT52	CLASSICAL AND STATISTICAL MECHANICS	L	T	P	C
	CORE-IX		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Knowledge about mechanics of the particles	K1
CO2	Differentiate Lagrangian equation of systems for conservative and non-conservative systems	K3
CO3	Apply Hamiltonian function for various applications	K3
CO4	Understand about classical and quantum statistics	K1
CO5	Acquire knowledge to apply the principles of statistical mechanics to selected problems.	K2

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT53	BASICS OF DATA COMMUNICATION AND PROGRAMMING IN C	L	T	P	C
	CORE-X		5	-	-	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Gains knowledge about network and transmission mode	K1
CO2	Understand about series and parallel transmission	K2
CO3	Differentiate analog and digital network	K4
CO4	Study about basic structure of C Programming	K2
CO5	Understand about statement and commands used in C programming	K2

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHP53	PRACTICAL-III	L	T	P	C
	CORE-XII		-	-	5	4

Course Outcomes (CO):

CO	Learning outcome	Remarks
CO1	Able to fabricate bridges and measure inductance	K3
CO2	Compare EMF value using potentiometer	K4
CO3	Determine wavelength of visible light	K4
CO4	Compare voltmeter and chargesensitivity using spot galvanometer	K3
CO5	Determine Cauchy's constant	K4

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT61	RELATIVITY AND QUANTUMMECHANICS	L	T	P	C
	CORE-XIII		5	-	-	4

CourseOutcomes (CO):

CO	Learningoutcome	Remarks
CO1	Gainknowledgeintheconceptsofspecialandtheoryofrelativity	K1
CO2	Evolveideasaboutdualnatureofmatter	K2
CO3	UnderstandaboutSchrodingerequation	K2
CO4	Learnaboutdifferentoperatormechanism	K2
CO5	ApplyofSchrödinger's equationtomicrosystem	K3

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT62	SOLIDSTATEPHYSICS	L	T	P	C
	CORE-XIV		5	-	-	4

CourseOutcomes(CO):

CO	Learningoutcome	Remarks
CO1	Understandaboutdifferentcrystalstructure	K1
CO2	Analyzestructureofdifferentcrystallinematerial anddefects	K4
CO3	Abletoknowabouttheinteratomicforcesandbondsbtwe ensolids	K2
CO4	Analyzethevariouskindsofmagneticmaterials	K4
CO5	Understandthedielectricpropertiesofcrystallinestructures.	K2

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHT63	MATHEMATICALPHYSICS	L	T	P	C
	CORE-XV		5	-	-	4

CourseOutcomes (CO):

CO	Learningoutcome	Remarks
CO1	Able to apply vector and scalar operator in different applications	K3
CO2	Understand different orders of differential equation	K2
CO3	Able to apply Matrix and functions of matrices in different problems.	K4
CO4	Enhance problem solving skill using Laplace transform	K3
CO5	Solve different problems using Partial Differential equations	K4

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

COURSE CODE	U21PHP64	PRACTICAL-IV	L	T	P	C
	CORE-XVII		-	-	5	4

CourseOutcomes(CO):

CO	Learningoutcome	Remarks
CO1	Design Half and Full subtractor	K3
CO2	Study the characteristics of diode and transistor	K4
CO3	Analyze arithmetical operation using OP-Amp	K4
CO4	Construct oscillator and multivibrator and determine its frequency.	K3
CO5	Verify Demorgan's theorem	K4

K1-Remember K2-Understand K3-Apply K4-Analyze K5-Evaluate

DEPARTMENT OF COMPUTER SCIENCE

Programme Specific Outcomes

The students at the time of graduation will be able to

PSO1: Impart the fundamental principles and methods of Computer Science in a wide range of applications

PSO2: Apply domain knowledge and problem solving skills to solve real time

problems **PSO3:** Ensure career opportunities and empower good employability skills in IT sector **PSO4:**

Identify and utilize the tools and techniques in the design and development of Software

Products

PSO5: Ability to work and communicate effectively in interdisciplinary environment

CODE	U21CST11	PROGRAMMING IN C	L	T	P	C
CORE-I			5	-	-	-

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO1: Apply the syntax and semantics of C language – K3

CO2: Utilize the concept of functions and arrays in solving real world problems –

K3 **CO3:** Demonstrate structures, union and pre-processing techniques in C –

K1 **CO4:** Design real world problems using pointers and file concept – K3

CO5: Develop problem solving skills using C language – K2

CODE	U21CSP11	PROGRAMMING IN CLAB	L	T	P	C
CORE-II			-	-	6	-

COURSE OUTCOMES

On the successful completion of the course, students will be able to

CO1: Develop and execute programs using Operators and control Structures – K2

CO2: Develop programs in C to solve any kind of real world problem – K2

CO3: Apply the programming concepts of C in the standalone applications. – K3

CO4: Have a depth understanding in C program features – K2

CO5: Develop programming skills in C language – K2

CODE	U21CSA11	DISCRETE MATHEMATICS	L	T	P	C
ALLIED-I			5	-	-	-

COURSE OUTCOMES:

After successful completion of the course, students shall be able to:

CO1: Understand the complexity of computational problems – K2

CO2: Think about the design of formal language which would be able to address any real time problem – K1

CO3: Improve the working flow of computational models – K2.

CO4: Evaluate Boolean functions using the properties of Boolean algebra – K2

CO5: Simplify Boolean expressions using Boolean algebra – K2

Course Code	U21CST21	FUNDAMENTALS OF DATA STRUCTURES	L	T	P	C
CORE III			5	-	-	4

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO1: Describe the basics of Ordered Lists and Representation of Arrays – K1

CO2: Apply the knowledge of Linked list for solving problem in the real world. – K3

CO3: Demonstrate the usage of Binary trees and Representation of Trees – K2

CO4: Illustrate the performance of Graphs representation and spanning Trees – K4

COURSE CODE	U21CSP22	DATA STRUCTURES USING C LAB	L	T	P	C
CORE-IV			-	-	5	4

COURSE OUTCOMES:

Upon successful completion of the course the students will be able to

CO1: Apply the concepts to solve problems using C programming language -

K3CO2: Implement the basic data structures using C – K1

CO3: Solve real world problems using C programming language –

K3CO4: Recognize the importance of Data Structure features – K4

CO5: Create linked list using stack operations – K5

COURSE CODE	U21CSA22	DIGITALPRINCIPLESANDCOMPUTERORGANIZATION	L	T	P	C
	ALLIEDII		5	-	-	4

COURSE OUTCOMES:

Upon successful completion of the course the students will be able to

CO1: Understand the hardware and software types and components of the computer –K2

CO2: Recognize the problem-solving fundamental keypoints. –K1

CO3: Sketch out the representation of numbers and codes in the computer –K1.

CO4: Know the digital computers internal components and the execution of the instructions – K2

CO5: Understand the hierarchy of memory management and usage –K1

COURSE CODE	U21CST31	OBJECT ORIENTED PROGRAMMING WITH JAVA	L	T	P	C
	CORE-V		5	-	-	4

COURSE OUTCOMES:

Upon successful completion of the course the students will be able to

CO1: Know the basics of OOP and the syntax of Java language –K1

CO2: Empower the knowledge of Input/Output functions with file manipulations using I/O –K2

CO3: Analyze GUI programming applications using AWT packages –K4

CO4: Develop Java based Applications using GUI and database Connectivity

CO5: Create knowledge about the file concept in Java –K1

COURSE CODE	U21CSE312	CHOICEII	L	T	P	C
ELECTIVE -I		GRAPHICSUSINGC++-LAB	-	-	4	3

COURSE OUTCOMES:

Upon successful completion of the course the students will be able to

CO1: Apply the concepts to solve graphical primitives using C++ programming language –

K3CO2: Implement the 2D&3D transformations using C++ -K2

CO3: Solve the real world problems using the features of clipping algorithm – K2CO4:

Recognize the importance of Composite transformations & its features –

K1CO5: Realize the importance of composite transformations and its properties –K1

COURSE CODE	U21CST41	WEBTECHNOLOGY	L	T	P	C
COREVI			4	-	-	4

COURSE OUTCOMES

On the successful completion of the course, students will be able to

CO1: Learn to design web pages using HTML –K1

CO2: To gain knowledge on creating interactive web pages using ASP.Net – K2

CO3: To understand how to use Cookies and DOM – K2

CO4: To develop server-side scripting using OLEDB – K3

CO5: To gain knowledge of handling client-server programs –K2

COURSE CODE	U21CSP43	WEBTECHNOLOGYLAB	L	T	P	C
COREVII			-	-	4	4

COURSEOUTCOMES:

Onthesuccessfulcompletionofthecourse, studentwill beable to

CO1:ToperformthebasicfunctionsofVB.NET–K2

CO2:Performtests,resolvedefectsandreviseexistingcode–K2

CO3: Develop dynamic web applications, create and consume web services –

K3CO4: Use appropriate data sources and data bindings in VB.NET / ASP.Net –

K3CO5:Todevelop&analysewebbased projectsusingwebtechnologytools–K3

COURSE CODE	U21CSA44	FUNDAMENTALSOFCOMPUTER ALGORITHMS	L	T	P	C
ALLIED-IV			4	-	-	4

COURSEOUTCOMES

Oncompletionofthecourse, thestudent willbe ableto

CO1: Understand the concepts of Divide and Conquer technique and have the skills to write efficientprocedureslikesorting, searchingetc.– K3

CO2:Understand the conceptsand workingprocedureforGreedytechniques–K3

CO3:AcquiretheknowledgetosolvebacktrackingandBranch-and-Boundtechniques–K1

CO4:Analyzethealgorithmsbasedon timecomplexity–K4

CO5:Acquire the knowledge to develop optimal procedures for problems like minimum spanningtreeconstruction, single sourceshortest paths–K3

COURSE CODE	U21CSE421	CHOICEI	L	T	P	C
ELECTIVEII		SYSTEMSOFTWARE	3	-	-	3

COURSEOUTCOMES

On the Successful completion of the course, students will be able to

CO1: Understand the relationship between System Software and Machine Architecture- K2

CO2: To know the design and implementation of assemblers, macro processors, loaders, linkers and compilers- K3

CO3: Interpret various concepts of scanning and parsing of a program- K2

CO4: Discuss the processing of a HLL program for execution on a computer system – K1

CO5: Familiar with system software components like compiler, loader & linker – K1

COURSE CODE	U21CST51	RELATIONAL DATABASE MANagements SYSTEM	L	T	P	C
CORE-VIII			5	-	-	4

COURSEOUTCOMES

On successful completion of the course, the student will be able to

CO1: Understand the fundamentals of database system- K2

CO2: Design and create tables in database and execute queries- K3

CO3: Have knowledge in network and hierarchical data base system –

K2CO4: Design a database based on a data models using normalization –

K3.CO5: Understand the important features available in PL/SQL- K1

COURSE CODE	U21CST52	OPERATING SYSTEM CONCEPTS	L	T	P	C
CORE-IX			5	-	-	4

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO1: Understand the types, design, implementation of operating system and

I/O programming concepts – K2

CO2: Recognize the management of main and virtual memory schemes – K1

CO3: Analyze different scheduling algorithms and the management of devices – K3

CO4: Understand and manage the information system using OS – K2

CO5: Realize the importance of file systems and its properties in OS – K2

COURSE CODE	U21CST53	COMPUTER NETWORKS	L	T	P	C
CORE-X			5	-	-	4

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO1: Explain the concepts of various reference models, Internet and protocols – K1

CO2: Identify different transmission media and topologies – K1

CO3: Distinguish error detection and error correction of data –

K2 **CO4:** Implement routing algorithms to determine the optimal path –

K3 **CO5:** Recognize the performance issues in LAN & WAN – K2

COURSE CODE	U21CST54	COMPUTER GRAPHICS	L	T	P	C
CORE XI			5	-	-	4

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO1: Have a broad knowledge about the overview of Graphics System – K2

CO2: Analyze and design algorithms using attributes in graphics – K4

CO3: Recognize the properties of Two and Three-dimensional geometric transformations – K1

CO4: Understand the importance of Windowing and Clipping – K2

COURSE CODE	U21CSE531	CHOICE-I	L	T	P	C
ELECTIVE -III		MULTIMEDIA&APPLICATIONS	3	-	-	3

COURSE OUTCOMES

After completing the course, the students can be able to

CO1: Define multimedia to potential clients – K1

CO2: Identify and describe the function of the general skill sets in the multimedia industry – K1

CO3: Identify the basic components of a multimedia project – K1

CO4: Work with text files and graphics files – K2

CO5: Knowledge about the applications of Multimedia – K1

COURSE CODE	U21CSE532	CHOICE-II	L	T	P	C
ELECTIVE -III		CLOUD COMPUTING	3	-	-	3

COURSE OUTCOMES

On the successful completion of the course, students will be able to

CO1: Understand the need for cloud computing – K2

CO2: Comprehend virtualization concept in cloud –

CO3: Get an idea of security threats in cloud – K2

CO4: Know the available web services in cloud computing – K1

CO5: Understand and use the web services available in Cloud Computing – K1

COURSE CODE	U21CST61	SOFTWARE ENGINEERING	L	T	P	C
CORE-XIII			5	-	-	4

COURSE OUTCOMES:

After completion of this course, students will be able to

CO1: Understand the factors and strategies in Software Engineering – K3

CO2: Recognize the cost metrics and feasibility study in Software estimation –

CO3: Create software design using real time applications – K3

CO4: Analyze the quality based on validation and verification techniques in Software development –

COURSE CODE	U21CST62	MOBILE APPLICATION DEVELOPMENT	L	T	P	C
CORE-XIV				5	-	-

COURSE OUTCOME:

On the successful completion of the course, students will be able to

- CO1:** Gain basic idea of XML and using it to develop an Android application – K1
- CO2:** Familiarize themselves with the concept of UI components and SQLite Database – K1
- CO3:** Implement GUI concepts in Android Platform – K3
- CO4:** Build any application for Android devices – K3
- CO5:** Knowledge to design mobile app development on Android APP – K3

COURSE CODE	U21CSP65	MOBILE APPLICATION DEVELOPMENT LAB	L	T	P	C
CORE-XVI				-	-	5

COURSE OUTCOMES

On completion of the course, the students will be able to

- CO1:** Design and develop applications for mobile devices – K3
- CO2:** Develop applications with various UI components using Java and XML – K3
- CO3:** Build an application using SQLite Database – K3
- CO4:** Know how to launch developed applications in mobile devices – K1
- CO5:** Design an application using SQLite database – K2

COURSE CODE	U21CST63	ARTIFICIAL INTELLIGENCE	L	T	P	C
CORE-XV				5	-	-

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

- CO1:** Learn about the artificial intelligence problem and its characteristics – K1
- CO2:** Demonstrate the fundamentals of heuristic search techniques and reasoning for problem solving – K3
- CO3:** Understand the problem-solving using predicates – K2
- CO4:** Describe the concepts of expert systems with case studies for various applications – K1
- CO5:** Interpret different learning methods in expert systems – K2

COURSE CODE	U21CSE641	CHOICEI	L	T	P	C
	ELECTIVEIV	INTERNETOFTHINGS	3	-	-	3

COURSE OUTCOMES:

On Successful completion of the course, students will be able to

CO1: Explain the components of IoT – K1

CO2: Make use of IoT Circuits to obtain solutions – K3 **CO3:**

Interpret different design challenges faced in IoT–

K2 CO4: Develop IoT applications in Python – K3

CO5: Design sensor based application using Python – K3

B.SCINFORMATIONTECHNOLOGY

ProgrammeSpecificOutcomes(PSOs)

PSO1	Demonstratelogical andanalyticalthinkingabilitiesinthefieldofIT					
PSO2	EngageinlifelonglearningandprofessionaldevelopmentthroughHigher Educationandresearch.					
PSO3	Abilitytoidentifytheresourcestobuild andmanagethe IT infrastructureinorder tosolvearealworld problems					
PSO4	Abilityto workand communicateeffectivelyininterdisciplinaryenvironment					
COURSE CODE	U21ITT11	PROGRAMMING IN C	L	T	P	C
CORE-I			5	-	-	4

CourseOutcomes:

Onthesuccessful completionofthecourse,
 studentswillbeabletoCO1:Applythesyntaxand semantics
 ofclanguage
 CO2:Applytheconceptsof functionsand arraysin solvingreal
 worldproblemsCO3:Demonstrate structures, unionand pre-processingtechniques
 CO4:AnalyseanddevelopprogramsusingpointersandfileconceptCO5:A
 bleto createprograms and applications

COURSE CODE	U21ITT12	PROGRAMMING IN CLAB	L	T	P	C
CORE-II			-	-	6	4

CourseOutcomes

Onthesuccessfulcompletionofthecourse, studentswill beable to
 CO1:DevelopandexecuteprogramsusingOperatorsandcontrolStructuresCO2:D
 evelop programs inC to solveanykind of real world problem
 CO3: Apply the programming concepts of C in the standalone
 applications.CO4:Haveadepth understandingin Cprogram features
 CO5:Developapplicationsinadifferentscenario

COURSE	U21ITA11	L	T	P	C
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CODE		MATHEMATICAL FOUNDATION				
	ALLIED-I		5	-	-	4

Course Outcomes

On the successful completion of the course, students will be able to

CO1: The course will help students to develop conceptual understanding
CO2: It acquire multiple strategies for solving problems.

CO3: The course will prepare students for success in future courses

CO4: It will help them develop skills for the workplace and as productive citizens.
CO5: Learn and apply multivariate analysis necessary.

COURSE CODE	U21ITT21	FUNDAMENTALS OF DATA STRUCTURES	L	T	P	C
	CORE-III		5	-	-	4

Course Outcome:

On the successful completion of the course, students will be able

to CO1: Describe the basics of Ordered Lists and Representation of Arrays

CO2: Apply the knowledge of Linked list for solving problem in the

real world. CO3: Demonstrate the usage of Binary trees and Representation of Trees

CO4: Illustrate the performance of representation

of Graphs and Spanning Trees
CO5: Can analyze and apply various structures in different applications.

COURSE CODE	U21ITP22	DATA STRUCTURE USING C++ LAB	L	T	P	C
	CORE-IV		-	-	5	4

Course Outcomes:

Upon successful completion of the course the students will be able to

CO1: apply the

concepts to solve problems using C++ programming language
CO2: implement

the basic data structures using C++

COURSE CODE	U21ITA22	DIGITAL PRINCIPLES & COMPUTER ORGANIZATION	L	T	P	C
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ALLIED-II	ON	5	-	-	4
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CourseOutcomes:

Upon successful completion of the course the students will be able to

CO1: Understand the hardware and software, types and components of the computer
CO2: Recognizes the problem solving fundamental keypoints.

CO3: Sketch out the representation of numbers and codes in the computer.

CO4: Knows the digital computer's internal components

and the execution of the instructions
CO5: Learn and work on new operating system and different platforms

COURSE CODE	U21ITE312	CHOICE II	L	T	P	C
ELECTIVE -I		GRAPHICS USING C++ LAB	-	-	6	4

CourseOutcomes:

Upon successful completion of the course the students will be able to

CO1: apply the concepts to solve problems using C++ programming language
CO2: implement the basic data structures using C++

CO3: solve real world problems using C++ Programming language
CO4: recognize the importance of Data Structure features

CO5: Enable user interface environment.

COURSE CODE	U21ITT41	OBJECT ORIENTED PROGRAMMING IN JAVA	L	T	P	C
CORE-VI			4	-	-	4

CourseOutcomes:

At the end of the course the student will be able to:

CO1: Describe the basics of OOP and the syntax of Java language

CO2: Discuss Input/Output functions with file manipulations using I/O

Streams. CO3: Analyze GUI programming applications using AWT packages.

CO4: Plan to Develop Java based Applications using GUI and
user interface and database Connectivity

CO5: Can build their own application using OOPS concept.

COURSE CODE	U21ITE421	CHOICE-I	L	T	P	C
ELECTIVE-II		SYSTEMSOFTWARE	3	-	-	3

CourseOutcome

On the Successful completion of the course, students will

be able to CO1: Understand fundamentals of wireless communications.

CO2: Analyze security, energy efficiency, mobility, scalability, and their unique characteristics in wireless networks.

CO3: Demonstrate basic skills for cellular network design.

CO4: Apply knowledge of TCP/IP

extensions for **mobile** and wireless networking. CO5: Learn and apply wired and wireless devices.

COURSE CODE	U21ITT51	COMPUTER NETWORKS	L	T	P	C
CORE-VIII			5	-	-	4

CourseOutcomes:

On the successful completion of the course, students will be able to

CO1: explain the concepts of various reference models, Internet and protocols
CO2: identify different transmission media and topologies

CO3: distinguish error detection and error correction of data
CO4: implement routing algorithms to determine the optimal path

CO5: Able to send data communication through wired and wireless mode.

COURSE CODE	U21ITT52	OPERATING SYSTEM CONCEPTS	L	T	P	C
CORE-IX			5	-	-	4

CourseOutcomes:

On the successful completion of the course, students will be able to

CO1: Understand the types, design, implementation of operating system and I/O programming concepts.

CO2: Recognize the management of main and virtual memory schemes.

CO3: Analyze different scheduling algorithms and

the management of devices. CO4: Understand and manage the information system

COURSE CODE	U21ITT53	WEBTECHNOLOGY	L	T	P	C
CORE-X			5	-	-	4

CourseOutcomes:

On the successful completion of the course,

students will be able to CO1: learn to design webpages using HTML.

CO2: to gain knowledge on creating interactive webpages using ASP.Net CO3: to understand how to use Cookies and DOM.

CO4: to develop server side scripting using OLEDB CO5: create own BLOG own webpage.

COURSE CODE	U21ITT54	COMPUTER GRAPHICS	L	T	P	C
CORE-XI			5	-	-	4

CourseOutcomes:

On the Successful completion of the course, students will be able

to CO1: Have a broad knowledge about the overview

of Graphics System CO2: Analyse and design algorithms using attributes in graphics

CO3: Recognize the properties of Two- and three-

dimensional geometric transformations CO4: Understand the importance of Windowing and Clipping

CO5: Develop user interface environment using graphic tools.

COURSE CODE	U21ITE531	CHOICE-I	L	T	P	C
ELECTIVE -III		MULTIMEDIA AND ITS APPLICATION	3	-	-	3

Courseoutcomes

1. After completing the course the students can
2. Define multimedia to potential clients.
3. Identify and describe the function of the general skill sets in the multimedia industry.
4. Identify the basic components of a multimedia project.
5. Learn to send lossy and lossless data.

6.

COURSE CODE	U21ITS51	OPERATING SYSTEM(OS) LAB	L	T	P	C
SBE -III				2	-	-

Course Outcomes:

On Successful Completion Of The Course,

Students Will Be Able To CO1: Learn Basic Linux Commands.

CO2: Understand The Basic Behaviour Of Operating System

CO3: Demonstrate Different Process Scheduling And Executing

Algorithm CO4: Do Shell Programming On Linux Os

CO5: Able to develop own applications in linux environment.

COURSE CODE	U21ITT61	INTERNET OF THINGS	L	T	P	C
CORE-XIII				5	-	-

Course Outcomes:

CO1: Understand the concepts of Internet of

Things CO2: Analyze basic protocols

in wireless sensor network

CO3: Design IoT applications in different domain and be able to

analyze their performance CO4: Implement basic IoT applications on embedded platform.

CO5: Simulation of tools in an IOT environment.

COURSE CODE	U21ITT62	DATA MINING	L	T	P	C
CORE-XIV				5	-	-

Course Outcomes

On successful

completion of the course, students will be able to CO1: explain the concepts

of data and trends of data mining

CO2: distinguish various data mining techniques such as Association rule

mining, Classification and Clustering

CO3: assess the application of data mining.

CO4: apply the data mining techniques for various

applications.CO5:Learn about text andweb mining.

COURSE CODE	U21ITT63	ARTIFICIALINTELLIGENCE	L	T	P	C
CORE-XVII			-	-	5	4

CourseOutcomes:

OntheSuccessfulcompletionofthecourse,students willbeableto

CO1: Learnabouttheartificialintelligenceproblemanditscharacteristics

CO2:Demonstratethefundamentalsofheuristicssearchtechniques

COURSE CODE	U21ITE641	CHOICE-I	L	T	P	C
ELECTIVE -IV		ETHICALHACKING	3	-	-	3

CourseOutcomes:

CO1: IntroduceaboutthebasicconceptsofethicalhackingCO2:

Know about the technical foundation of

hackingCO3:Acquireabout thetechniques used in hacking

CO4:KnowabouttheenumerationandthreatsCO5:

Learn to providesecurityfordata.

COURSE CODE	U21ITE642	CHOICE-II	L	T	P	C
ELECTIVE -IV		INFORMATIONSECURITY	3	-	-	3

CourseOutcomes

Afterthe completionof InformationsecurityThestudentscangaintheCO1:

Knowledgeof cryptographyand network security

CO2: Knowledge of security management and incident

responseCO3: Knowledge of security in software and operating systemsCO4:Knowledgeof data

securityandsecuresystemdevelopmentCO5:Analyzedifferent threatsand remove thethreats.

COURSE CODE	U21ITS611	IMAGEPROCESSINGLAB	L	T	P	C
SBE -IV			-	-	2	2

Course Outcomes

After the completion of Information security. The students can gain the

CO1: Knowledge of image processing and basic analytical methods to be used in image processing. CO2: Knowledge of Image Enhancement and Restoration technique.

CO3: Knowledge of Image Compression Technique

CO4: Knowledge of segmentation and morphological processing techniques CO5:

Knowledge about to develop new real time application.

Course Code	U21BCE422	PLANT THERAPEUTICS	L	T	P	C
Elective	II		3	-	-	3
Course Outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	attain knowledge on the therapeutics properties of bioactive compounds in plants	K1			
	CO2	understand the mechanism behind free radical scavenging and the antioxidant properties of plants	K1, K2			
	CO3	gain knowledge on plant secondary metabolites and their functions	K2			
	CO4	learn how to standardize and stabilize herbal preparations	K3			
	CO5	acquire knowledge on development of plant therapeutics for commercial use	K2			
		L	P			
		GENERAL MICROBIOLOGY				
		5	-			
Course Outcomes	Upon completion of this course, the students will be able to					
	CO	Course Outcomes	Knowledge Level			
	CO1	explain basics of microorganisms and microscope and its types	K1, K2			
	CO2	gain knowledge on various cell organelles of micro-organisms and its structure	K1, K2, K3			
	CO3	describe the nutrition, photosynthesis, metabolism of bacteria	K1, K2, K3			
	CO4	illustrate the factors involved in spoilage, poisoning of food and foodborne diseases	K1, K2, K3			
	CO5	know the methods of fermentation and applications of micro	K1, K2, K3			

		besinindustry						
CourseCode	U21BCT52	IMMUNOLOGY			L	T	P	C
Core	VIII				5	-	-	4

Course outcomes	Upon completion of this course, the students will be able to						
	CO	Course Outcomes	Knowledge Level				
	CO1	understand the history and development of immunology and contributions of various scientist	K1, K2				
	CO2	define antigens and antibodies	K1, K2, K3				
	CO3	illustrate antigen-antibody reaction	K1, K2, K3				
	CO4	define hypersensitivity and explain its types.	K1, K2, K3				
	CO5	explain the concepts of immunodeficiency	K1, K2, K3				

CourseCode	U21BCT54	FUNDAMENTALS OF MOLECULAR BIOLOGY			L	T	P	C
Core	XI				5	-	-	4

Course outcomes	Upon completion of this course, the students will be able to						
	CO	Course Outcomes	Knowledge Level				
	CO1	know and understand the structure of nucleic acids, genetic code, wobble hypothesis and mutation and their types	K1, K2				
	CO2	describe about the central dogma of life	K1, K2, K3				
	CO3	explain the gene exchange methods	K1, K2, K3				
	CO4	discuss about operon and its types	K1, K2, K3				
	CO5	gain knowledge on transposons as mutagenic agent, DNA damage and repair mechanisms.	K1, K2, K3				

CourseCode	U21BCP53	GENERAL MICROBIOLOGYANDI MMUNOLOGY		L	T	P	C
Core	XII			-	-	5	4
Courseo utcomes	Uponcompletionofthiscourse, thestudents willbeableto						
	CO	CourseOutcomes	KnowledgeLevel				
	CO1	understandhematologyandbloodgroupingmethod s.	K1,K2				
	CO2	empathize on various immunologicaltechniques	K1,K2, K3				
	CO3	gain expertiseinaseptictechnique	K1,K2, K3				
	CO4	learndifferentstainingtechniques	K1,K2,K3				
	CO5	acquire knowledge in various platingtechniques	K1,K2, K3				