PO-PSO-CO

yuva kṣhētṛa Institute of Management Studies Ezhakkad P.O. Mundur, Palakkad Pin-678 631

Principal
yuva kṣhētṛa
Institute of Management Studies
Ezhakkad(PO), Mundur, Palakkad(Dt.)
Kerala, India, Pin-678 631

UG PROGRAMMES

NAME OF THE PROGRAMME : B.Sc. COMPUTER SCIENCE

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:	
PSO 1	Understand the theoretical and mathematical foundations of Computer Science.
PSO 2	Apply fundamental computer science principles and practices to analyze, design, and implement software solutions for real-world problems.
PSO 3	Develop dynamic and interactive web and mobile applications using web technologies, frameworks, and design principles, ensuring usability, accessibility, and security.
PSO 4	Apply fundamental computer science principles and algorithmic techniques to analyze, design, and implement efficient and scalable software solutions for a variety of computational problems.
PSO 5	Configure, manage, and troubleshoot computer networks and systems, and apply basic cybersecurity principles to protect data and systems from unauthorized access and cyber threats.
PSO 6	Understand the fundamental principles, architecture and design concepts of system software, and apply this knowledge to analyze, manage and optimize system resources and services.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : BCS1B01

Course Title : Computer Fundamentals and HTML

CO 1	Demonstrate a foundational understanding of computer hardware, software, and operating systems, including their components, functions, and interrelationships.
CO 2	Design, develop, and validate simple web pages using HTML, incorporating text, images, links, lists, and tables, adhering to HTML syntax and best practices.
CO 3	Understand the basic concepts of the Internet, the World Wide Web, and web technologies, including URLs, HTTP, and web browsers, and explain their roles in accessing and displaying web content.
CO 4	Design a simple, multi-page website with effective navigation and present it using HTML, incorporating basic principles of user interface (UI) design.

SEMESTER 2

Course Code : BCS2B02	
Course Title : Problem Solving Using C	
CO 1	Understand the fundamental data types, operators, and control flow constructs of the C programming language.
CO 2	Apply the concepts of arrays, strings, and functions to design and implement C programs that solve basic problems.
CO 3	Analyze a given problem, decompose it into smaller sub-problems, and develop an algorithmic solution using C.
CO 4	Evaluate the efficiency and readability of C code and propose improvements using appropriate coding practices.
Course Code : BCS2B03	
Course Title : Programming Laboratory I: HTML and Programming in C	
CO 1	Design and implement basic web pages using HTML, incorporating elements such as text, images, links, and tables, demonstrating an understanding of HTML syntax and structure.
CO 2	Develop C programs using fundamental programming constructs such as data types, operators, control flow statements (if-else, loops), and functions to solve simple computational problems.
CO 3	Identify and correct syntax and logical errors in HTML code and C programs, utilizing debugging techniques and error messages effectively.
CO 4	Evaluate and compare different approaches for solving a programming problem in C, considering factors such as efficiency, readability, and maintainability.
CO 5	Create well-structured and commented C programs that adhere to coding standards, demonstrating an ability to organize code logically and communicate its functionality clearly.
SEMESTER 3	
Course Code : BCS3B04	
Course Title : Data Structures Using C	
CO 1	Explain the fundamental concepts of data structures, including arrays, linked lists, stacks, queues, trees, and graphs, and their applications.
CO 2	Implement linear data structures like arrays, linked lists, stacks, and queues using the C programming language.
CO 3	Analyze the time and space complexity of different data structure operations (e.g., insertion, deletion, searching) to select the most appropriate data structure for a given problem
CO 4	Design and implement non-linear data structures such as binary trees, binary search trees, and graphs, and apply them to solve practical problems.
SEMESTER 4	
Course Code : BCS4B05	
Course Title : Database Management System and RDBMS	
CO 1	Explain the fundamental concepts of database management systems, including data models, database architectures, and the importance of data integrity and security.
CO 2	Design relational database schemas, including identifying entities, attributes,

	relationships, and applying normalization techniques to reduce data redundancy and improve data integrity.
CO 3	Implement database queries using SQL (Structured Query Language) to retrieve, insert, update, and delete data from relational databases, including the use of joins, subqueries, and aggregate functions.
CO 4	Analyze a given problem scenario and select the appropriate database model and database management system (DBMS) for its solution, justifying the choice based on factors such as scalability, performance, and data consistency.
CO 5	Develop a functional database application using a RDBMS (Relational Database Management System) such as MySQL or PostgreSQL, integrating front-end interfaces for user interaction and data visualization.
Course Code : BCS4B06	
Course Title : Programming Laboratory II: Data Structures and RDBMS	
CO 1	Implement fundamental data structures like linked lists, stacks, and queues, and demonstrate their usage in solving basic computational problems.
CO 2	Design and implement efficient algorithms using tree and graph data structures for searching and sorting problems.
CO 3	Create a relational database schema based on given requirements and formulate SQL queries to retrieve, update, and manage data effectively.
CO 4	Analyze the performance characteristics of different data structures and RDBMS operations, and justify the choice of appropriate structures and queries for specific applications.
CO 5	Evaluate and Compare different relational database management systems (RDBMS) and data structures based on factors like performance, scalability, and security, and make informed decisions for real-world applications.
SEMESTER 5	
Course Code : BCS4B07	
Course Title : Computer Organization and Architecture	
CO 1	Understand the fundamental components of a computer system and their interrelationships, including the CPU, memory, input/output devices, and buses.
CO 2	Apply Boolean algebra and digital logic principles to design and analyze combinational and sequential circuits used in computer systems.
CO 3	Analyze different addressing modes, instruction set architectures (ISAs), and CPU organization techniques used in modern processors.
CO 4	Evaluate the performance of different memory systems and caching techniques, and explain how they impact overall system performance.
CO 5	Explain the organization and operation of input/output (I/O) systems, including different I/O techniques such as programmed I/O, interrupt-driven I/O, and DMA.
Course Code : BCS4B08	
Course Title : Java Programming	
CO 1	Explain the fundamental concepts of object-oriented programming (OOP) using Java, including classes, objects, inheritance, polymorphism, and encapsulation.
CO 2	Design and implement Java programs using control flow statements, arrays,

	strings, and methods to solve basic programming problems.
CO 3	Develop Java programs that utilize exception handling techniques to ensure robust and error-free execution.
CO 4	Construct Java programs that leverage the Java Collections Framework to manage and manipulate data effectively.
CO 5	Implement Graphical User Interfaces (GUIs) using Java Swing or JavaFX to create interactive and user-friendly applications.
Course Code : BCS5B09	
Course Title : Web Programming Using PHP	
CO 1	Understand the fundamental concepts of PHP scripting, including data types, variables, operators, control structures, and functions
CO 2	Apply PHP syntax and logic to develop dynamic web pages that interact with user input using HTML forms and handle GET and POST methods effectively
CO 3	Analyze database structures and design PHP scripts to interact with MySQL databases for creating, retrieving, updating, and deleting data using prepared statements to ensure security
CO 4	Evaluate different PHP frameworks like Laravel or Symfony, comparing their features, advantages, and disadvantages, to determine the best choice for specific web development projects
CO 5	Create a fully functional web application utilizing PHP, HTML, CSS, JavaScript, and a MySQL database, demonstrating the ability to integrate multiple technologies to solve a real-world problem.
Course Code : BCS5B10	
Course Title : Principles of Software Engineering	
CO 1	Define fundamental software engineering concepts, principles, and methodologies.
CO 2	Explain the different phases of the Software Development Life Cycle (SDLC) and apply suitable SDLC models for specific project scenarios.
CO 3	Analyze software requirements documents and create use case diagrams, data flow diagrams, and other relevant system models.
CO 4	Design effective test cases and apply various software testing techniques (e.g., black-box, white-box) to ensure software quality.
CO 5	Evaluate different software design principles (e.g., modularity, cohesion, coupling) and propose improvements to existing software designs.
SEMESTER 6	
Course Code : BCS6B11	
Course Title : Android Programming	
CO 1	Explain the fundamental concepts of the Android operating system, including its architecture, components, and development environment.
CO 2	Design and implement user interfaces (UIs) for Android applications using various UI elements (e.g., TextViews, EditTexts, Buttons, ListViews) and layout managers.
CO 3	Develop Android applications that handle user input, manage data using SQLite databases or other storage mechanisms, and perform network operations.

CO 4	Analyze and debug Android applications to identify and resolve errors, optimize performance, and ensure a robust user experience.
CO 5	Create a complete, functional Android application that integrates multiple components and features, demonstrating an understanding of the Android development lifecycle and best practices.
Course Code : BCS6B12	
Course Title : Operating Systems	
CO 1	Define and describe the fundamental concepts of operating systems, including process management, memory management, file systems, and I/O management.
CO 2	Apply process scheduling algorithms to solve process scheduling problems and analyze their performance metrics.
CO 3	Implement solutions for classical synchronization problems using semaphores or monitors.
CO 4	Analyze different memory management techniques and their impact on system performance and memory utilization.
CO 5	Evaluate the security threats and vulnerabilities in operating systems and propose solutions to mitigate them.
Course Code : BCS6B13	
Course Title : Computer Networks	
CO 1	Explain the fundamental concepts of computer networks, including network architectures, protocols, and technologies, and their roles in data communication.
CO 2	Analyze different network topologies, routing algorithms, and congestion control mechanisms, and evaluate their performance characteristics under varying network conditions.
CO 3	Design and implement simple network configurations using appropriate network devices and protocols, and troubleshoot common network problems.
CO 4	Evaluate the security vulnerabilities in computer networks and implement appropriate security measures to protect network resources from unauthorized access and attacks.
CO 5	Explain the principles of various network protocols (e.g., TCP/IP, HTTP, DNS) and demonstrate their functionalities through simulation or practical implementation.
Course Code : BCS6B14	
Course Title : Programming Laboratory III: Java and PHP Programming	
CO 1	Implement basic Java and PHP programs using fundamental programming constructs like loops, conditional statements, and data types.
CO 2	Develop Java applications utilizing object-oriented programming (OOP) principles such as encapsulation, inheritance, and polymorphism.
CO 3	Design and implement dynamic web pages using PHP and interact with databases using PHP's database connectivity features (e.g., MySQLi or PDO).
CO 4	Analyze given code snippets in Java and PHP to identify errors, understand their functionality, and propose solutions for improvements in efficiency or readability.
CO 5	Build a complete web application using Java Servlets/JSP or PHP,

	demonstrating the integration of front-end (HTML, CSS, JavaScript) and back-end (Java/PHP) technologies to solve a real-world problem.
Course Code : BCS6B15	
Course Title : Programming Laboratory IV: Android and Linux Shell Programming	
CO 1	Implement basic Android UI elements and event handling to create interactive mobile applications.
CO 2	Analyze and debug Android application code, identifying and resolving common errors.
CO 3	Design and write Linux shell scripts to automate system administration tasks and manipulate files and directories.
CO 4	Evaluate different shell scripting techniques for efficiency and readability, justifying the choice of one approach over another.
CO 5	Integrate Android applications with external data sources or APIs using appropriate networking techniques.
Course Code : BCS6B16A	
Course Title : System Software (ELECTIVE)	
CO 1	Describe the fundamental concepts and architecture of system software, including operating systems, assemblers, linkers, loaders, and compilers
CO 2	Explain the process of compilation, linking, and loading, and relate these processes to program execution.
CO 3	Apply assembly language programming techniques to write simple programs and analyze their behavior.
CO 4	Compare and contrast different memory management techniques used in operating systems, such as paging, segmentation, and virtual memory, evaluating their advantages and disadvantages.
Course Code : BCS6B17	
Course Title : Industrial Visit & Project Work	
CO 1	Identify real-world software development practices and challenges through observation during the industrial visit.
CO 2	Apply software engineering principles and a chosen programming language to design and develop a functional software project.
CO 3	Analyze the requirements of a software project and select appropriate development tools and techniques.
CO 4	Evaluate the performance and usability of the developed software project through testing and user feedback.
CO 5	Create a comprehensive project report documenting the entire software development process, including design, implementation, testing, and future enhancements.
OPEN COURSE OFFERED BY BSc CS	
SEMESTER 5	
Course Code : BCS5D01	
Course Title : Introduction to Computers and Office Automation	
CO 1	Describe the fundamental components of a computer system, including hardware and software, and their respective functions.
CO 2	Apply word processing, spreadsheet, and presentation software to create,

	format, and present professional-quality documents, data analyses, and presentations.
CO 3	Explain the concepts of computer networks, internet, and email, and practice safe and effective online communication and information retrieval techniques.
CO 4	Identify and evaluate potential security threats to computer systems and implement basic security measures to protect data and prevent malware infections.

COMMON COURSES

SEMESTER 3

Course Code : A11	
Course Title : PYTHON PROGRAMMING	
CO1	Understand Python fundamentals including data types, operators, expressions, and basic input/output operations.
CO2	Apply decision-making constructs and implement iterative programming using various loop structures.
CO3	Design and develop modular programs using functions, including built-in and user- defined functions with different parameter passing mechanisms
CO4	Implement programs using Python's built-in data structures like strings, lists, tuples, dictionaries, and sets
CO5	Create Python applications by integrating various programming concepts and data structures to solve real-world problems
Course Code : A12	
Course Title : Sensors and Transducers	
CO1	Grasp the basic idea about sensors and transducers and its types
CO2	Study Thermal and Thermoelectric Sensors:
CO3	Comprehend Pressure and Level Measurement:
C04	Learn Flow and Radiation Sensors:
C05	Understand Sound and Hall Effect Sensors

SEMESTER 4

Course Code : A13	
Course Title : Data Communication and Optical Fibers	
CO1	Gain Knowledge of data communication, including data transmission, protocols, and networking fundamentals.
CO2	Understand different communication models, including the OSI and TCP/IP models.

CO3	Identify and describe components of optical fiber communication
CO4	Analyze properties of optical fibers including total internal reflection, refraction and dispersion
CO5	To describe principles of optical signal transmission including modulation, demodulation and detection
Course Code : A14	
Course Title : Microprocessors-Architecture and Programming	
CO1	Understand computer architecture fundamentals, memory organization, and detailed architecture of 8085 microprocessor including its registers and signals
CO2	Apply assembly language programming concepts and implement various instructions using different addressing modes of 8085 microprocessor.
CO3	Develop programs using advanced programming techniques including looping, indexing, stack operations, and subroutines in 8085.
CO4	Implement interrupt-driven programs and interface 8085 with programmable peripheral devices.
CO5	Understand the architecture of 8086/88 microprocessors, including execution unit, registers, flags, and addressing modes.

NAME OF THE PROGRAMME : BCA

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship
PROGRAMME SPECIFIC OUTCOMES:	
PSO 1	Identify the relevance and application of computers in various disciplines.
PSO 2	Analyze problems and design, develop, and test effective solutions using computer programming languages.
PSO 3	Design, analyze, and develop code-based solutions for the algorithm.
PSO 4	Communicate technical ideas and solutions effectively to both technical and non-technical stakeholders.
PSO 5	Adapt to new programming languages, software tools, and technologies as needed.
COURSE OUTCOMES	
CORE COURSES	
SEMESTER 1	
Course Code : BCA1B01	
Course Title : Computer Fundamentals and HTML	
CO1	Understand the fundamentals of computer hardware and software, including languages, translators, and key components like memory and storage.
CO2	Gain proficiency in number systems conversions, complements, digital codes, and Boolean algebra.
CO3	Develop problem-solving skills on flowcharts
CO4	Gain knowledge on basics of web design and web technologies
CO5	Acquire the ability to create simple web pages using CSS for effective layout and design.
SEMESTER 2	
Course Code : BCA2B02	
Course Title : Problem Solving using C	
CO1	Illustrate the flowchart problem-solving steps
CO2	Ability to handle possible errors during program execution.
CO3	Understand the basic structure of basic C programming, declaration and using variables

CO4	Understand the fundamentals of C programming
CO5	To write a simple C program for a given problem
Course Code : BCA2B03	
Course Title : Programming Laboratory I: HTML and Programming in C	
CO 1	Design and implement basic web pages using HTML, incorporating elements such as text, images, links, and tables, demonstrating an understanding of HTML syntax and structure.
CO 2	Develop C programs using fundamental programming constructs such as data types, operators, control flow statements (if-else, loops), and functions to solve simple computational problems.
CO 3	Identify and correct syntax and logical errors in HTML code and C programs, utilizing debugging techniques and error messages effectively.
CO 4	Evaluate and compare different approaches for solving a programming problem in C, considering factors such as efficiency, readability, and maintainability.
CO 5	Create well-structured and commented C programs that adhere to coding standards, demonstrating an ability to organize code logically and communicate its functionality clearly.
SEMESTER 3	
Course Code : BCA3B04	
Course Title : Data Structures using C	
CO1	Differentiate data and information
CO2	Understanding of different data structures.
CO3	Know Data Structures' basic operations like insert, delete, search, update, and traversal
CO4	Understand basic data structures such as arrays, stacks, and queues.
CO5	Apply Algorithm for solving problems like sorting, searching, insertion, and deletion of data
SEMESTER 4	
Course Code : BCA4B05	
Course Title : Database Management System and RDBMS	
CO1	Gain knowledge of fundamentals of DBMS and database design
CO2	Understand database management systems and query languages.

CO3	Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respect data into RDBMS and formulate SQL queries on the data.
CO4	Analyze a given database application scenario to use ER model for conceptual design of the database
CO5	Analyse the existing design of a database schema
Course Code : BCA4B06	
Course Title : Programming Laboratory II: Data Structures and RDBMS	
CO 1	Implement fundamental data structures like linked lists, stacks, and queues, and demonstrate their usage in solving basic computational problems.
CO 2	Design and implement efficient algorithms using tree and graph data structures for searching and sorting problems.
CO 3	Create a relational database schema based on given requirements and formulate SQL queries to retrieve, update, and manage data effectively.
CO 4	Analyze the performance characteristics of different data structures and RDBMS operations, and justify the choice of appropriate structures and queries for specific applications.
CO 5	Evaluate and Compare different relational database management systems (RDBMS) and data structures based on factors like performance, scalability, and security, and make informed decisions for real-world applications.
SEMESTER 5	
Course Code : BCA4B07	
Course Title : Computer Organization and Architecture	
CO1	Understand and Explain Digital Logic Concepts
CO2	Analyze and Design Combinational and Sequential Circuits
CO3	Implement Basic Computer Organization and Instruction Design
CO4	Evaluate Microprogrammed Control and Processor Organization
CO5	Demonstrate Memory and I/O System Functionality
Course Code : BCA4B08	
Course Title : Java Programming	
CO1	To understand the concepts and features of Object-Oriented Programming (OOPs)
CO2	To practice programming in Java
CO3	To learn Java's error handling mechanism, I/O

	operations, and multithreading.
CO4	Implement programs using Java Database Connectivity
CO5	Students will be capable of developing Graphical User Interface (GUI) applications using Applet, and implementing basic event handling.
Course Code : BCA5B09	
Course Title : Web Programming Using PHP	
CO1	Describe the fundamental concepts of PHP
CO2	Develop interactive web pages using JavaScript
CO3	Design and develop a dynamic web application using PHP to handle data storage and retrieval efficiently.
CO4	Analyze array constructs and header functions to manipulate and organize web application data.
CO5	Describe the principles of client-side and server-side scripting and their roles in web application development.
Course Code : BCA5B10	
Course Title : Principles of Software Engineering	
CO1	Understand the Basics of Software Engineering fundamentals.
CO2	Develop use cases and build requirements models to capture functional and non-functional requirements.
CO3	Examine system requirements and decompose complex software structures into modular UML representations.
CO4	Evaluate different programming constructs such as type checking, user-defined data types, and data abstraction.
CO5	Implement testing strategies for conventional, object-oriented, and web-based applications while applying debugging techniques.
SEMESTER 6	
Course Code : BCA6B11	
Course Title : Android Programming	
CO1	Understand Android platform architecture and develop basic Android applications using SDK and development tools.
CO2	Implement Android resources, content providers, and different types of intents for application development.

CO3	Create interactive user interfaces using various Android layouts, controls, and adapter views.
CO4	Develop applications using advanced UI components including menus, fragments, dialogs, and action bars.
CO5	Design and implement data persistence in Android applications using files, shared preferences, and SQLite databases.
Course Code : BCA6B12	
Course Title : Operating Systems	
CO1	Identify the objectives, functions, and evolution of operating systems
CO2	Utilize shell commands for file manipulation, process management, and scripting in a Linux environment.
CO3	Compare and recommend various scheduling algorithms for processes, and solve the deadlock problems.
CO4	Analyze the memory management schemes.
CO5	Compare and contrast the architectures and security models of Android, UNIX Kernel, and Microsoft Windows NT.
Course Code : BCA6B13	
Course Title : Computer Networks	
CO1	Understand Network Fundamentals
CO2	Gain knowledge of error detection/correction, flow control, addressing, and routing algorithms in layers
CO3	Learn about process-to-process communication using protocols, and explore congestion control
CO4	Understand cryptographic-related terms and conversions
CO5	Evaluate security threats, cryptographic techniques, and the effectiveness of various encryption schemes.
Course Code : BCA6B14	
Course Title : Programming Laboratory III: Java and PHP Programming	
CO 1	Implement basic Java and PHP programs using fundamental programming constructs like loops, conditional statements, and data types.
CO 2	Develop Java applications utilizing object-oriented programming (OOP) principles such as encapsulation, inheritance, and polymorphism.
CO 3	Design and implement dynamic web pages using PHP and interact with databases using PHP's database connectivity features (e.g., MySQLi or PDO).
CO 4	Analyze given code snippets in Java and PHP to identify errors, understand their functionality, and propose solutions for improvements in efficiency or

	readability.
CO 5	Build a complete web application using Java Servlets/JSP or PHP, demonstrating the integration of front-end (HTML, CSS, JavaScript) and back-end (Java/PHP) technologies to solve a real-world problem.
Course Code : BCA6B15	
Course Title : Programming Laboratory IV: Android and Linux Shell Programming	
CO 1	Implement basic Android UI elements and event handling to create interactive mobile applications.
CO 2	Analyze and debug Android application code, identifying and resolving common errors.
CO 3	Design and write Linux shell scripts to automate system administration tasks and manipulate files and directories.
CO 4	Evaluate different shell scripting techniques for efficiency and readability, justifying the choice of one approach over another.
CO 5	Integrate Android applications with external data sources or APIs using appropriate networking techniques.
Course Code : BCA6B16A	
Course Title : Software Testing and Quality Assurance (ELECTIVE)	
CO1	Define key concepts of software testing, including quality assurance, quality control, verification, validation, and various testing methodologies.
CO2	Explain different software testing life cycle models, white-box and black-box testing techniques, and their applications
CO3	Implement system, acceptance, and regression testing strategies to ensure software functionality and reliability
CO4	Examine performance testing methodologies, tools, and challenges to evaluate software efficiency under various conditions
CO5	Design comprehensive test plans and implement best practices for managing software testing processes in real-world projects
Course Code : BCA6B17	
Course Title : Industrial Visit & Project Work	
CO 1	Identify real-world software development practices and challenges through observation during the industrial visit.
CO 2	Apply software engineering principles and a chosen programming language to design and develop a functional software project.
CO 3	Analyze the requirements of a software project and select appropriate development tools and techniques.
CO 4	Evaluate the performance and usability of the developed software project through testing and user feedback.
CO 5	Create a comprehensive project report documenting the entire software development process, including design, implementation, testing, and future enhancements.
COMPLEMENTARY COURSES FOR BCA	

SEMESTER 1	
Course Code : BCA1C02	
Course Title : Discrete Mathematics	
CO1	Understand Fundamental principles of logic, set theory, relations, functions, and counting techniques.
CO2	Apply the algebra of propositions to simplify logical expressions.
CO3	Able to understand fundamental graph theory concepts, analyze graph properties, and planarity principles, and solve real-world problems
CO4	Analyze spanning trees and their algorithms, explore connectivity concepts, and apply network flow techniques
CO5	To Construct Graphs using Graph Theory for real-time problems
SEMESTER 3	
Course Code : BCA3C06	
Course Title : Theory of Computation	
CO1	Understand Fundamental Mathematical Concepts
CO2	Classify and Analyze Formal Languages
CO3	Design and Evaluate Finite Automata
CO4	Analyze and Simplify Context-Free Languages
CO5	Apply Automata Theory to Advanced Computation Models
SEMESTER 4	
Course Code : BCA4C07	
Course Title : E-Commerce	
CO1	Understand the Evolution of E-Commerce
CO2	Analyse and Understand E-Commerce Business Models and Technologies of the Web
CO3	Implement E-Marketing Strategies and Navigate E-Security and Risk Management
CO4	Recognize Legal and Ethical Issues in E-Commerce
CO5	Understand E-Payment Systems and Digital Transactions
Course Code : BCA4C08	
Course Title : Computer Graphics	
CO1	Understand fundamental concepts of computer graphics
CO2	Explain various line and circle drawing algorithms and their role in rendering

	graphical primitives.
CO3	Compare color models and assess their applications in computer graphics and digital image processing.
CO4	Implement polygon filling and clipping algorithms in graphical applications.
CO5	Differentiate between various 2D transformation techniques and evaluate their effects on graphical objects.
OPEN COURSE OFFERED BY BCA	
SEMESTER 5	
Course Code : BCA5D01	
Course Title : Introduction to Computers and Office Automation	
CO 1	Describe the fundamental components of a computer system, including hardware and software, and their respective functions.
CO 2	Apply word processing, spreadsheet, and presentation software to create, format, and present professional-quality documents, data analyses, and presentations.
CO 3	Explain the concepts of computer networks, internet, and email, and practice safe and effective online communication and information retrieval techniques.
CO 4	Identify and evaluate potential security threats to computer systems and implement basic security measures to protect data and prevent malware infections.
COMMON COURSES	
SEMESTER 3	
Course Code : A11	
Course Title : PYTHON PROGRAMMING	
CO1	Understand Python fundamentals including data types, operators, expressions, and basic input/output operations.
CO2	Apply decision-making constructs and implement iterative programming using various loop structures.
CO3	Design and develop modular programs using functions, including built-in and user- defined functions with different parameter passing mechanisms
CO4	Implement programs using Python's built-in data structures like strings, lists, tuples, dictionaries, and sets
CO5	Create Python applications by integrating various programming concepts and data structures to solve real-world problems
Course Code : A12	
Course Title : Sensors and Transducers	
CO1	Grasp the basic idea about sensors and transducers and its types

CO2	Study Thermal and Thermoelectric Sensors:
CO3	Comprehend Pressure and Level Measurement:
C04	Learn Flow and Radiation Sensors:
C05	Understand Sound and Hall Effect Sensors
SEMESTER 4	
Course Code : A13	
Course Title : Data Communication and Optical Fibers	
CO1	Gain Knowledge of data communication, including data transmission, protocols, and networking fundamentals.
CO2	Understand different communication models, including the OSI and TCP/IP models.
CO3	Identify and describe components of optical fiber communication
CO4	Analyze properties of optical fibers including total internal reflection, refraction and dispersion
CO5	To describe principles of optical signal transmission including modulation, demodulation and detection
Course Code : A14	
Course Title : Microprocessors-Architecture and Programming	
CO1	Understand computer architecture fundamentals, memory organization, and detailed architecture of 8085 microprocessor including its registers and signals
CO2	Apply assembly language programming concepts and implement various instructions using different addressing modes of 8085 microprocessor.
CO3	Develop programs using advanced programming techniques including looping, indexing, stack operations, and subroutines in 8085.
CO4	Implement interrupt-driven programs and interface 8085 with programmable peripheral devices.
CO5	Understand the architecture of 8086/88 microprocessors, including execution unit, registers, flags, and addressing modes.

NAME OF THE PROGRAMME : B.Sc. MATHS

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:	
PSO 1	**Advanced Mathematical Skills**: Graduates will apply advanced mathematical techniques to solve real-world problems in engineering and science.
PSO 2	**Research Proficiency**: Graduates will conduct independent research, analyze data, and present findings in their specific area of study.
PSO 3	**Technological Competence**: Graduates will proficiently use modern tools and technology relevant to their discipline.
PSO 4	**Lifelong Learning**: Graduates will engage in lifelong learning to stay current in their field and adapt to changing environments.

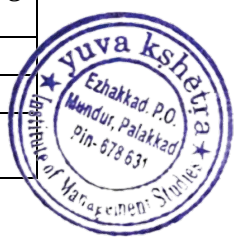
COURSE OUTCOMES	
CORE COURSES	
SEMESTER 1	
Course Code : MTS1B01	
Course Title : Basic Logic And Number Theory	
CO 1	**Understands** various types of propositions, laws of logics, mathematical induction, fundamental theorem of arithmetic, LCM and GCD, congruence and divisibility test
CO 2	**Apply** the principles of mathematical induction, pigeon hole principle, quantifiers in mathematical reasoning, solve congruences, use modular inverses, division algorithms
CO 3	**Analyse** recursive definitions of functions, explore the properties of prime numbers, the concepts of LCM and GCD, various methods of proofs
CO 4	**Evaluate** the implications of theorems in number theory, various methods in congruences, number theoretic functions and distribution of prime numbers.
SEMESTER 2	
Course Code : MTS2B02	
Course Title : Calculus of Single variable - 1	
CO 1	**Understands** types of functions with properties, concept of limit and continuity, extrema of functions, derivatives, integrations.
CO 2	**Apply** operations on functions, compute limits of functions, Use Rolle's Theorem and the Mean Value Theorem, derivative tests for extrema, apply integration techniques to solve differential equations and initial value

	problems, find areas between curves and volumes of solids of revolution.
CO 3	**Analyse** the continuity of functions, secant and tangent lines, the concavity and inflection points, infinite limits and asymptotes, the properties of definite integrals and their geometric interpretations
CO 4	**Evaluate** the implications of continuous functions and their applications in real-world scenarios, estimate rate of change, evaluate the effectiveness of curve sketching techniques, the importance of the Fundamental Theorem in solving integration problems.
CO 5	**Create** problem-solving strategies involving differentiation and application of derivatives in other disciplines. Create detailed sketches of function graphs, develop new integration formulas and rules for practical applications
SEMESTER 3	
Course Code : MTS3B03	
Course Title : Calculus of Single variable - 2	
CO 1	Understand the fundamental properties of logarithmic, exponential, and inverse trigonometric functions, including their derivatives and integrals.
CO 2	**Apply logarithmic differentiation techniques to solve complex problems involving exponential and logarithmic functions.**
CO 3	Analyze **the properties and graphs** of natural logarithmic and exponential functions, and apply them in integration and differentiation problems.
CO 4	**Interpret and solve problems involving hyperbolic functions, their derivatives, integrals, and applications.**
SEMESTER 4	
Course Code : MTS4B04	
Course Title : Linear Algebra	
CO 1	Understand the fundamental properties, derivatives, and integrals of logarithmic and exponential functions, along with their applications.
CO 2	Analyze the concept of inverse functions, their continuity, differentiability, and applications in calculus.
CO 3	Apply differentiation and integration techniques to exponential and logarithmic functions, including general base functions.
CO 4	Interpret and solve problems involving inverse trigonometric functions, including their derivatives, integrals, and applications.
SEMESTER 5	
Course Code : MTS5 B05	
Course Title : Abstract Algebra	
CO 1	List examples and non-examples of algebraic structures.
CO 2	Explain the properties and significance of groups, rings, and fields in algebraic structures. Interpret the meaning of homomorphisms, isomorphisms, and normal subgroups.
CO 3	Apply group and ring properties to solve algebraic equations and problems. Verify whether a given set with an operation forms a group, ring, or field.
CO 4	Differentiate between various types of groups (e.g., cyclic, abelian, normal, symmetric) and Examine the structure of rings and identify quotient rings.
CO 5	Assess the validity of algebraic proofs using axioms and logical reasoning.

	Develop proofs for algebraic statements and theorems using rigorous mathematical reasoning.
Course Code : MTS5 B06	
Course Title : Basic Analysis	
CO 1	Understands the concepts of real numbers, sequence, convergence, closed and open sets in R, finite and infinite sets, complex numbers and properties. Compare the limits of real functions and complex functions.
CO 2	Apply the theorems and techniques in solving problems related to convergence of sequences, linear mappings on complex numbers, properties of real numbers, limit of complex functions, to find the supremum and infimum of sets
CO 3	Analyse and evaluate the effectiveness of the limit theorems in solving sequence problems Analyse the situations concerned with convergence of sequences, supremum and dense property of real numbers, countability of sets. Analyse the behaviour of complex and real functions.
CO 4	Develop examples to illustrate the algebraic and order properties of real numbers. Evaluate the situations of convergence in real life problems and other discipline. Design new functions and sequences using arithmetic operations and compositions
Course Code : MTS5 B07	
Course Title : Numerical Analysis	
CO 1	Understand the various numerical methods, including interpolation, differentiation and integration.
CO 2	Apply numerical techniques to solve problems in various fields such as physics, engineering, and computer science
CO 3	Implement numerical methods using programming languages, such as Python, MATLAB or C++
CO 4	Analyse numerical results using plots, graphs, and other visualization tools.
CO 5	Understand numerical error analysis, error propagation, and error control.
Course Code : MTS5 B08	
Course Title : Linear Programming	
CO 1	Recall fundamental concepts of Linear Programming, including the formulation of LPP, feasibility, boundedness, and optimality criteria.
CO 2	Explain different methods for solving LPP, including the Tucker Table Method, graphical method, and duality theory, and interpret their real-world significance.
CO 3	Solve LPPs using graphical and simplex methods, including non-canonical LPP, and apply negative transpose for transformations.
CO 4	Examine dual problems, compare primal-dual relationships, and analyze how solutions change when constraints or objectives are modified.
CO 5	Assess optimization techniques for Transportation and Assignment Problems, justifying the best approach for cost minimization or efficiency maximization.
Course Code : MTS5 B09	
Course Title : Introduction to Geometry and Theory of Equations	
CO 1	Understanding conic sections and their properties

CO 2	Analyze the focal distance properties and reflection properties of conics.
CO 3	Derive and apply equations of tangents and normals to conic sections.
CO 4	Analyzing and Solving Polynomial Equations
CO 5	Derive and apply equations of tangents and normals to conic sections.
SEMESTER 6	
Course Code : MTS6 B10	
Course Title : Real Analysis	
CO 1	Understands the concepts of continuity, integrability of functions and the idea of uniform convergence.
CO 2	Apply the results and techniques in solving problems related to continuity and convergence in other situations.
CO 3	Analyse the situations concerned with uniform continuity, uniform convergence, the interchange of limits and the convergence of improper integrals.
CO 4	Demonstrate the ability to solve problems on improper integrals, continuity, integrability and convergence of sequence of functions.
Course Code : MTS6 B11	
Course Title : Complex Analysis	
CO 1	Recall fundamental concepts of complex numbers, analytic functions, Cauchy-Riemann equations, and theorems like Cauchy's Integral Theorem and Morera's Theorem.
CO 2	Explain the properties of complex functions, conformal mappings, bilinear (Möbius) transformations, and harmonic functions with their real-world applications.
CO 3	Solve problems involving complex differentiation, contour integration, and power series representations (Taylor and Laurent series) to analyze complex functions.
CO 4	Examine singularities of complex functions, classify them as removable, poles, or essential singularities, and apply the Residue Theorem to evaluate integrals.
CO 5	Compare and contrast different methods of complex integration, assess their effectiveness in solving definite integrals, and justify the use of conformal mappings in physical and engineering problems.
Course Code : MTS6 B12	
Course Title : Calculus of Multivariable	
CO 1	Understand the multivariable functions, including their domains and range.
CO 2	Analyze partial derivatives including their geometric interpretation, computation and application.
CO 3	Apply multiple integrals and vector calculus to solve complex problems in physics, engineering and other fields.
CO 4	Visualize multivariable functions using graphs and 3-D models.
CO 5	Evaluate the limitations and assumptions of mathematical models using multivariable calculus, including the impact of numerical methods on solution accuracy.
Course Code : MTS6 B13	
Course Title : Differential Equations	

CO 1	Understand and Solve Two-Point Boundary Value Problems
CO 2	Classify and Utilize Even and Odd Functions in Fourier Series
CO 3	Apply the Separation of Variables Method in Heat Conduction Problems
CO 4	Solve the Wave Equation for Vibrating Strings**.**
Course Code : MTS6 B14(E01)	
Course Title : Graph Theory	
CO 1	Define fundamental graph theory concepts such as graphs, vertices, edges, degree, paths, cycles, and connectivity.
CO 2	Explain the differences between various types of graphs and their properties.Describe real-world applications of graph theory in computer science, engineering, and networks. Interpret graphical representations of problems using graphs and matrices.
CO 3	Construct graphs from given real-world problems and scenarios.
CO 4	Identify graph properties and determine whether a given graph satisfies specific criteria (e.g., bipartite, planar). Examine the impact of graph transformations on connectivity and structure.
CO 5	Critically evaluate the efficiency and limitations of graph models in different applications. Design efficient graph-based solutions for real-world problems such as network design and social network analysis.
COMPLEMENTARY COURSES FOR B.Sc. CS	
SEMESTER 1	
Course Code : MTS1C01	
Course Title : Mathematics 1	
CO1	Explain the fundamental concepts of derivatives and limits ,Define and explain limits, continuity, and differentiability. , Interpret the concept of instantaneous velocity, slope of a tangent line, and rate of change.
CO2	Apply differentiation techniques to analyze functions, Differentiate polynomials, fractional powers, and implicit functions using chain rule, Solve problems related to related rates, parametric curves, and linear approximations.
CO3	Evaluate the behaviour of functions using calculus methods, Use the first and second derivatives to determine function behaviour (increasing/decreasing, concavity). Apply the Extreme Value Theorem and Mean Value Theorem to identify function properties.
CO4	Utilize L'Hôpital's Rule and summation techniques for problem-solving, Solve indeterminate forms using L'Hôpital's Rule, Compute summation expressions, including distance and velocity problems.
CO5	Apply integration techniques to compute areas and volumes, Define and compute definite and indefinite integrals using Riemann sums and the Fundamental Theorem of Calculus, Calculate areas between curves and volumes using the disk and slicing methods.
Course Code : MTS2C02	
Course Title : Mathematics 2	
CO1	Solve the derivatives and anti derivatives of hyperbolic and inverse hyperbolic



	functions.
CO2	Analyze series to determine convergence and divergence.
CO3	Analyze the eigen decomposition of matrices and apply matrix operations to solve linear systems of linear equations
CO4	Evaluate the solvability of linear systems, determining the existence and uniqueness of solutions and identifying inconsistent systems.
Course Code : MTS3C03	
Course Title : Mathematics 3	
CO1	Explain vector functions, motion on a curve, curvature, and acceleration components to analyze dynamic systems.
CO2	Compute partial and directional derivatives to determine tangent planes and normal lines in multivariable functions.
CO3	Evaluate vector fields using curl and divergence and apply Green's, Stokes', and Divergence theorems in physical contexts. Analyze functions of a complex variable using Cauchy-Riemann equations, contour integrals, and fundamental theorems of complex analysis
CO4	Solve problems using line, surface, and multiple integrals in Cartesian and polar coordinates for real-world applications.
CO5	Perform algebraic operations on complex numbers, including powers, roots, and transformations in the complex plane.
Course Code : MTS4C04	
Course Title : Mathematics 4	
CO1	Recall the definitions and properties of ODE and PDE, including the classification, order and linearity.
CO2	Apply Laplace transforms to solve ODEs, including initial value problems and boundary value problems.
CO3	Evaluate the accuracy and efficiency of different analytical and numerical methods for solving ODE and PDE problems.
CO4	Analyze the convergence of Fourier series, including the effects of truncation and approximation.
CO5	To create mathematical models of real world phenomena, such as electrical circuits, mechanical systems, or heat transfer.
COMPLEMENTARY COURSES FOR BCA	
SEMESTER 1	
Course Code : BCA1C01	
Course Title : Mathematical Foundation for Computer Applications	
CO1	Reflect the concept of matrices and determinants as a way to depict and streamline mathematical ideas to perform basic operations.

CO2	Able to find the inverse of square matrices using different methods and demonstrate a solid understanding of eigen values.
CO3	Proficiency in solving linear equations using different techniques and understanding the geometric interpretation of solutions.
CO4	Gain proficiency in representing vectors geometrically and algebraically, understanding vector addition, dot and cross products.
CO5	Able to apply differential and integral calculus to various functions encountered in computer applications such as polynomials, exponentials and logarithmic functions.
CO6	Represent various mathematical problems using algorithmic approaches and enhance problem-solving skills by visualizing solutions through the utilization of software tools.
SEMESTER 2	
Course Code : BCA2C04	
Course Title : Operation Research	
CO1	Define key concepts of operations research, including linear programming and list various types of decision-making models used in operations research.
CO2	Explain the formulation of linear programming problems and their real-world applications and interpret the results of mathematical models to analyze business and industrial problems
CO3	Apply mathematical programming techniques to solve optimization problems in business, logistics, and engineering.
CO4	Analyze sensitivity and duality in linear programming solutions.
SEMESTER 3	
Course Code : BCA3C05	
Course Title : Computer Oriented Numerical and Statistical Methods	
CO1	Define and Explain the basic concepts of numerical methods and statistical techniques used in computing
CO2	Identify the sources of errors in numerical computations
CO3	Implement numerical methods such as Bisection, Newton-Raphson, and Secant method for solving algebraic and transcendental equations.
CO4	Evaluate and compare different interpolation techniques, such as Newton's forward, backward interpolation, and Lagrange interpolation and Compute numerical differentiation and integration using methods like Trapezoidal and Simpson's rules.
COMPLEMENTARY COURSES FOR PSYCHOLOGY	
SEMESTER 1	
Course Code : STA 1C 02	
Course Title : Descriptive Statistics	
CO1	**Understand** the concepts of data collection, classification, and survey planning.
CO2	**Create** -Develop skills to classify and tabulate data, construct frequency distributions, and represent data graphically.
CO3	**Apply** various measures of central tendency and dispersion in data analysis.

CO4	Interpret the skewness and kurtosis of data distributions.
SEMESTER 2	
Course Code : STA 2C 02	
Course Title : Regression Analysis and Probability Theory	
CO1	**Analyze** relationships between variables using correlation methods like Karl Pearson's coefficient and rank correlation.
CO2	**Apply** regression analysis techniques, derive regression equations, and interpret regression coefficients.
CO3	**Understand** and apply probability concepts, including classical, frequency, and axiomatic approaches.
CO4	**Analyze** random variables and probability distributions to assess their role in statistical decision-making
SEMESTER 3	
Course Code : STA 3C 02	
Course Title : Probability Distributions and Parametric Tests	
CO1	Describe key probability distributions and utilize them to solve practical statistical problems.
CO2	Differentiate between various sampling techniques and effectively apply them for data collection.
CO3	Assess hypotheses using statistical tests, interpreting Type-I and Type-II errors, p-values, and significance levels.
CO4	Execute large and small sample tests, including t-tests, chi-square tests, and F-tests, to draw meaningful conclusions from data.
SEMESTER 4	
Course Code : STA 4C 02	
Course Title : Statistical Techniques for Psychology	
CO1	**Apply** Analysis of Variance (ANOVA) to compare multiple group means and **interpret** the results to draw valid conclusions in research contexts.
CO2	**Use** non-parametric tests to **examine** categorical data and assess the **independence** of attributes.
CO3	**Implement** factorial design principles to **evaluate** the effects of multiple factors on experimental outcomes.
CO4	**Assess** the reliability and validity of measurement tools and test scores to ensure **accuracy** in data collection and analysis.
COMPLEMENTARY COURSES FOR GEOGRAPHY	
SEMESTER 1	
Course Code : STA 1C 03	
Course Title : Descriptive Statistics	

CO1	**Understand** the basic concepts of statistics, including data collection, classification, tabulation, and graphical representation of data.
CO2	**Apply** various sampling techniques to select representative samples and understand the advantages of sampling over census methods.
CO3	**Apply**-Compute and interpret measures of central tendency (mean, median, mode) and dispersion (variance, standard deviation) for data analysis.
CO4	**Analyze** raw and central moments, calculate measures of skewness and kurtosis, and understand their significance in data analysis.
CO 5	**Create** Present statistical data effectively through graphical methods such as histograms, bar charts, and Lorenz curves, and interpret the results in the context of the data set.
SEMESTER 2	
Course Code : STA2C03	
Course Title : Regression Analysis and Time Series	
CO1	Recall key statistical concepts, including correlation methods, regression equations, and time series components.
CO2	**Apply** correlation and regression analysis techniques to real-world datasets, including calculating correlation coefficients and regression lines**.**
CO3	**Analyze** bivariate and time series data to identify trends, relationships, and components such as trend, seasonal, and irregular variations.
CO4	Evaluate the effectiveness of different regression methods in making predictions and interpreting relationships in data.
SEMESTER 3	
Course Code : STA 3C 03	
Course Title : Probability Theory	
CO1	**Understand** the fundamental concepts of probability, including random experiments, sample space, events, and the axiomatic approach to probability.
CO2	Solve problems using the theorems of probability, and understand the concept of conditional probability and event independence.
CO3	**Understand** the concept of random variables, both discrete and continuous, and apply their properties to solve basic probability problems.
CO4	**Analyze** and solve problems using key discrete probability distributions, such as binomial, Poisson, and uniform distributions.
CO5	**Solve** problems involving continuous probability distributions, specifically the normal distribution**, analyze** its properties, and **apply** standard normal tables to interpret results.
SEMESTER 4	
Course Code : STA4C03	
Course Title : Statistical Techniques for Geography	

CO1	Explaining key concepts of hypothesis testing, including null and alternative hypotheses, types of errors, and significance levels.
CO2	Explain and interpret ANOVA techniques for comparing multiple groups in geographical data.
CO3	Application of non-parametric tests, including chi-square tests and Kolmogorov-Smirnov test, for analyzing geographical datasets.
CO4	Evaluate spatial and point patterns using statistical tools such as quadrat analysis, VMR test, and contiguity tests.

COMPLEMENTARY COURSES FOR MATHEMATICS AND COMPUTER SCIENCE

SEMESTER 1

Course Code : STA 1C 01	
Course Title : Introductory Statistics	
CO1	Define key concepts of statistics, such as population, sample, variables, and statistical measures
CO2	Compute measures of central tendency and dispersion to analyze data sets.
CO3	Examine relationships between variables using correlation and regression techniques to draw meaningful conclusions.
CO4	**Analyze** data using histograms, box plots, ogives, and frequency distributions to identify trends and patterns.
Course Code : STA 2C 02	
Course Title : Probability Theory	
CO1	Recall basic statistical concepts, including types of data, measures of central tendency, and dispersion.
CO2	Explain the properties and relationships of independent and dependent events, conditional probability, and theorems of probability
CO3	Use probability rules to compute probabilities for single and multiple events and solve real-world probability problems.
CO4	**Analyze** and interpret problems involving random experiments, and evaluate the independence of events and the significance of probabilistic outcomes.
Course Code : STA3C03	
Course Title : Probability Distribution and Sampling Theory	
CO1	Recall basic statistical concepts, including types of data, measures of central tendency, and dispersion.
CO2	Explain the properties and relationships of independent and dependent events, conditional probability, and theorems of probability
CO3	Use probability rules to compute probabilities for single and multiple events and solve real-world probability problems.

CO4	**Analyze** and interpret problems involving random experiments, and evaluate the independence of events and the significance of probabilistic outcomes.
Course Code : STA4C04	
Course Title : Statistical Inference and Quality Control	
CO1	Understanding advanced concepts in estimation theory, including unbiasedness and efficiency, and solving real-world problems.
CO2	Analyze and interpret data using hypothesis testing techniques such as ANOVA, t-tests, and Chi-square tests.
CO3	Apply and compare non-parametric statistical methods, such as the Sign Test and Mann-Whitney U Test, to analyze non-normal data in research studies.
CO4	Apply design and implement quality control measures using control charts to enhance operational efficiency.
COMMON COURSES FOR HOTEL MANAGEMENT	
SEMESTER 1	
Course Code : A11	
Course Title : Basic Numerical Methods	
CO1	Understanding Numerical Techniques
CO2	Apply numerical techniques to find roots of equations.
CO3	Solving Systems of Linear Equations
CO4	Apply numerical techniques to solve the real-world problems.
CO5	Develop Computational Thinking.

yuva kshetra Institute of Management Studies Ezhakkad, P.O. Mundur, Palakkad Pin-678 631

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Ezhakkad(PO), Mundur, Palakkad(Dt.)
Kerala, India, Pin-678 631

NAME OF THE PROGRAMME : B.Sc. PHYSICS

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:	
PSO 1	Gain a comprehensive understanding of fundamental concepts of mechanics, quantum mechanics, relativity, nuclear physics, optics, spectroscopy, solid-state physics, astrophysics, statistical physics, photonics, and thermodynamics.
PSO 2	Apply fundamental physics concepts to explore and understand related disciplines such as Nanotechnology, Electronics, and Computational Physics.
PSO 3	Analyze physical phenomena by breaking down complex principles, identifying underlying patterns, and evaluating relationships between different concepts in physics.
PSO 4	Develop experimental skills to accurately measure, analyze, and interpret empirical data, and effectively present findings in a structured and accessible manner.
PSO 5	Design and execute projects that address real-world challenges, aligning with academic research needs, within a stipulated timeframe.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : PHY1B01

Course Title : Mechanics I

CO 1	Recall and Explain the fundamental concepts of Newtonian mechanics and their significance in understanding physical systems
CO 2	Apply Newton's laws of motion to analyze the dynamics of physical systems under different force conditions.
CO 3	Interpret and Utilize the work-energy theorem to evaluate the motion and energy transformations in various physical systems.
CO 4	Analyze the rotational dynamics of rigid bodies, including torque, angular

	momentum, and moment of inertia, to solve real-world problems.
CO 5	Evaluate and Solve complex mechanical problems involving forces, energy, and rotational motion by integrating principles of Newtonian mechanics and mathematical reasoning.
SEMESTER 2	
Course Code : PHY2B02	
Course Title : Mechanics II	
CO 1	Explain the features of inertial and non-inertial reference frames and the origin of fictitious forces in different physical systems.
CO 2	Analyze the characteristics of central forces and apply them to understand planetary motion and orbital mechanics.
CO 3	Apply the fundamental principles of harmonic oscillations to describe simple and damped oscillatory systems.
CO 4	Evaluate the basic concepts of wave motion, including wave propagation, superposition, and resonance, in various physical contexts.
CO 5	Compare and Differentiate between inertial and non-inertial frames, central and non-central forces, and different types of oscillations and waves.
SEMESTER 3	
Course Code : PHY3B03	
Course Title : Electrodynamics I	
CO 1	Apply vector calculus to solve problems related to physical and electromagnetic systems.
CO 2	Analyze the electrostatic properties of physical systems using fundamental laws and mathematical models.
CO 3	Explain the behavior of electric fields in matter, including polarization and dielectric effects.
CO 4	Evaluate the magnetic properties of physical systems by applying concepts of magnetostatics and Ampère's law.
CO 5	Experiment and Interpret the behavior of magnetic fields in matter through laboratory investigations, analyzing magnetization and material responses.
SEMESTER 4	
Course Code : PHY4B04	
Course Title : Electrodynamics II	
CO 1	Explain and Apply the fundamental concepts of electrodynamics to analyze electric and magnetic fields in different physical scenarios.

CO 2	Apply mathematical techniques, including vector calculus and differential equations, to solve electromagnetic problems.
CO 3	Evaluate the behavior of transient currents in electrical circuits and their response to varying input conditions.
CO 4	Predict and Evaluate the behavior of electromagnetic waves in different contexts, such as optics and antenna theory.
CO 5	Design and Analyze complex electromagnetic systems and devices using advanced electrodynamics principles.
Course Code : PHY4B05	
Course Title : Practical I	
CO 1	Remember and recall the fundamental principles underlying experimental techniques such as Young's modulus, moment of inertia, and refractive index measurements
CO 2	Understand the working principles, significance, and limitations of various experimental setups, including spectrometers, galvanometers, and potentiometers.
CO 3	Apply appropriate experimental methods to determine physical constants such as acceleration due to gravity, rigidity modulus, dielectric constant, and thermal conductivity.
CO 4	Analyse experimental data by constructing graphs, calculating errors, and interpreting results to validate theoretical concepts like Thevenin's theorem, maximum power transfer theorem, and Lissajous figures.
CO 5	Evaluate experimental findings by comparing results with theoretical predictions, assessing sources of error, and justifying conclusions with scientific reasoning.
SEMESTER 5	
Course Code : PHY5B06	
Course Title : Computational Physics	
CO 1	Understand the fundamental concepts of Python programming, including syntax, data structures, and control flow.
CO 2	Apply Python modules and libraries to solve computational problems efficiently.
CO 3	Analyze basic numerical analysis techniques and implement them using Python for scientific computing.
CO 4	Apply and Evaluate computational techniques to solve physics-related problems, integrating programming with mathematical modeling.

CO 5	Design and Develop a Python-based simulation or computational tool to model and analyze physical phenomena.
Course Code : PHY5B07	
Course Title : Quantum Mechanics	
CO 1	Recall the particle properties of electromagnetic radiation.
CO 2	Explain the Rutherford-Bohr model of the atom and its significance in atomic theory.
CO 3	Apply the concept of wave-particle duality to understand the wavelike properties of particles.
CO 4	Analyze and solve problems using the Schrödinger equation for simple physical systems.
CO 5	Evaluate and apply the principles of wave mechanics to describe the behavior of the Hydrogen atom.
Course Code : PHY5B08	
Course Title : Optics	
CO 1	Recall the fundamentals of Fermat's principle and its role in geometrical optics.
CO 2	Apply the principles of light interference and diffraction to solve problems.
CO 3	Analyze the behavior of polarized light and understand the underlying concepts.
CO 4	Evaluate the the behavior of polarized light ,significance of holography and fiber optics in modern technology.
CO 5	Design experiments or applications that demonstrate the principles of polarization, interference, diffraction, and fiber optics.
Course Code : PHY5B09	
Course Title : Electronics (Analog and Digital)	
CO 1	Recall the fundamental principles of rectifiers and DC power supplies.
CO 2	Apply the working principles to design and analyze transistor amplifiers and oscillators.
CO 3	Analyze the basic operation of operational amplifiers (Op-Amps) and their practical applications.
CO 4	Evaluate the fundamentals of digital electronics and their role in modern circuits and systems.
CO 5	Design circuits using transistors, Op-Amps, and digital electronics for

	practical applications.
SEMESTER 6	
Course Code : PHY6B10	
Course Title : Thermodynamics	
CO 1	Recall the zero and first laws of thermodynamics and their significance.
CO 2	Explain the thermodynamic description of an ideal gas and its properties.
CO 3	Apply the second law of thermodynamics and its various applications in different systems.
CO 4	Analyze the concept of entropy and its role in thermodynamic processes.
CO 5	Evaluate the importance of thermodynamic potentials and their relation to phase transitions.
Course Code : PHY6B11	
Course Title : Statistical Physics, Solid State Physics, Spectroscopy	
CO 1	Grasp the fundamental principles of statistical physics and its applications.
CO 2	Comprehend the key aspects of crystallography in solid-state physics.
CO 3	Understand the essential elements of spectroscopy, including hands-on experimental learning.
CO 4	Learn the basics of microwave and infrared spectroscopy.
CO 5	Explore the fundamental concepts of photonics.
Course Code : PHY6B12	
Course Title : Nuclear Physics and Particle Physics	
CO 1	Understand the essential concepts of nuclear structure and the basics of radioactivity.
CO 2	Outline the different types of nuclear reactions and their real-world applications.
CO 3	Comprehend the principles and operation of particle detectors.
CO 4	Explain the working mechanism of particle accelerators.
CO 5	Grasp the core principles of elementary particle physics.
Course Code : PHY6B13	
Course Title : Relativistic Mechanics and Astrophysics	
CO 1	Gain an understanding of the core principles behind special relativity.
CO 2	Explore the fundamental concepts of general relativity and their connection to

	cosmology.
CO 3	Learn the key techniques and methodologies employed in the field of astronomy.
CO 4	Investigate the life cycle of stars, from formation to their eventual demise.
CO 5	Examine the structure, types, and classification of galaxies.
Course Code : PHY6B14	
Course Title : Nanoscience and Technology	
CO 1	Grasp the fundamental concepts of nanoscience.
CO 2	Understand the mechanisms of electrical transport in nanostructures.
CO 3	Learn the applications of quantum mechanics in nanoscience.
CO 4	Explore the fabrication and characterization methods for nanomaterials.
CO 5	Enumerate the various applications of nanotechnology.
Course Code : PHY6B15	
Course Title : Practical II	
CO 1	Remember fundamental experimental principles related to optics, electromagnetism, and thermal physics, such as diffraction, interference, and conductivity measurements.
CO 2	Understand the working principles of instruments like spectrometers, potentiometers, ballistic galvanometers, and polarimeters to measure physical properties.
CO 3	Apply experimental techniques to determine physical constants, including e/m ratio, refractive indices, wavelength of light, thermal conductivity, and Planck's constant.
CO 4	Analyse experimental data by plotting graphs, calculating uncertainties, and interpreting results for parameters such as numerical aperture, dispersive power, and specific rotation.
CO 5	Evaluate the accuracy and reliability of experimental results by assessing errors, calibration techniques, and limitations of various measurement methods.
Course Code : PHY6B16	
Course Title : Practical II	
CO 1	Remember fundamental principles of electronics components and circuits such as diodes, transistors, operational amplifiers, and oscillators.
CO 2	Understand the working principles and characteristics of various electronic

	devices like Zener diodes, LEDs, LDRs, and the behavior of different oscillator circuits.
CO 3	Apply numerical methods using Python to solve equations, perform least square fitting, numerical differentiation, and integration for practical problems.
CO 4	Create and design various electronic circuits such as amplifiers, oscillators, and logic gates, and verify their performance through practical implementation.
CO 5	Evaluate the effectiveness and performance of constructed circuits and numerical solutions by comparing experimental results with theoretical predictions, identifying sources of error, and suggesting improvements.
Course Code : PHY6B17	
Course Title : Project	
CO 1	Remember fundamental concepts of research methodology, including types of research, data collection methods, and analysis techniques.
CO 2	Understand the principles of research formulation, including hypothesis development, literature review, and research design.
CO 3	Apply appropriate methodologies to design and implement a structured research project in physics.
CO 4	Analyse the scope, limitations, and challenges of a research project through critical evaluation of methodologies and data interpretation.
CO 5	Evaluate research findings by assessing the validity, reliability, and ethical considerations of a research project.
Complementary Courses Offered for B. Sc. Chemistry and B. Sc. Mathematics Students	
SEMESTER 1	
Course Code : PHY1C01	
Course Title : Properties of Matter & Thermodynamics	
CO 1	Comprehend the fundamental principles of elasticity.
CO 2	Understand the concepts related to surface tension.
CO 3	Explore the key aspects of viscosity.
CO 4	Grasp the basic principles of thermodynamics.
CO 5	Analyze or apply the foundational concepts of fluid dynamics in practical scenarios.

SEMESTER 2	
Course Code : PHY2C02	
Course Title : Optics, Laser & Electronics	
CO 1	Comprehend the basic concepts of interference and diffraction.
CO 2	Understand the principles of polarization.
CO 3	Grasp the fundamentals of electronics.
CO 4	Explore the key principles of laser physics.
CO 5	Analyze the applications of optical devices in technology.
SEMESTER 3	
Course Code : PHY3C03	
Course Title : Mechanics, Relativity, Waves and Oscillations	
CO 1	Recognize the fundamental concepts of frames of reference and the principles of conservation of energy and momentum.
CO 2	Understanding the concepts of relativity.
CO 3	Apply the principles of oscillations and waves in various physical systems.
CO 4	Analyzing the core ideas of modern physics and their implications for understanding the universe.
CO 5	Assess the impact of modern physics theories on technological advancements and scientific research.
SEMESTER 4	
Course Code : PHY4BC04	
Course Title : Electricity, Magnetism and Nuclear Physics	
CO 1	Recognize the essential concepts of static and current electricity.
CO 2	Understand the principles of magnetism and its effects.
CO 3	Outline the foundational concepts of nuclear physics.
CO 4	Explore the basic principles of cosmic rays and elementary particles.
CO 5	Investigate the interactions between electromagnetic fields and matter.
SEMESTER 5	
Course Code : PHY5CC05	
Course Title : Physics Practical	
CO 1	Remember the principles and characteristics of fundamental devices such as diodes, Zener diodes, and magnetometers, and methods to measure physical quantities like refractive index, rigidity modulus, and viscosity.

CO 2	Understand the operation and applications of key experimental setups, including spectrometers, potentiometers, Young's modulus measurement, and oscillators, to measure various physical properties.
CO 3	Apply appropriate experimental techniques to determine parameters like resistance, surface tension, refractive index, and moment of inertia, and verify theoretical concepts with experimental data.
CO 4	Create and design experimental setups for advanced applications such as Young's modulus determination, viscosity measurement, and logic gate verification, demonstrating the ability to construct and optimize circuits and experiments.
CO 5	Evaluate the precision and accuracy of experimental measurements, including calculating errors, assessing calibration methods, and comparing results to theoretical expectations to draw valid conclusions.
OPEN COURSE OFFERED BY B.Sc. PHYSICS	
SEMESTER 5	
Course Code : PHY5D01	
Course Title : Non Conventional Energy Sources	
CO 1	Recognize the significance of non-conventional energy sources.
CO 2	Understand the fundamental concepts of solar energy.
CO 3	Comprehend the basic principles behind wind energy conversion.
CO 4	Understand the concepts of geothermal and biomass energy, including their advantages and disadvantages.
CO 5	Explore the ideas of ocean and chemical energy resources, along with their benefits and limitations.

yuva kshetra Institute of Management Studies Ezhakkad, P.O. Mundur, Palakkad Pin-678 631

Principal
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Kerala, India, Pin-678 631

NAME OF THE PROGRAMME : B.Sc. CHEMISTRY

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:	
PSO1	Comprehend theoretical concepts and applications across key chemistry subfields, including inorganic, organic, physical, analytical chemistry, and quantum mechanics.
PSO2	Develop hands-on expertise in safely handling chemicals, preparing solutions, conducting experiments, and analyzing chemical species in laboratory settings.
PSO3	Build a strong foundation in chemistry, facilitating advanced studies in interdisciplinary fields.
PSO4	Apply chemical knowledge across various industries, including pharmaceuticals, materials science, energy, polymers, and environmental monitoring.
PSO5	Conceptualize and execute research projects addressing real-world issues, aligning with societal and academic needs within a given timeframe.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : CHE1B01

Course Title : Theoretical and Inorganic Chemistry- I

CO 1	To apply the methods of a research project.
CO 2	To understand the principles behind volumetry.
CO 3	To analyse the characteristics of different elements.
CO 4	To distinguish between different acid base concepts.
CO5	To analyse the stability of different nuclei.

SEMESTER 2

Course Code : CHE2B02

Course Title : Theoretical and Inorganic Chemistry- II

CO 1	To understand the importance and the impact of quantum revolution in science.
CO 2	To apply the concept that the wave functions of hydrogen atom are nothing but atomic orbitals.
CO 3	To apply the concept of atomic orbitals in chemical bonding .
CO 4	To relate the concept of hybridization as linear combination of orbitals of the same atom.
CO5	To instill an atomic/molecular level philosophy in the mind.

SEMESTER 3

Course Code : CHE3B03	
Course Title : PHYSICAL CHEMISTRY – I	
CO 1	To understand the properties of gaseous state and how it links to thermodynamic systems
CO 2	To understand the concepts of thermodynamics and it's relation to statistical thermodynamics.
CO 3	To apply symmetry operations to categorize different molecules.
CO 4	To comprehend the concepts of law of mass action and chemical equilibria
SEMESTER 4	
Course Code : CHE4B04	
Course Title : ORGANIC CHEMISTRY– I	
CO 1	To apply the concept of stereochemistry to different compounds.
CO 2	To understand the basic concepts of reaction mechanism.
CO 3	To differentiate between different types of organic reactions
CO 4	To analyse the stability of different aromatic systems.
CO5	TO examine the mechanisms and factors influencing aromatic substitution reaction.
Course Code : CHE4B05	
Course Title : INORGANIC CHEMISTRY PRACTICAL– I	
CO 1	To enable the students to develop skills in quatitative analysis and preparing inorganic complexes.
CO 2	To understand the principles behind quantitative analysis.
CO 3	To apply appropriate techniques of volumetric quantitative analysis in estimations.
CO 4	To analyse the strength of different solutions.
SEMESTER 5	
Course Code : CHE5B06	
Course Title : INORGANIC CHEMISTRY – III	
CO 1	To understand the principles behind qualitative and quantitative analysis.
CO 2	To compare various processes of metallurgy and to analyse the merits of different alloys.
CO 3	To understand the applications of different inorganic polymers.
CO 4	To analyse different polluting agents.
CO5	To apply the principles of solid waste management.
Course Code : CHE5B07	
Course Title : ORGANIC CHEMISTRY – II	
CO 1	To understand the difference between alcohols and phenols.
CO 2	To understand the importance of ethers and epoxides.
CO 3	To apply organometallic compounds in the preparation of different functional groups.
CO 4	To identify different reagents for the inter conversion of aldehydes, carboxylic acids and acid derivatives.
CO5	To apply active methylene compounds in organic preparations.
Course Code : CHE5B08	
Course Title : PHYSICAL CHEMISTRY – II	

CO 1	To apply the concept of kinetics in various chemical and physical processes.
CO 2	To characterise different molecules using spectral methods.
CO 3	To understand various phase transitions and its applications.
CO 4	To explain the principles of catalysis and its applications in industrial, biological, and environmental processes.
CO5	To understand the photochemical principles and reactions
SEMESTER 6	
Course Code : CHE6B09	
Course Title : INORGANIC CHEMISTRY – IV	
CO 1	To understand the principles behind different instrumental methods.
CO 2	To distinguish between lanthanides and actinides.
CO 3	To appreciate the importance of CFT.
CO 4	To understand the importance of metals in living systems.
CO5	To distinguish geometries of coordination compounds.
Course Code : CHE6B10	
Course Title : ORGANIC CHEMISTRY – III	
CO 1	utilize spectral techniques to determine the structure of simple organic compounds.
CO 2	To analyze the fundamental structures of carbohydrates and apply chemical tests to distinguish different types.
CO 3	Investigate the molecular components of DNA, their structural organization, and their biological significance.
CO 4	To understand the basic structure and applications of alkaloids and terpenes.
CO5	To distinguish different pericyclic reactions.
Course Code : CHE6B11	
Course Title : PHYSICAL CHEMISTRY – III	
CO 1	To describe the fundamental principles of electrochemistry
CO 2	To utilize electrochemical methods for energy storage, corrosion prevention, and practical applications.
CO 3	To examine the impact of colligative properties on solutions, including boiling point elevation, freezing point depression, and osmotic pressure.
CO 4	To correlate the physical and chemical properties of solids with their geometric arrangement and chemical composition.
Course Code : CHE6B12	
Course Title : Advanced and Applied Chemistry	
CO 1	To understand the importance of nanomaterials.
CO 2	To appreciate the importance of green approach in chemistry.
CO 3	To understand the uses and importance of computational calculations in molecular design.
CO 4	To reflect the role of chemistry in human happiness index and life expectancy.
Course Code : CHE6B13	
Course Title : Polymer Chemistry	
CO 1	To understand various classification of polymers and types of polymerisation methods.

CO 2	To interpret the important characteristics of polymers such as average molecular weight, glass transition temperature, viscoelasticity and degradation.
CO 3	To appreciate the importance of processing techniques.
CO 4	To characterise different commercial polymers and to understand the significance of recycling.
Course Code : CHE6B14	
Course Title : Physical Chemistry Practical	
CO 1	To enable the students to develop analytical skills in determining the physical properties
CO 2	To develop skill in setting up an experimental method to determine the physical properties.
CO 3	To understand the principles of Refractometry, Potentiometry and Conductometry.
CO 4	Gain knowledge of Potentiometry and Conductometry techniques and their practical significance**.**
Course Code : CHE6B15	
Course Title : Organic Chemistry Practical	
CO 1	To enable the students to develop analytical skills in organic qualitative analysis.
CO 2	To develop talent in organic preparations to ensure maximum yield.
CO 3	To apply the concept of melting or boiling points to check the purity of compounds.
CO4	To analyse and characterise simple organic functional groups.
CO5	To analyse individual amino acids from a mixture using chromatography.
Course Code : CHE6B16	
Course Title : INORGANIC CHEMISTRY PRACTCAL-II	
CO 1	To enable the students to develop analytical skills in inorganic quantitative analysis.
CO 2	To understand the principles behind gravimetry and to apply it in quantitative analysis.
CO 3	To understand the principles behind colorimetry and to apply it in quantitative analysis.
CO 4	Apply gravimetric and colorimetric techniques to accurately determine the composition of inorganic substances.
Course Code : CHE6B17	
Course Title : INORGANIC CHEMISTRY PRACTCAL-III	
CO 1	To enable the students to develop skills in inorganic quanlitative analysis.
CO 2	To understand the principles behind inorganic mixture analysis and to apply it in quanlitative analysis.
CO 3	To analyse systematically mixtures containing two cations and two anions.
CO 4	Enhance problem-solving abilities in qualitative analysis.
Course Code : CHE6B18	
Course Title : PROJECT WORK	
CO 1	To understand the scientific methods of research project.
CO 2	To apply the scientific method in life situations.

CO 3	To analyse scientific problems systematically.
CO 4	Enhance critical thinking and research skills through scientific inquiry.
COMPLEMENTARY COURSES FOR CHEMISTRY	
SEMESTER 1	
Course Code : CHE1C01	
Course Title : General Chemistry	
CO 1	To understand and to apply the theories of quantitative and qualitative analysis.
CO 2	To understand the theories of chemical bonding.
CO 3	To appreciate the uses of radioactive isotopes.
CO 4	To explain the importance of metals in biological systems.
SEMESTER 2	
Course Code : CHE2C02	
Course Title : Physical Chemistry	
CO 1	To understand the importance of free energy in defining spontaneity.
CO 2	To realise the theories of different states of matter and their implication
CO 3	To understand the basic principles of electrochemistry.
CO 4	Apply thermodynamic and electrochemical concepts to real-world chemical phenomena.
SEMESTER 3	
Course Code : CHE3C03	
Course Title : Organic Chemistry	
CO 1	To understand the basic concepts involved in reaction intermediates.
CO 2	To realise the importance of optical activity and chirality.
CO 3	To appreciate the importance of functional groups and aromatic stability.
CO 4	To understand the basic structure and importance of carbohydrates, nucleic acids, alkaloids and terpenes.
SEMESTER 4	
Course Code : CHE4C04	
Course Title : Physical and Applied Chemistry	
CO 1	To understand the basic concepts behind colloidal state and nanochemistry.
CO 2	To understand the importance of green chemistry and pollution prevention.
CO 3	To appreciate the importance of different separation methods and spectral techniques.
CO 4	To understand the extent of chemistry in daily life.
Course Code : CHE4C05(P)	
Course Title : Chemistry Practical	
CO 1	To understand the basic concepts of inter group separation.
CO 2	To enable the students to develop analytical and preparation skills.
CO 3	Acquire practical knowledge in the preparation of chemical substances.
CO 4	Apply separation and preparation techniques in laboratory experiments.
OPEN COURSE OFFERED BY B.Sc. CHEMISTRY	
SEMESTER 5	
Course Code : CHE5D01	

Course Title : Environmental Chemistry	
CO 1	Recall the technical/scientific terms involved in pollution.
CO 2	Understand the causes and effects of air pollution.
CO 3	Understand the sources, types and effects of water pollution.
CO 4	Describe water quality parameters.
CO5	Know soil, noise, thermal and radioactive pollutions and their effects.
CO6	Study various pollution control measures.
CO7	Understand the basics of green chemistry.

NAME OF THE PROGRAMME : B.Sc. GEOGRAPHY

PROGRAMME OUTCOMES:	
PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:	
PSO1	Understanding Physical and Human Geography
PSO2	Application of Geospatial Technologies
PSO3	Environmental and Resource Management
PSO4	Research and Analytical Skills
PSO5	Regional and Indian Geography Insights

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : GRY1B01

Course Title : Fundamentals of Geomorphology

CO 1	Explain the basic concepts of physical geography, including the origin of the Earth, geological time scale, and geomorphic processes.
CO 2	Analyze the theories of Continental Drift, Plate Tectonics, and related processes, and their role in shaping Earth's surface.
CO 3	Apply the knowledge of geomorphic processes to understand mountain-building, volcanism, and seismic activities.
CO 4	Evaluate the driving mechanisms behind plate movements and their influence on Earth's dynamic systems.
CO5	Synthesize concepts from geomorphic theories to explain the relationship between Earth's internal structure and surface processes.

SEMESTER 2

Course Code : GRY2B02

Course Title : Process Geomorphology

CO 1	Explain the fundamental concepts of landforms, including their classification and the forces and processes shaping them, such as weathering and erosion.
CO 2	Analyze the role of fluvial action in shaping landforms, including drainage patterns, erosional and depositional features, and the stages of erosion.
CO 3	Evaluate the formation of landforms associated with groundwater and wind, focusing on karst topography and wind-driven processes.
CO 4	Examine coastal landforms and the influence of waves, currents, and tides on erosional and depositional features along different types of coastlines.
CO5	Describe the processes associated with glacial action and identify the types of glaciers and their associated landforms.

SEMESTER 3

Course Code : GRY3B03	
Course Title : Climatology	
CO 1	Students will analyze the composition, structure, and significance of the atmosphere and apply these concepts to assess weather and climate variations across different regions.
CO 2	Students will evaluate temperature variations spatially and temporally and apply heat budget principles to analyze climate trends and temperature anomalies, including temperature inversions and their effects.
CO 3	Students will apply knowledge of atmospheric pressure, wind systems (planetary, seasonal, and local), monsoons, and humidity to interpret weather patterns, predict climatic changes, and assess monsoonal impacts on agriculture and society.
CO 4	Students will examine evaporation, condensation, cloud formation, and precipitation processes to interpret weather conditions, forecast rainfall, and analyze extreme weather events like cyclones and anticyclones.
CO5	Students will critically analyze human influences on climate, including air pollution, ozone depletion, and global warming, and apply climate change mitigation strategies to support sustainable environmental policies.
SEMESTER 4	
Course Code : GRY4804	
Course Title : Oceanography	
CO 1	Students will describe the origin of Earth's oceans, early explorations, and the development of oceanography as a systemic science, and identify major oceans, marginal seas, and oceanographic institutions.
CO 2	Students will examine ocean bottom topography, analyze the composition of seawater, and interpret the distribution of salinity, temperature, and density across different oceanic regions.
CO 3	Students will assess the role of ocean currents, upwelling, downwelling, thermohaline circulation, and climate phenomena (El Niño and La Niña) in regulating global climates and apply these concepts to explain climate change and sea-level variations.
CO 4	Students will analyze the causes and impacts of tsunamis, oil spills, coastal pollution, and waste islands, and evaluate international laws and agreements, such as the Exclusive Economic Zone (EEZ) and the UN Law of the Seas, for ocean conservation.
CO5	Students will investigate the potential of physical, biological, and marine energy resources and develop sustainable strategies for their utilization, considering economic, ecological, and international cooperation challenges.
SEMESTER 5	
Course Code : GRY5B05	
Course Title : Human Geography	
CO 1	Define and explain the fundamental concepts, principles, and approaches of human geography.
CO 2	Describe the stages of human development, cultural regions, and their geographic distributions.
CO 3	Examine the factors influencing population distribution, migration trends, and

	demographic transitions globally.
CO 4	Critically assess geopolitical theories and their implications for international relations, particularly in India and its neighbouring regions.
CO5	Develop knowledgeable perspectives on the spatial distribution of human activities and propose solutions to geographic challenges.
Course Code : GRY5B06	
Course Title : Cartography	
CO 1	Define and explain the fundamental concepts, history, and scope of cartography, including map properties and institutions.
CO 2	Describe and compare different models of the Earth, geodetic concepts, map projections, and spatial data infrastructure.
CO 3	Classify different types of maps, interpret cartographic conventions, and analyse Survey of India's topographic map schemes.
CO 4	Examine various map-making techniques, including surveying, remote sensing, GPS, and statistical data collection for cartographic design.
CO5	Develop and visualize thematic maps by integrating weather, socio-economic, and terrain data to create special-purpose cartographic representations.
Course Code : GRY5B07	
Course Title : Introduction to Geoinformatics	
CO 1	Define and explain the fundamental concepts of GIS, including spatial thinking, components, coordinate systems, and data quality.
CO 2	Describe and differentiate data models, spatial objects, and topological rules while analysing vector and raster data structures.
CO 3	Examine the principles of remote sensing, including electromagnetic radiation interactions, spectral reflectance, and atmospheric effects.
CO 4	Compare various remote sensing systems, sensors, and platforms, including Earth observation satellites and their resolutions.
CO5	Apply remote sensing and GIS techniques to real-world applications, such as water resource management and disaster mitigation.
Course Code : GRY5B08	
Course Title : Methodology of Geographical Studies	
CO 1	Define and explain geography as a science, including its approaches, traditions, and significance in understanding spatial relationships.
CO 2	Describe and differentiate between various models, paradigms, and scientific concepts such as facts, theories, laws, and hypotheses in geography.
CO 3	Apply field-based data collection techniques, including primary and secondary data sources, to analyse local geographic problems.
CO 4	Evaluate different sampling techniques, including probability and non-probability sampling methods, to ensure accuracy in geographic research.
CO5	Analyse and interpret geographical data using tabulation, thematic mapping, hypothesis testing, and report preparation techniques.
SEMESTER 6	
Course Code : GRY6809	
Course Title : World Regional and Economic Geography	
CO 1	Students will explain the nature and scope of world regional geography,

	differentiate between various types of regions (natural, cultural, and functional), and analyze major tropical and temperate natural regions.
CO 2	Students will classify economic activities based on production, exchange, and consumption, and apply economic geography concepts to analyze global agricultural systems, resource distribution, and industrial locations.
CO 3	Students will examine the agricultural land-use model of Von Thünen, assess the global distribution and production of key crops (wheat, cotton, sugarcane, tea, coffee, jute), and evaluate the role of marine and animal resources in economic geography.
CO 4	Students will analyze the global distribution of key minerals (iron ore, bauxite, copper) and energy resources (coal, petroleum, atomic minerals, hydropower) and assess industrial location theories (Weber and Lösch) to explain global industrial patterns.
CO5	Students will evaluate the classification of resources, assess the significance of sustainable agriculture and industry, and develop strategies for sustainable development in relation to resource conservation and environmental management.
Course Code : GRY6810	
Course Title : General Geography of India	
CO 1	Understand the strategic significance of India's location, its unity in diversity, and its physiographic regions, drainage systems, and climate characteristics.
CO 2	Evaluate the distribution of natural vegetation, soil types, and biogeographical zones, and understand the implications for agriculture and biodiversity in India.
CO 3	Examine the salient features of Indian agriculture, the role of major crops like rice, wheat, cotton, and sugarcane, and assess the impacts and problems of the Green Revolution.
CO 4	Assess India's mineral and energy resources, both conventional and non-conventional, and propose strategies for their sustainable conservation.
CO5	Understand the issues related to population growth, distribution, and density, and assess the problems faced in transportation and foreign trade of India
Course Code : GRY6811	
Course Title : Geographical Appraisal of Kerala	
CO 1	Understand the absolute and relative location of Kerala, its physiographic divisions, climate characteristics, and the influence of the Arabian Sea and Western Ghats on temperature and rainfall distribution.
CO 2	Analyze the monsoon patterns, distribution, and impact in Kerala, as well as the state's geology, soil types, drainage patterns, and characteristics of major river basins.
CO 3	Examine the agricultural conditions favorable for the cultivation of key crops such as paddy, coconut, rubber, tea, and spices, and evaluate the challenges posed by urbanization and infrastructure development on Kerala's agriculture.
CO 4	Evaluate the trends and challenges related to population growth, distribution, density, literacy, sex ratio, and occupational structure in Kerala, including the impacts of migration and urbanization.
CO5	Understand the transportation network in Kerala, including roads, railways,

	waterways, and airways, and assess the role of Mass Rapid Transport System (MRTS) in urban development.
Course Code : GRY6812	
Course Title : Biogeography	
CO 1	Understand the basic concepts of biogeography, ecology, ecosystems, and the environment, including ecological principles and the theory of evolution.
CO 2	Define and differentiate between key ecological concepts like habitat, biome, community, ecotone, and ecological niche.
CO 3	Explain the structure and functioning of the biosphere, energy sources, and energy flow, including the dynamics of food chains and food webs.
CO 4	Analyze and classify the types of biodiversity, including species, ecosystem, and genetic diversity, and describe major biomes such as forest, grassland, desert, and icecap biomes, with their distribution and characteristics.
COMPLEMENTARY COURSES FOR GEOGRAPHY	
SEMESTER 1	
Course Code : GRY1C01.1	
Course Title : Development of Geographical Thought	
CO 1	Explain the meaning, nature, and scope of geography, as well as the contributions of Greek, Roman, Arab, and Indian scholars to the evolution of geographical thought.
CO 2	Describe and interpret the key dichotomies in geography, such as determinism, possibilism, neo-determinism, and positivism, and explain their role in shaping geographical theories.
CO 3	Apply the concepts of the quantitative revolution and spatial thinking to analyze geographical patterns and processes in real-world contexts.
CO 4	Critically analyze the various models in geography, classify their typologies, and assess their effectiveness in explaining spatial relationships and systems.
CO 5	Synthesize traditional and contemporary geographical approaches to develop innovative solutions for spatial problems and evaluate their relevance in addressing modern geographical challenges.
SEMESTER 2	
Course Code : GRY2C01.2	
Course Title : Soil Geography	
CO 1	Explain the meaning, scope, and significance of Soil Geography and its relationship with Pedology.
CO 2	Analyze the factors influencing soil formation, describe the components and properties of soil, and explain the processes of soil profile development.
CO 3	Classify soils based on zonal and USDA systems, and evaluate the characteristics of soils in India and Kerala.
CO 4	Identify the types and causes of soil erosion and propose suitable conservation principles and strategies to prevent soil degradation.
CO 5	Design and recommend effective soil management practices for sustainable soil usage and productivity enhancement.
SEMESTER 3	
Course Code : GRY3C01.3	

Course Title : Geography of Water Resources	
CO 1	demonstrate an in-depth understanding of water as a resource, its forms, characteristics, distribution, and the hydrological cycle, essential for sustainable water management.
CO 2	apply hydrological, geological, and environmental principles to analyze and solve real-world water management challenges, including watershed planning, groundwater conservation, and pollution control.
CO 3	critically analyze water-related environmental issues, such as climate change impacts, surface water pollution, and inter-state water conflicts, and propose sustainable and scientifically sound solutions.
CO 4	evaluate and contribute to water governance policies, such as the National Water Policy, and participate in community-driven initiatives like the Water Parliament model for participatory water management.
CO 5	develop and implement innovative water conservation strategies, including rainwater harvesting, interlinking of rivers, and integrated watershed management, to promote sustainable and resilient water resource systems.
SEMESTER 4	
Course Code : GRY4C01.4	
Course Title : Introduction to Disaster Management	
CO 1	Students will define and classify natural hazards and anthropogenic disasters, explain their impact on the environment and society, and identify global and national institutions involved in disaster management.
CO 2	Students will examine the causes, distribution, and consequences of earthquakes, volcanoes, landslides, floods, droughts, cyclones, and tsunamis, and analyze the vulnerability and risk factors affecting different regions.
CO 3	Students will apply disaster resilience and mitigation strategies for floods, droughts, and other hydrological extremes, and evaluate disaster response, rehabilitation, and recovery plans in the context of India's National Disaster Management Framework.
CO 4	Students will demonstrate the use of Remote Sensing, Geographic Information Systems (GIS), and Global Positioning Systems (GPS) for predicting, monitoring, and managing natural hazards and disasters.
CO 5	Students will assess the role of government policies, voluntary organizations, and local communities in disaster management and develop action plans for community-based disaster preparedness and response.
OPEN COURSE OFFERED BY B.Sc. GEOGRAPHY	
SEMESTER 5	
Course Code : GRY5D01	
Course Title : Physical Geography	
CO 1	Define and explain the fundamental concepts of geography, including its scope, major branches, and the evolution of the Earth.
CO 2	Describe geomorphological processes such as earthquakes, volcanoes, weathering, and denudation, and their impact on Earth's surface.
CO 3	Analyse atmospheric processes, including temperature variations, wind systems, cyclones, and climatic classifications.

CO 4	Evaluate oceanographic phenomena such as ocean currents, tides, salinity, and El Niño–La Niña events, and their influence on global climate.
CO5	Apply concepts of biogeography to assess soil formation, ecosystems, food chains, and the importance of environmental conservation.

NAME OF THE PROGRAMME : B.Sc. PSYCHOLOGY

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Develop a comprehensive knowledge of psychological principles, theories, and research methodologies to apply it in real world contexts to address societal challenges and promote psychological wellbeing.
PSO 2	Demonstrate ethical integrity, empathy, and responsibility in psychological practice, rooted in constitutional and moral values. ***lication*** Emphasis theoretical knowledge to solve real-world problems
PSO 3	Cultivate intellectual, emotional, and interpersonal skills to develop as responsible citizens and compassionate human beings.
PSO 4	Engage in scientific inquiry, data analysis, and evidence-based research to contribute to advancements in psychological sciences.
PSO 5	Promote psychological well-being and environmental sustainability through research, counselling, and community engagement, integrating a love for nature and human responsibility.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **PSY 1B 01**

Course Title : BASIC THEMES IN PSYCHOLOGY I

CO 1	Define and describe the basic concepts, origin, and history of psychology, including different perspectives and branches.

CO 2	Explain and differentiate various psychological research methods such as observation, interviews, surveys, case studies, correlational and experimental methods.
CO 3	Examine the nature of consciousness, biological rhythms, sleep cycle, and the effects of altered states such as hypnosis, meditation, and psychoactive drugs.
CO 4	Apply classical and operant conditioning principles to real-life scenarios, including reinforcement, punishment, and shaping behavior.
CO 5	Compare and contrast different types of learning and their applications in education, behavior modification, and skill acquisition.
SEMESTER 2	
Course Code : **PSY2B01**	
Course Title : BASIC THEMES IN PSYCHOLOGY II	
CO 1	Define and describe the basic cognitive processes, including thought, reasoning, problem-solving, and decision-making.
CO 2	Analyze different models and theories of memory, including Atkinson-Shiffrin Model, working memory, and reconstructive memory
CO 3	Evaluate the major theories of motivation and apply them to real-life situations, including biological, learned, and achievement motives.
CO 4	Apply cognitive and motivational theories to real-life situations, such as decision-making, learning, goal-setting, and behavior regulation.
CO 5	Assess the role of biological and environmental factors in memory, motivation, and emotion.
SEMESTER 3	
Course Code : **PSY 3B 01**	
Course Title : PSYCHOLOGICAL MEASUREMEMT AND TESTING	
CO 1	Differentiate between nominal, ordinal, interval, and ratio scales of measurement,explaining their properties and appropriate applications in psychological research.
CO 2	Evaluate various psychophysical scaling methods and their contribution to understanding sensory thresholds and perception.
CO 3	Analyze the key characteristics of a good psychological test, including objectivity,reliability, validity, norms, and practicability, and explain their importance in ensuring testquality and utility.

CO 4	Classify and compare different types of psychological tests based on various criteria, explaining the advantages and disadvantages of each type.
CO 5	Apply the principles of test construction, including item writing, item analysis,reliability estimation, and validity assessment, to develop a short psychological measurement instrument.
SEMESTER 4	
Course Code : **PSY 4B 01**	
Course Title : INDIVIDUAL DIFFERENCES	
CO 1	Compare and contrast major theories of intelligence, including psychometric cognitive biological and multiple intelligences, highlighting their strengths and weaknesses.
CO 2	Evaluate the historical development and contemporary use of intelligence tests analyzing their psychometric properties, cultural fairness, and ethical considerations in administration and interpretation.
CO 3	Differentiate between aptitude, achievement, and interest, explaining their theoretical underpinnings and the methods used to assess each construct.
CO 4	Explain major theoretical perspectives on personality, including psychodynamic and type humanistic, and social-cognitive approaches, demonstrating an understanding of their core concepts and assumptions.
CO 5	Analyze the strengths and limitations of various personality assessment methods, including self-report inventories, projective techniques behavioral observations, and interviews, considering their reliability, validity, and ethical implications.
SEMESTER 5	
Course Code : **PSY 5B 01**	
Course Title : ABNORMAL PSYCHOLOGY- I	
CO 1	Explain the biological, psychological, and sociocultural causal factors of abnormal behavior and their application to specific disorders.
CO 2	Identify and classify major categories of psychological disorders, including anxiety, stress-related, somatoform, dissociative, and personality disorders, based on diagnostic criteria.
CO 3	Analyze the presenting symptoms and clinical features to formulate a potential diagnosis using appropriate terminology.

CO 4	Evaluate the potential causal factors (predisposing, precipitating, and maintaining) for specific psychological disorders, considering the interaction of biological, psychological, and social domains.
CO 5	Describe various therapeutic techniques used in the management of anxiety and stress disorders, demonstrating an understanding of their theoretical underpinnings and mechanisms of action.
Course Code : **PSY 5B 02**	
Course Title : SOCIAL PSYCHOLOGY	
CO 1	Define and describe the origin, development, nature, goals, and scope of social psychology.
CO 2	Analyze the role of social perception, non-verbal communication, and attribution theories in understanding human interactions.
CO 3	Evaluate the formation, functions, and impact of attitudes on social behavior.
CO 4	Identify and explain the nature and functions of groups, different types of leadership, and theories of leadership.
CO 5	Apply theoretical concepts to real-world social situations, including group behavior, leadership, and social influence.
Course Code : **PSY 5B 03**	
Course Title : DEVELOPMENTAL PSYCHOLOGY-I	
CO 1	Describe the historical foundation of developmental psychology and its relevance in understanding human growth.
CO 2	Evaluate the impact of prenatal and perinatal diagnostic tests, birth methods, and complications on development
CO 3	Assess physical and emotional adjustments during the postpartum period.
CO 4	Examine physical developmental milestones from childhood to adolescence.
CO 5	Critically evaluate physical conditions and health challenges in early and middle adulthood.
Course Code : **PSY 5B 03**	
Course Title : DEVELOPMENTAL PSYCHOLOGY-I	
CO 1	Describe the historical foundation of developmental psychology and its relevance in understanding human growth.

CO 2	Evaluate the impact of prenatal and perinatal diagnostic tests, birth methods, and complications on development
CO 3	Assess physical and emotional adjustments during the postpartum period.
CO 4	Examine physical developmental milestones from childhood to adolescence.
CO 5	Critically evaluate physical conditions and health challenges in early and middle adulthood.
Course Code : **PSY 5B 04**	
Course Title : PSYCHOLOGICAL COUNSELING	
CO 1	Explain the definition, scope, goals, and conditions necessary for effective counseling.
CO 2	Demonstrate effective counseling skills, including rapport building, listening techniques, and communication strategies.
CO 3	Describe Egan's Model of counseling and apply its three-stage approach to problem-solving in real-life scenarios.
CO 4	Compare and contrast different approaches to counseling, such as psychoanalytic,person-centered, cognitive, and behavioral methods.
CO 5	Assess the ethical, legal, and professional aspects of counseling practice.
Course Code : **PSY 5B 05**	
Course Title : HEALTH PSYCHOLOGY	
CO 1	Define health psychology and explain the mind-body relationship, highlighting thesignificance of health psychology in understanding physical and mental well-being.
CO 2	Compare and contrast the biopsychosocial model with the biomedical model,emphasizing their applications in health psychology.
CO 3	Apply knowledge of health psychology to develop strategies for promoting health and preventing illness, considering individual and community interventions.
CO 4	Develop a comprehensive health behavior intervention plan aimed at promoting well-being and reducing risk factors for diseases, integrating psychological principles.
CO 5	Assess the effectiveness of various stress management techniques in improving both mental and physical health.

SEMESTER 6	
Course Code : **PSY 6B 01**	
Course Title : ABNORMAL PSYCHOLOGY II	
CO 1	Describe and classify major psychological disorders, including substance-related,psychotic, mood, and developmental disorders, according to established diagnostic criteria
CO 2	Explain the biological, psychological, and sociocultural factors contributing to the development and maintenance of major psychological disorders.
CO 3	To differentiate between disorders with overlapping symptoms, providing a clear differential diagnosis based on case presentations or clinical vignettes.
CO 4	To analyze case studies, identifying presenting problems, potential diagnoses, and contributing etiological factors for a range of psychological disorders.
CO 5	To evaluate the strengths and limitations of various treatment approaches for major psychological disorders.
CO 6	To apply ethical considerations and professional guidelines to the assessment and treatment of individuals with psychological disorders.
Course Code : **PSY 6B 02**	
Course Title : APPLIED SOCIAL PSYCHOLOGY	
CO 1	Describe the foundations of applied social psychology and its relationship with other disciplines.
CO 2	Apply social psychology theories to address and solve critical social issues such as child abuse and labor.
CO 3	Critically examine aggression through biological, psychological, and situational perspectives.
CO 4	Analyze historical developments and key theories in social psychology, such as cognitive dissonance and groupthink.
CO 5	Evaluate the impact of media violence and pornography on aggression and social behavior.
Course Code : **PSY 6B 03**	
Course Title : DEVELOPMENTAL PSYCHOLOGY II	
CO 1	Define and classify different types of emotions and temperament, and explain their role in emotional development from infancy to middle adulthood.

CO 2	Analyze the influence of family, parenting, and peer relationships on emotional and self-development, and evaluate the significance of close relationships in adulthood.
CO 3	Explain the process of socialization and attachment development using Vygotsky's and Bowlby's theories, and assess their role in forming interpersonal relationships.
CO 4	Compare and contrast different theories of moral development (Piaget & Kohlberg) and examine their influence on adult decision-making and behavior.
CO 5	Assess the impact of changing work conditions on vocational adjustment in middle adulthood and formulate strategies for career sustainability.
Course Code : **PSY 6B 04**	
Course Title : LIFE SKILL EDUCATION: APPLICATIONS AND TRAINING	
CO 1	Identify and describe key life skills necessary for personal development, including self-awareness, emotional regulation, and resilience.
CO 2	Investigate the role of communication styles in resolving interpersonal conflicts and improving relationships.
CO 3	Demonstrate the ability to apply decision-making techniques to real-life situations,focusing on problem-solving and critical thinking.
CO 4	Assess the effectiveness of goal-setting strategies in achieving personal and professional success, and design a plan to evaluate their long-term outcomes.
CO 5	Create and implement problem-solving approaches in complex, real-world situations to enhance critical thinking and adaptability.
Course Code : **PSY 6B 06**	
Course Title : POSITIVE PSYCHOLOGY	
CO 1	Students will be able to explain the fundamental concepts, theories, and cross-cultural perspectives of positive psychology, including its assumptions, goals, and well-being models.
CO 2	Students will be able to apply ethical principles and culturally sensitive approaches in fostering optimism, mindfulness, and resilience to enhance psychological well-being.
CO 3	Students will be able to analyze the impact of happiness, subjective well-being, and positive emotions across different life stages, gender, relationships, and cultural contexts.

CO 4	Students will be able to utilize research methodologies to investigate the neurobiological and psychological foundations of optimism, flow, and intrinsic motivation.
CO 5	Students will be able to design evidence-based interventions to promote psychological well-being and environmental sustainability through community-based engagement and counseling practices.

COMPLENTARY COURSES

SEMESTER 1

Course Code : **PSY 1C 01**

Course Title : HUMAN PHYSIOLOGY

CO 1	Describe the structure and function of cells, including their organelles, membranes, and key biomolecules (carbohydrates, lipids, proteins), and explain the principles of cell theory and tissue organization.
CO 2	Explain the structure and function of DNA, the processes of DNA replication and gene expression, and describe the morphology and types of chromosomes.
CO 3	Describe the cell cycle and the processes of mitosis and meiosis, explaining their roles in growth, development, and reproduction.
CO 4	Define key genetic terms, explain Mendel's laws of inheritance, and describe various patterns of non-mendelian inheritance.
CO 5	Describe different types of gene mutations and chromosomal abnormalities, and explain how these genetic changes can lead to various genetic disorders.

SEMESTER 2

Course Code : **PSY 2C 01**

Course Title : HUMAN PHYSIOLOGY

CO 1	Describe the structure and function of the nervous system, including neurons, synapses, and neurotransmitters, and explain how nerve impulses are generated and transmitted.
CO 2	Describe and explain the organization of the central nervous system (brain and spinal cord), and reflex activity.
CO 3	Describe the role of cerebellum and basal ganglia in motor control and cognition.
CO 4	Describe the functions of specific cortical areas, and the concept of

	hemispheric dominance.
CO 5	Describe sleep stages and their associated brain wave patterns, and explain the basic principles of various neurophysiological techniques, such as EEG and brain imaging.
SEMESTER 3	
Course Code : **PSY 3C 01**	
Course Title : HUMAN PHYSIOLOGY	
CO 1	Describe the anatomy and physiology of the major sensory systems, including their pathways, receptor mechanisms, perceptual processes, and common impairments.
CO 2	Explain sensory transduction and information processing in the brain.
CO 3	Critically evaluate different theories of sensory perception.
CO 4	Describe major endocrine glands, their hormones, and the physiological effects of hormones
CO 5	Understanding hormone action mechanisms and the role of endocrine system in regulating various bodily functions.
SEMESTER 4	
Course Code : **PSY 4C 01**	
Course Title : HUMAN PHYSIOLOGY	
CO 1	Describe and explain the physiological mechanisms underlying hunger, thirst, and sexual behaviour, including the roles of neural circuits, hormones, and peripheral factors in regulating these fundamental drives.
CO 2	Describe the neural basis of emotion, including the functions of key brain regions like the frontal lobes, hypothalamus, limbic system, and amygdala, and how these areas contribute to emotional experience and expression.
CO 3	Identify the causes and types of brain damage and explain their effects on brain function.
CO 4	Describe various neuropsychological disorders and explain their underlying pathophysiology and clinical manifestations.
CO 5	Discuss the concept of neuroplasticity, including its mechanisms and its role in recovery from brain damage and adaptation to environmental changes.
OPEN COURSE OFFERED BY B.Sc. PHYCHOLOGY	

SEMESTER 5	
Course Code : PSY5D02	
Course Title : LIFE SKILL APPLICATIONS	
CO 1	Recall and Define the Concepts of Life Skills.
CO 2	Explain the Relevance of Life Skills in Personal and Professional Development.
CO 3	Demonstrate Problem-Solving, Critical Thinking, and Decision-Making Skills.
CO 4	Differentiate Between Effective and Ineffective Communication and Interpersonal Skills.
CO 5	Develop and Implement Life Skill-Based Strategies for Career Development and Social Well-being.

NAME OF THE PROGRAMME : B.Sc. HOTEL MANAGEMANT CATERING SCIENCE

PROGRAMME OUTCOMES:

PO 1	Knowledge & Understanding
PO 2	Application & Execution
PO 3	Critical Thinking & Problem-Solving
PO 4	Innovation & Strategic Decision-Making
PO 5	Professional Communication
PO 6	Global Awareness & Cultural Sensitivity
PO 7	Leadership & Teamwork
PO 8	Technical Expertise in Food Production
PO 9	Commodity Knowledge & Practical Execution

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Demonstrate a comprehensive understanding of hospitality operations, including food production, food service, tourism management, accommodation services, and front office operations
PSO 2	Apply culinary skills, food safety, hygiene practices, and foodservice management techniques to ensure high standards in food production, service, and guest satisfaction.
PSO 3	Manage accommodation services and front office operations effectively to enhance guest satisfaction and operational efficiency
PSO 4	Through conducting and coordinating various programs in the department and college, students gain knowledge in organizing events and activities, enhancing operational and organizational skills.
PSO 5	Develop entrepreneurial skills to identify business opportunities, manage ventures, and integrate sustainability and nutrition practices across hospitality operations.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **BSH/C 1B01**

Course Title : **Introduction to Hospitality Industry**

CO 1	Explain the origin and historical evolution of the hospitality industry, including the development of travel and hotels in India and internationally.
CO 2	Analyze the growth of hotels, resorts, and motels, understanding their significance in different historical contexts.
CO 3	Differentiate between various types of hotels, organizational structures, revenue and non-revenue departments, and job roles in front office operations.
CO 4	Evaluate the importance of customer service in the hospitality industry, emphasizing guest relations, customer satisfaction, and service quality.
CO 5	Identify and classify different areas of the hospitality industry, including hotels, airlines, cruises, restaurants, institutional catering, and tourism-related accommodations.

SEMESTER 2	
Course Code : **BSH2B02**	
Course Title : **Accommodation Operation.**	
CO 1	Understand the housekeeping department's role, responsibilities, and structure in different hotel categories.
CO 2	Apply cleaning procedures, linen handling, and room servicing techniques to maintain hygiene and guest comfort.
CO 3	Analyze room types, statuses, and cleaning schedules to ensure effective housekeeping operations.
CO 4	Evaluate housekeeping records, key handling, and communication tools to improve efficiency and security.
CO 5	Implement best practices for safety, lost-and-found, and fire safety to enhance workplace standards.
Course Code : **BSH2B02 (P)**	
Course Title : **Accommodation Operation Practical**	
CO 1	Demonstrate proficiency in housekeeping procedures, including cleaning techniques, guest room servicing, and maintenance of public areas and guest floors.
CO 2	Identify and apply the appropriate cleaning agents, chemicals, and equipment for various housekeeping tasks, ensuring hygiene and safety standards.
CO 3	Operate and maintain both mechanical and manual housekeeping equipment efficiently for effective cleaning and upkeep.
CO 4	Execute guest handling procedures professionally, addressing guest requests, complaints, and special requirements with hospitality standards.
CO 5	Implement best practices in maintaining public areas, ensuring cleanliness, organization, and a welcoming ambiance.
SEMESTER 3	
Course Code : **BSH3B03**	
Course Title : **Food And Beverage Production –I**	
CO 1	Demonstrate an understanding of kitchen hierarchy, roles, and responsibilities while maintaining personal hygiene, food safety, and professional kitchen behavior.
CO 2	Apply fundamental and advanced food production techniques, including ingredient selection, cooking methods, and plating, ensuring high standards of quality and presentation.
CO 3	Analyze the characteristics and functionalities of ingredients such as meat, seafood, dairy, herbs, and spices to create balanced and flavorful dishes.
CO 4	Evaluate and implement sustainable and ethical culinary practices, considering nutrition, waste management, and environmental impact in food production.
CO 5	Develop entrepreneurial and managerial skills in kitchen operations, cost control, and menu planning, preparing for leadership roles in the culinary and hospitality industry.

Course Code : **BSH3B03 (P)**	
Course Title : **Food And Beverage Production – I (Practical)**	
CO 1	Demonstrate proficiency in vegetable cutting techniques, ingredient selection, and fundamental culinary preparations while maintaining hygiene and safety standards.
CO 2	Prepare and evaluate stocks, sauces, and soups, understanding their role in enhancing flavors, textures, and overall food presentation.
CO 3	Apply industry-standard techniques in handling and cooking eggs, fish, poultry, meats, and vegetables to create balanced and flavorful dishes.
CO 4	Execute traditional and contemporary cooking methods in preparing Indian and international dishes, including rice, gravies, breads, snacks, and desserts, with an emphasis on authenticity.
CO 5	Develop creativity and technical skills in food presentation, menu planning, and culinary innovation while ensuring consistency, quality, and adherence to food safety norms.
Course Code : **BSH3B04**	
Course Title : **Food and Beverage Service I**	
CO 1	Understand the hotel industry's structure, growth, and the role of catering establishments in tourism.
CO 2	Apply food and beverage management skills, including staff roles and restaurant service techniques.
CO 3	Identify and classify restaurant equipment and understand the functions of ancillary departments.
CO 4	Plan and organize menus and service styles for breakfast, banquets, and buffets.
CO 5	Enhance guest service by improving service sequences for floor, room, and lounge service.
Course Code : **BSH3B04(P)**	
Course Title : **Food and Beverage Service I (Practical)**	
CO 1	Understand the structure and key areas of Food and Beverage (F&B) service operations.
CO 2	Gain hands-on experience in handling, maintaining, and storing F&B service equipment.
CO 3	Develop basic technical skills for service tasks, including handling cutlery, crockery, and glassware.
CO 4	Master various types of menus and appropriate table settings for different dining styles.
CO 5	Learn the procedures for effective restaurant service, including opening, operating, and closing duties
SEMESTER 4	
Course Code : **BSH4B05**	
Course Title : **Food and Beverage Service II**	
CO 1	Identify and classify different types of beverages, including alcoholic and non-

	alcoholic drinks.
CO 2	Demonstrate the preparation methods for cocktails, mocktails, and specialty coffee, showcasing application of beverage-making skills.
CO 3	Analyze the factors affecting the quality of wines, spirits, and liqueurs, understanding their production processes.
CO 4	Design beverage menus, applying principles of menu engineering and merchandising, with attention to pricing and layout.
CO 5	Evaluate bar stock management, equipment uses, and billing systems, ensuring efficient service and operations.
Course Code : **BSH4B06 (P)**	
Course Title : **Food and Beverage Service II (Practical)-**	
CO 1	Identify and organize bar equipment for wine, beer, and cocktail service.
CO 2	Plan and develop business models for food and beverage outlets.
CO 3	Classify and prepare popular cocktails and mixed drinks.
CO 4	Evaluate the service techniques for wines, spirits, and liqueurs.
CO 5	Match wines with foods for continental and regional cuisines.
Course Code : **BSH4B06**	
Course Title : **Food & Beverage Production–II**	
CO 1	Understand the role of condiments, spices, and masalas in Indian cuisine, applying blending techniques to create authentic flavors and textures.
CO 2	Demonstrate proficiency in using quantity food production equipment, ensuring proper selection, care, and maintenance to optimize large-scale food preparation.
CO 3	Develop effective menu plans for different institutions, applying principles of quantity food production, portion control, and recipe standardization.
CO 4	Prepare and present dishes from various international cuisines while mastering charcuterie techniques, including sausages, forcemeats, marinades, and pâtés.
CO 5	Apply advanced baking techniques in pastry, bread making, and dessert production, ensuring quality standards in temperature control and ingredient handling.
Course Code : **BSH 4B06 (P)**	
Course Title : **Food & Beverage Production – II (Practical)**	
CO 1	Demonstrate a comprehensive understanding of classic French cooking methods, ingredients, and menu structures, applying them to practical food preparation.
CO 2	Prepare and present authentic French multi-course menus, ensuring consistency in taste, texture, and presentation according to culinary standards.
CO 3	Develop proficiency in preparing classical French sauces and garnishes, enhancing the aesthetic and flavor profile of dishes.
CO 4	Effectively manage kitchen operations, including mise en place, cooking techniques, portioning, and plating, in a structured and organized manner.
CO 5	Demonstrate expertise in the preparation of French bread, pastries, and desserts, maintaining high standards of quality and presentation.
SEMESTER 5	
Course Code : **BSH5B09**	
Course Title : **Front Office Operation**	
CO 1	Demonstrate knowledge of front office operations, including the guest cycle, check-

	in/check-out procedures, and guest service standards.
CO 2	Apply effective communication and interpersonal skills in guest handling, ensuring a high standard of customer service and guest satisfaction.
CO 3	Analyze and implement front office technology, such as Property Management Systems (PMS) and reservation systems, to streamline operations and improve efficiency.
CO 4	Manage guest inquiries, complaints, and requests, applying problem-solving techniques to provide optimal solutions and enhance the guest experience.
CO 5	Evaluate and handle various front office functions, including reservations, billing, and cashiering, ensuring accuracy and adherence to hotel policies and procedures.
Course Code : **BSH5B09 (P)**	
Course Title : **Front Office Operation - Practical**	
CO 1	Demonstrate proficiency in handling guest check-ins, check-outs, and room assignments, applying industry-standard front office procedures and guest service techniques.
CO 2	Effectively use Property Management Systems (PMS) for reservations, guest check-ins, billing, and check-out processes, ensuring seamless front office operations.
CO 3	Apply communication and interpersonal skills in real-life scenarios, handling guest inquiries, requests, and complaints while maintaining professionalism and customer satisfaction. Execute front office procedures related to room assignments, group bookings, and special requests, ensuring accuracy and attention to detail.
CO 4	Evaluate and manage front office documentation, such as guest registration forms, billing statements, and reports, ensuring compliance with hotel policies and legal standards.
CO 5	Demonstrate proficiency in handling guest check-ins, check-outs, and room assignments, applying industry-standard front office procedures and guest service techniques.
Course Code : **BSH5B10**	
Course Title : **Accommodation Management**	
CO 1	Demonstrate an understanding of the key aspects of accommodation management, including room division operations, front office, housekeeping, and guest services, ensuring a smooth and efficient operation.
CO 2	Apply knowledge of room types, layouts, and guest expectations to manage the allocation of rooms effectively, enhancing guest satisfaction and operational efficiency.
CO 3	Analyze and manage housekeeping operations, including cleaning, linen management, inventory control, and maintenance, ensuring high standards of hygiene, safety, and guest satisfaction.
CO 4	Evaluate the role of accommodation management in maximizing hotel revenue through effective pricing, yield management, and room occupancy strategies.
CO 5	Demonstrate proficiency in managing front office operations, including guest check-ins, check-outs, guest relations, and handling complaints, providing excellent customer service and maintaining operational standards
Course Code : **BSH5B11**	
Course Title : **Rooms Division Management**	

CO 1	Understand the organizational structure and operations of the rooms division, including front office, housekeeping, and guest services, to ensure smooth and efficient management of accommodation facilities.
CO 2	Apply principles of room allocation, room types, guest needs, and operational efficiency to optimize room occupancy and revenue in hospitality operations.
CO 3	Evaluate and implement housekeeping procedures for cleanliness, maintenance, and guest satisfaction, focusing on safety and hygiene standards in all areas of the hotel.
CO 4	Analyze the role of technology and property management systems in streamlining room division operations and improving guest services, ensuring maximum efficiency and accuracy.
CO 5	Demonstrate skills in managing the front office functions, including guest check-ins, check-outs, reservations, and guest relations, ensuring high levels of guest satisfaction and operational effectiveness.
Course Code : **BSH/C 5B12**	
Course Title : **Food and Beverage Management**	
CO 1	Understand the role of food and beverage management within the hospitality industry, including the importance of menu planning, pricing strategies, and inventory control to ensure cost-effective and high-quality service.
CO 2	Apply knowledge of food and beverage production and service, ensuring adherence to hygiene, safety, and quality standards in both front-of-house and kitchen operations.
CO 3	Analyze various types of food and beverage establishments, from quick-service restaurants to fine dining, to develop effective management strategies for each.
CO 4	Demonstrate proficiency in managing food and beverage operations, including staff scheduling, budgeting, and customer service, while maintaining efficiency and maximizing profitability.
CO 5	Evaluate current trends in the food and beverage industry, such as sustainable practices, technology integration, and health-conscious offerings, to adapt management strategies accordingly.
SEMESTER 6	
Course Code : **BSH6B07**	
Course Title : **Industrial Exposure Training and Report**	
CO 1	Identify and describe the various operational departments in a hotel, demonstrating understanding of their roles and responsibilities.
CO 2	Evaluate the relationships between different hotel departments, highlighting their interdependence and collaboration.
CO 3	Critique the daily functions and activities of various hotel departments, assessing their efficiency and effectiveness.
CO 4	Rate and assess the standard operating procedures (SOPs) of hotel departments, identifying areas of improvement.
CO 5	Examine the performance appraisal systems within the hotel, identifying strengths and weaknesses in employee evaluation methods.
Course Code : **BSH5B08**	
Course Title : **Comprehensive self-study**	

CO 1	Appraise the operations and roles of different hotel departments, demonstrating evaluation of their functions and performance.
CO 2	Monitor and identify technical terms used in core hotel departments, showcasing understanding of industry-specific vocabulary.
CO 3	Analyze and assess the functions of the front office and housekeeping, identifying key responsibilities and operational efficiency.
CO 4	Evaluate the functions of F&B Service and F&B Production, examining their contribution to overall hotel performance.
CO 5	Assess and compare various hospitality techniques followed in hotels, identifying best practices for guest satisfaction
Course Code : **BSH6B13**	
Course Title : **Project Report and Viva**	
CO 1	Demonstrate the ability to conduct independent research and analysis on a relevant topic within the hospitality industry, utilizing appropriate methodologies and data collection techniques.
CO 2	Develop a comprehensive project report that presents clear, well-organized findings, recommendations, and conclusions in a professional manner, adhering to academic standards.
CO 3	Apply critical thinking and problem-solving skills to address real-world challenges in the hospitality industry, offering innovative solutions and strategies. (PO4, PO6, PO9)
CO 4	Effectively communicate project findings during the viva session, demonstrating clarity of thought, depth of understanding, and the ability to defend key concepts and conclusions.
CO 5	Synthesize theoretical knowledge and practical experience gained throughout the course to produce a project that contributes to the academic and professional field of hospitality management.
COMPLEMENTRY COURSE OFFERED BY BSc HM CS	
SEMESTER 1	
Course Code : **BSH/C 1CO1**	
Course Title : **Sales and Marketing**	
CO 1	Recall and describe key marketing strategies specific to the hospitality industry, understanding how to adapt to its ever-changing nature.
CO 2	Explain market trends and buyer behavior, demonstrating an understanding of how to tailor marketing strategies to meet customer needs and organizational goals.
CO 3	Apply marketing techniques to promote hospitality services, ensuring that services meet customer expectations and align with business objectives.
CO 4	Analyze competitive positioning in the hospitality industry, identifying opportunities for differentiation in a crowded market.
CO 5	Create targeted marketing campaigns using customer insights, developing personalized offers to effectively attract and retain guests.
Course Code : **BSH/C1C02**	
Course Title : **Travel and Tourism**	
CO 1	Understand the basics of the tourism industry by learning key concepts, frameworks

	types, and forms of tourism, along with its economic, social, and environmental impacts.
CO 2	Comprehend travel behavior and motivations by gaining an understanding of the psychological and social factors that influence travel and tourism decisions.
CO 3	Identify and analyze national and international tourism organizations, learning about key organizations and their role in promoting global tourism and hospitality.
CO 4	Develop business management skills, acquiring expertise in managing tourism-related businesses with a focus on operations, marketing, and customer service.
CO 5	Enhance communication skills for the tourism sector, building effective communication and interpersonal skills to engage with clients, colleagues, and stakeholders in the tourism industry.
SEMESTER 2	
Course Code : **BSH/C 2CO3**	
Course Title : **Event Management**	
CO 1	Explain the fundamentals of event management, including types, classifications, and key elements of successful event planning.
CO 2	Develop, organize, and execute various events by applying industry-specific planning, budgeting, and risk management strategies.
CO 3	Utilize marketing, sponsorship, and public relations techniques to enhance event promotion and audience engagement.
CO 4	Demonstrate proficiency in logistics management, vendor coordination, and on-site event execution for seamless operations.
CO 5	Apply evaluation techniques to assess event success, gather feedback, and implement improvements for future events.
Course Code : **BSH/C 2C04**	
Course Title : **Management Principles and Practices**	
CO 1	Explain the fundamental concepts, functions, and principles of management and their relevance in business operations.
CO 2	Apply planning, organizing, leading, and controlling techniques to enhance organizational efficiency and effectiveness.
CO 3	Analyze different management approaches, decision-making processes, and problem-solving strategies in various business scenarios.
CO 4	Demonstrate leadership, motivation, and team management skills essential for managerial success in a competitive environment.
CO 5	Evaluate the impact of corporate ethics, social responsibility, and sustainable business practices in modern management.
SEMESTER 3	
Course Code : **BSH/C 3CO5**	
Course Title : **Nutrition Hygiene and Sanitation**	
CO 1	Explain the principles of nutrition, the role of macronutrients and micronutrients, and their impact on human health and well-being.
CO 2	Apply knowledge of food safety standards, hygiene practices, and sanitation protocols to prevent contamination and ensure food quality.

CO 3	Identify and assess common foodborne diseases, their causes, symptoms, and preventive measures in hospitality operations.
CO 4	Demonstrate an understanding of personal and workplace hygiene, pest control methods, waste management, and sanitation practices in food establishments.
CO 5	Implement HACCP and other food safety management systems to maintain high standards in food production, handling, and service.
Course Code : **BSH/C 3CO6**	
Course Title : **Facility Planning**	
CO 1	Explain the principles of facility planning, layout design, and space allocation in hospitality establishments to enhance operational efficiency.
CO 2	Analyze the key factors influencing the planning and design of hotel kitchens, restaurants, and other hospitality facilities, ensuring compliance with industry standards.
CO 3	Evaluate the importance of workflow management, equipment selection, and maintenance in optimizing hospitality operations.
CO 4	Apply safety, sanitation, waste management, and energy conservation strategies in facility planning to promote sustainability.
CO 5	Assess the role of project management, budgeting, and legal considerations in the development and renovation of hospitality facilities.
SEMESTER 4	
Course Code : **BSH/C 4CO7**	
Course Title : **Hotel Laws**	
CO 1	Recall the essential laws and regulations that govern the hospitality industry, including national and international legal frameworks.
CO 2	Explain the key aspects of hotel laws, focusing on contracts, licenses, consumer protection, and labor regulations within the hospitality context.
CO 3	Apply the procedures for obtaining and renewing the required licenses to operate hotels and catering establishments, ensuring compliance with legal standards.
CO 4	Analyze legal issues, including discrimination, liability, taxation, and business ethics, and provide solutions to address these challenges effectively.
CO 5	Evaluate the significance of legal aspects in hotel operations, assess various contracts, employment laws, and guest-related issues to make well-informed decisions.
Course Code : **BSH/C 4CO8**	
Course Title : **Human Resource Management**	
CO 1	Recall the key principles and functions of human resource management in the hospitality industry, including recruitment, selection, and training.
CO 2	Explain the importance of effective human resource planning and the role of HR policies in enhancing employee performance and satisfaction.

CO 3	Apply recruitment, selection, and induction techniques to identify and onboard suitable candidates for various hospitality roles.
CO 4	Analyze and evaluate employee performance using performance appraisal techniques and address issues related to motivation, retention, and discipline.
CO 5	Assess the legal and ethical considerations in human resource management, ensuring compliance with labor laws and fostering a positive workplace culture.
OPEN COURSE OFFERED BY B.Sc. HM CS	
SEMESTER 1	
Course Code : BSH/C 5D02	
Course Title : Basics in Culinary	
CO 1	Explain the principles and objectives of cooking to understand fundamental cooking methods.
CO 2	Demonstrate knife skills and basic cuts to enhance efficiency and precision in food preparation.
CO 3	Apply food safety practices to prevent cross-contamination and ensure hygiene in culinary operations.
CO 4	Identify the role of stocks and sauces in cooking to develop foundational culinary techniques.
CO 5	Prepare basic stocks and mother sauces to build essential culinary skills for professional cooking.

NAME OF THE PROGRAMME : B.Sc. HOTEL MANAGEMENT & CULNARY ARTS

PROGRAMME OUTCOMES:

PO 1	Knowledge & Understanding (Remembering & Understanding)
PO 2	Application & Execution (Applying)
PO 3	Critical Thinking & Problem-Solving (Analyzing & Evaluating)
PO 4	Innovation & Strategic Decision-Making (Evaluating & Creating)
PO 5	Professional Communication (Applying & Evaluating)
PO 6	Global Awareness & Cultural Sensitivity (Understanding & Applying)
PO 7	Leadership & Teamwork (Applying & Evaluating)
PO 8	Technical Expertise in Food Production (Applying & Analyzing)
PO 9	Commodity Knowledge & Practical Execution (Understanding & Applying)

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Demonstrate a comprehensive understanding of culinary arts, including food production techniques, food safety, hygiene, nutrition, and kitchen management.
PSO 2	Apply culinary skills, food safety practices, and hygiene standards to prepare and present high-quality dishes, ensuring guest satisfaction and food excellence.
PSO 3	Develop proficiency in managing kitchen operations, from inventory control to staff coordination, while maintaining quality and efficiency in the food production process.
PSO 4	Gain hands-on experience in food and beverage service, learning about food presentation, menu planning, and customer interaction during culinary events and programs.
PSO 5	Develop entrepreneurial skills to identify and manage culinary ventures, incorporating innovation, sustainability, and nutrition in food preparation, service, and business operations.
PSO 6	Demonstrate a comprehensive understanding of culinary arts, including food production techniques, food safety, hygiene, nutrition, and kitchen management.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **BHC 1B01**

Course Title : **Introduction to Hospitality Industry**

CO 1	Explain the origin and historical evolution of the hospitality industry, including the development of travel and hotels in India and internationally.
CO 2	Analyze the growth of hotels, resorts, and motels, understanding their significance in different historical contexts.
CO 3	Differentiate between various types of hotels, organizational structures, revenue and non-revenue departments, and job roles in front office operations.
CO 4	Evaluate the importance of customer service in the hospitality industry, emphasizing guest relations, customer satisfaction, and service quality.
CO 5	Identify and classify different areas of the hospitality industry, including hotels, airlines

	cruises, restaurants, institutional catering, and tourism-related accommodations
SEMESTER 2	
Course Code : **BHC 2B02**	
Course Title : **Food and Beverage Production.**	
CO 1	Understand and apply basic food production techniques, including preparation, cooking, and presentation, to ensure high-quality food production.
CO 2	Demonstrate proficiency in handling and using kitchen equipment, tools, and utensils safely and efficiently in the production of food.
CO 3	Understand the role of different ingredients and cooking methods in food production, ensuring consistency in taste, texture, and presentation.
CO 4	Develop skills in portion control, food costing, and managing food production to optimize resources and minimize waste.
CO 5	Apply knowledge of food safety, hygiene, and sanitation procedures to ensure the production of safe and high-quality food in compliance with industry standards.
Course Code : **BHC 2B02 P**	
Course Title : **Food and Beverage Production Practical.**	
CO 1	Demonstrate hands-on proficiency in preparing, cooking, and presenting various dishes using industry-standard techniques while adhering to food safety and hygiene practices.
CO 2	Apply culinary skills to prepare a variety of food items, including appetizers, main courses, desserts, and bakery products, following appropriate cooking methods and presentation techniques.
CO 3	Operate kitchen equipment and tools effectively and safely, demonstrating an understanding of their proper use and maintenance in the food production process.
CO 4	Implement portion control and food costing techniques, ensuring efficient use of resources and minimizing food waste during practical kitchen operations.
CO 5	Exhibit teamwork, communication, and organizational skills in a professional kitchen environment while maintaining high standards of cleanliness and order.
SEMESTER 3	
Course Code : **BHC3B04**	
Course Title : **Advanced Food and Beverage Production**	
CO 1	Demonstrate advanced techniques in food preparation and presentation, focusing on international cuisines, modern cooking methods, and innovative plating styles.
CO 2	Apply knowledge of advanced cooking methods such as sous-vide, molecular gastronomy, and other contemporary techniques to create unique and high-quality dishes.
CO 3	Analyze and incorporate modern trends in the food and beverage industry, such as sustainable cooking practices, plant-based cuisine, and health-conscious food preparation.
CO 4	Develop skills in managing complex food production systems, ensuring the efficient and safe operation of kitchens with a focus on inventory management, food costing, and menu planning.

CO 5	Evaluate the nutritional aspects and dietary needs of various food items while considering allergens and food sensitivities in advanced food preparation.
Course Code : **BHC3B04 (P)**	
Course Title : **Advanced Food and Beverage Production –Practical**	
CO 1	Demonstrate advanced culinary techniques and skills in preparing international dishes, using modern cooking methods and presentation styles.
CO 2	Execute advanced cooking methods such as sous-vide, molecular gastronomy, and fermentation, ensuring high-quality food production.
CO 3	Apply principles of food safety, sanitation, and hygiene in a high-level kitchen environment while ensuring the efficient operation of food production systems.
CO 4	Create and present a variety of advanced dishes from different cuisines, emphasizing innovation, creativity, and modern plating techniques.
CO 5	Manage and organize the preparation and service of complex menus, maintaining consistency, quality, and effective kitchen workflow.
Course Code : **BHC 3B03**	
Course Title : **Food and Beverage Service**	
CO 1	Understand the hotel industry's structure, growth, and the role of catering establishments in tourism.
CO 2	Apply food and beverage management skills, including staff roles and restaurant service techniques.
CO 3	Identify and classify restaurant equipment and understand the functions of ancillary departments.
CO 4	Plan and organize menus and service styles for breakfast, banquets, and buffets.
CO 5	Enhance guest service by improving service sequences for floor, room, and lounge service.
Course Code : **BHC 3B03(P)**	
Course Title : **Food and Beverage Service-Practical**	
CO 1	Understand the structure and key areas of Food and Beverage (F&B) service operations.
CO 2	Gain hands-on experience in handling, maintaining, and storing F&B service equipment.
CO 3	Develop basic technical skills for service tasks, including handling cutlery, crockery, and glassware.
CO 4	Master various types of menus and appropriate table settings for different dining styles.
CO 5	Learn the procedures for effective restaurant service, including opening, operating, and closing duties
SEMESTER 4	
Course Code : **BHC4B05**	
Course Title : **Quantity Cooking**	
CO 1	Demonstrate the ability to prepare and produce large quantities of food while maintaining quality, flavor, and presentation.
CO 2	Apply principles of portion control, menu planning, and food cost calculation to efficiently manage large-scale food production.

CO 3	Understand and execute various cooking methods used in quantity cooking, ensuring food safety and hygiene standards are met.
CO 4	Manage kitchen operations and teamwork in high-pressure environments to ensure timely and efficient service for large groups.
CO 5	Evaluate the challenges involved in quantity cooking, including inventory management, waste reduction, and maintaining food quality at scale.
Course Code : **BHC4B05 (P)**	
Course Title : **Quantity Cooking Practical**	
CO 1	Demonstrate the ability to prepare and produce large quantities of food while maintaining quality, flavor, and presentation.
CO 2	Apply principles of portion control, menu planning, and food cost calculation to efficiently manage large-scale food production.
CO 3	Understand and execute various cooking methods used in quantity cooking, ensuring food safety and hygiene standards are met.
CO 4	Manage kitchen operations and teamwork in high-pressure environments to ensure timely and efficient service for large groups.
CO 5	Evaluate the challenges involved in quantity cooking, including inventory management, waste reduction, and maintaining food quality at scale.
Course Code : **BHC 4B06**	
Course Title : **Bakery and Confectionary**	
CO 1	Demonstrate an understanding of the various baking methods and techniques for preparing bread, cakes, pastries, and other bakery products, ensuring adherence to industry standards.
CO 2	Apply principles of food science in the preparation of bakery and confectionery items, including the correct use of ingredients and baking processes to achieve desired results.
CO 3	Develop skills in decorating and presenting bakery and confectionery items creatively, while maintaining high standards of hygiene and safety.
CO 4	Analyze the role of different ingredients in bakery products, including leavening agents, flour types, and sugars, and adapt recipes to suit various dietary needs or preferences.
CO 5	Evaluate the economic aspects of bakery and confectionery production, focusing on cost control, inventory management, and effective use of kitchen resources.
Course Code : **BHC 4B06 (P)**	
Course Title : **Bakery and Confectionary Practical**	
CO 1	Demonstrate the ability to prepare a variety of bakery and confectionery products, including bread, cakes, pastries, and cookies, using appropriate techniques and equipment.
CO 2	Apply the knowledge of food safety, hygiene practices, and proper handling of bakery ingredients during the preparation and production of various items.
CO 3	Develop proficiency in decorating bakery items, including cakes and pastries, using industry-standard techniques such as piping, fondant work, and glazing.
CO 4	Use appropriate methods for the preparation of different doughs, batters, and fillings, ensuring quality consistency and presentation.

CO 5	Implement time management and organizational skills in the practical preparation of bakery and confectionery products, ensuring efficient use of kitchen resources.
SEMESTER 5	
Course Code : **BHC5B07**	
Course Title : **Advanced Garde manger**	
CO 1	Demonstrate an advanced understanding of the principles and techniques of cold food preparation, including salads, appetizers, pâtés, terrines, and charcuterie.
CO 2	Apply advanced knife skills and precision in preparing garnishes, decorations, and plating, enhancing the presentation of cold dishes.
CO 3	Analyze and create innovative cold food recipes, considering flavor combinations, textures, and seasonality, to meet contemporary dining standards.
CO 4	Develop proficiency in the production of high-quality hors d'oeuvres, canapés, and buffet-style cold platters for large-scale catering events.
CO 5	Demonstrate an advanced understanding of the principles and techniques of cold food preparation, including salads, appetizers, pâtés, terrines, and charcuterie.
Course Code : **BHC5B07(P)**	
Course Title : **Advanced Garde manger Practical**	
CO 1	Demonstrate proficiency in preparing and presenting a wide range of cold dishes, including salads, pâtés, terrines, and charcuterie, using professional techniques and equipment.
CO 2	Apply advanced knife skills and precision in garnishing, decoration, and plating to create visually appealing and well-executed cold food items.
CO 3	Execute the preparation of hors d'oeuvres, canapés, and buffet-style platters, ensuring the presentation and taste align with industry standards for large-scale events.
CO 4	Analyze and adapt recipes based on seasonal ingredients, flavor profiles, and dietary requirements, demonstrating creativity in cold food preparations.
CO 5	Ensure food safety and hygiene in the preparation and storage of cold dishes, following industry standards and maintaining high-quality standards throughout production.
Course Code : **BHC5B08**	
Course Title : **Kitchen Management**	
CO 1	Demonstrate an understanding of kitchen hierarchy, roles, and responsibilities, ensuring smooth operations through effective team management.
CO 2	Apply cost control techniques such as portioning, inventory management, and supplier negotiations to optimize kitchen profitability.
CO 3	Analyze and implement food safety practices, including proper handling, storage, and sanitation, in compliance with industry standards.
CO 4	Evaluate and apply principles of kitchen design and workflow optimization to improve efficiency, safety, and productivity.
CO 5	Develop and implement effective training programs for kitchen staff, focusing on skill enhancement, safety, and maintaining high culinary standards.
Course Code : **BHC509**	
Course Title : **Banquets and Buffets**	

CO 1	Demonstrate a clear understanding of the concepts of banquets and buffets, including various types, layouts, and service styles, and apply this knowledge to event planning.
CO 2	Apply effective strategies for organizing, planning, and executing banquets and buffet services, ensuring efficient and seamless operations.
CO 3	Evaluate and create well-balanced menu plans and beverage selections suitable for banquets and buffets, meeting guest preferences and dietary requirements.
CO 4	Analyze and apply techniques for managing large events, including managing staff, inventory, and time to ensure smooth service delivery and customer satisfaction.
CO 5	Evaluate guest expectations in banquet and buffet services and apply customer service strategies to ensure satisfaction and enhance the overall dining experience
Course Code : **BSH/C 5B10**	
Course Title : **Food and Beverage Management**	
CO 1	Identify and classify cost elements, types, and sales concepts, demonstrating understanding of cost accounting principles.
CO 2	
CO 3	Apply inventory control methods and techniques, including perpetual and physical inventory, to manage pricing and stock .
CO 4	
CO 5	Analyze food and beverage control processes, including receiving, storing, issuing, and budgeting, to ensure efficient operations.
SEMESTER 6	
Course Code : **BHC6B11**	
Course Title : **Industrial Exposure Training and Report**	
CO 1	Identify and describe the various operational departments in a hotel, demonstrating understanding of their roles and responsibilities.
CO 2	Evaluate the relationships between different hotel departments, highlighting their interdependence and collaboration.
CO 3	Critique the daily functions and activities of various hotel departments, assessing their efficiency and effectiveness.
CO 4	Rate and assess the standard operating procedures (SOPs) of hotel departments, identifying areas of improvement.
CO 5	Examine the performance appraisal systems within the hotel, identifying strengths and weaknesses in employee evaluation methods.
Course Code : **BHC6B12**	
Course Title : **Comprehensive self-study**	
CO 1	Appraise the operations and roles of different hotel departments, demonstrating evaluation of their functions and performance.
CO 2	
CO 3	Monitor and identify technical terms used in core hotel departments, showcasing understanding of industry-specific vocabulary.
CO 4	
CO 5	Analyze and assess the functions of the front office and housekeeping, identifying key responsibilities and operational efficiency.

Course Code : **BHC 6B13**	
Course Title : **Project Report and Viva**	
CO 1	Demonstrate the ability to conduct independent research and analysis on a relevant topic within the hospitality industry, utilizing appropriate methodologies and data collection techniques.
CO 2	Develop a comprehensive project report that presents clear, well-organized findings, recommendations, and conclusions in a professional manner, adhering to academic standards.
CO 3	Apply critical thinking and problem-solving skills to address real-world challenges in the hospitality industry, offering innovative solutions and strategies.
CO 4	Effectively communicate project findings during the viva session, demonstrating clarity of thought, depth of understanding, and the ability to defend key concepts and conclusions.
CO 5	Synthesize theoretical knowledge and practical experience gained throughout the course to produce a project that contributes to the academic and professional field of hospitality management.
COMPLIMENTRY COURSE OFFERED BY B.Sc. HM CA	
SEMESTER 1	
Course Code : **BSH/C 1CO1**	
Course Title : **Sales and Marketing**	
CO 1	Recall and describe key marketing strategies specific to the hospitality industry, understanding how to adapt to its ever-changing nature.
CO 2	Explain market trends and buyer behavior, demonstrating an understanding of how to tailor marketing strategies to meet customer needs and organizational goals.
CO 3	Apply marketing techniques to promote hospitality services, ensuring that services meet customer expectations and align with business objectives.
CO 4	Analyze competitive positioning in the hospitality industry, identifying opportunities for differentiation in a crowded market.
CO 5	Create targeted marketing campaigns using customer insights, developing personalized offers to effectively attract and retain guests.
Course Code : **BSH/C 1C02**	
Course Title : **Travel and Tourism**	
CO 1	Understand the basics of the tourism industry by learning key concepts, frameworks, types, and forms of tourism, along with its economic, social, and environmental impacts.
CO 2	Comprehend travel behavior and motivations by gaining an understanding of the psychological and social factors that influence travel and tourism decisions.
CO 3	Identify and analyze national and international tourism organizations, learning about key organizations and their role in promoting global tourism and hospitality.
CO 4	Develop business management skills, acquiring expertise in managing tourism-related businesses with a focus on operations, marketing, and customer service.
CO 5	Enhance communication skills for the tourism sector, building effective

	communication and interpersonal skills to engage with clients, colleagues, and stakeholders in the tourism industry.
SEMESTER 2	
Course Code : **BSH/C 2CO3**	
Course Title : **Event Management**	
CO 1	Explain the fundamentals of event management, including types, classifications, and key elements of successful event planning.
CO 2	Develop, organize, and execute various events by applying industry-specific planning, budgeting, and risk management strategies.
CO 3	Utilize marketing, sponsorship, and public relations techniques to enhance event promotion and audience engagement.
CO 4	Demonstrate proficiency in logistics management, vendor coordination, and on-site event execution for seamless operations.
CO 5	Apply evaluation techniques to assess event success, gather feedback, and implement improvements for future events.
Course Code : **BSH/C 2C04**	
Course Title : **Management Principles and Practices**	
CO 1	Explain the fundamental concepts, functions, and principles of management and their relevance in business operations.
CO 2	Apply planning, organizing, leading, and controlling techniques to enhance organizational efficiency and effectiveness.
CO 3	Analyze different management approaches, decision-making processes, and problem-solving strategies in various business scenarios.
CO 4	Demonstrate leadership, motivation, and team management skills essential for managerial success in a competitive environment.
CO 5	Evaluate the impact of corporate ethics, social responsibility, and sustainable business practices in modern management.
SEMESTER 3	
Course Code : **BSH/C 3CO5**	
Course Title : **Nutrition Hygiene and Sanitation**	
CO 1	Explain the principles of nutrition, the role of macronutrients and micronutrients, and their impact on human health and well-being.
CO 2	Apply knowledge of food safety standards, hygiene practices, and sanitation protocols to prevent contamination and ensure food quality.
CO 3	Identify and assess common foodborne diseases, their causes, symptoms, and preventive measures in hospitality operations.
CO 4	Demonstrate an understanding of personal and workplace hygiene, pest control methods, waste management, and sanitation practices in food establishments.
CO 5	Implement HACCP and other food safety management systems to maintain high standards in food production, handling, and service.
Course Code : **BSH/C 3CO6**	

Course Title : **Facility Planning**	
CO 1	Explain the principles of facility planning, layout design, and space allocation in hospitality establishments to enhance operational efficiency.
CO 2	Analyze the key factors influencing the planning and design of hotel kitchens, restaurants, and other hospitality facilities, ensuring compliance with industry standards.
CO 3	Evaluate the importance of workflow management, equipment selection, and maintenance in optimizing hospitality operations.
CO 4	Apply safety, sanitation, waste management, and energy conservation strategies in facility planning to promote sustainability.
CO 5	Assess the role of project management, budgeting, and legal considerations in the development and renovation of hospitality facilities.
SEMESTER 4	
Course Code : **(BSH/C 4CO7)**	
Course Title : **Hotel Laws**	
CO 1	Recall the essential laws and regulations that govern the hospitality industry, including national and international legal frameworks.
CO 2	Explain the key aspects of hotel laws, focusing on contracts, licenses, consumer protection, and labor regulations within the hospitality context.
CO 3	Apply the procedures for obtaining and renewing the required licenses to operate hotels and catering establishments, ensuring compliance with legal standards.
CO 4	Analyze legal issues, including discrimination, liability, taxation, and business ethics, and provide solutions to address these challenges effectively.
CO 5	Evaluate the significance of legal aspects in hotel operations, assess various contracts, employment laws, and guest-related issues to make well-informed decisions.
Course Code : **(BSH/C 4CO8)**	
Course Title : **Human Resource Management**	
CO 1	Recall the key principles and functions of human resource management in the hospitality industry, including recruitment, selection, and training.
CO 2	Explain the importance of effective human resource planning and the role of HR policies in enhancing employee performance and satisfaction.
CO 3	Apply recruitment, selection, and induction techniques to identify and onboard suitable candidates for various hospitality roles.
CO 4	Analyze and evaluate employee performance using performance appraisal techniques and address issues related to motivation, retention, and discipline.
CO 5	Assess the legal and ethical considerations in human resource management, ensuring compliance with labor laws and fostering a positive workplace culture.
OPEN COURSE OFFERED BY B.Sc. HM CA	

Course Title : TOURISM AND HOSPITALITY MANAGEMENT	
CO 1	Define key tourism concepts and terminologies to build a strong industry foundation.
CO 2	Explain transportation modes and travel documentation to enhance travel planning skills.
CO 3	Classify tourism products and key destinations to develop expertise in destination management.
CO 4	Analyze travel agencies, tour operators, and accommodations to prepare for tourism business roles.
CO 5	Assess tourism's economic, environmental, and social impacts to promote sustainable tourism practices.

NAME OF THE PROGRAMME : BBA FINANCE

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Knowledge and Understanding of Core Business Principles and Financial Concepts
PSO 2	Understanding Business Practices , Financial Markets & Institutions
PSO 3	Application of Business and Financial Tools & Techniques
PSO 4	Analytical and Critical Thinking in Business Decision Making
PSO 5	Financial Decision Making and Investment Analysis
PSO 6	Developing Innovation & Entrepreneurial Mindset

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : BBA1B01

Course Title : Management Theory & Practices

CO 1	Explain the different schools of management thought and their evolution over time
CO 2	Apply the concepts of Management to real-world management scenarios for effective decision-making.
CO 3	Assess ethical and socially responsible behaviours in management and justify their

	importance
CO 4	Develop and implement Real-world management scenarios for effective decision-making
SEMESTER 2	
Course Code : BBA2B02	
Course Title : Financial Accounting	
CO 1	Understand on Fundamentals of Accounting
CO 2	Prepare and Analyze the Financial Statements
CO 3	Evaluate Accounting Treatments and Hire Purchase
CO 4	Applying Accounting Techniques for Branch Accounting
CO 5	Analyze & Record Shares & Debentures Transactions
Course Code : BBA2B03	
Course Title : Marketing Management	
CO 1	Explain the marketing and marketing mix and strategic marketing planning
CO 2	Enumerate consumer behavior, market segmentation, target marketing, and positioning
CO 3	Analyze product and price-related decisions
CO 4	Assess the role of promotion in marketing of a Product
CO 5	Apply distribution strategies and emerging trends
SEMESTER 3	
Course Code : BBA3B04	
Course Title : Corporate Accounting	
CO 1	Explain the concept financial reporting standards, including IFRS and Indian Accounting Standards (IndAS)
CO 2	Compare and analyze IFRS and IndAS

CO 3	Assess the conceptual framework of financial reporting
CO 4	Prepare financial statements of joint stock companies
CO 5	Compute and analyze key accounting ratios
Course Code : BBA3B05	
Course Title : Financial Management	
CO 1	Fundamental concepts of finance, financial management, financial decisions,
CO 2	Financial performance using EBIT-EPS analysis, capital structure decisions
CO 3	Assess capital budgeting techniques
CO 4	Evaluate working capital management
CO 5	Examine dividend decisions, policies, and their impact on firm value
SEMESTER 4	
Course Code : BBA4B06	
Course Title : Cost And Management Accounting	
CO 1	Understand cost and management accounting concepts
CO 2	Application of CMA for decision making.
CO 3	Cost consciousness and the various methods
CO 4	Evaluate the Kinds of Costing applied in Business
CO 5	Marginal Costing & Budgetary Control:
SEMESTER 5	
Course Code : BBA5B07	
Course Title : Human Resources Management	
CO 1	Fundamental concepts of Human Resource Management (HRM),
CO 2	Analyze the HR procurement process
CO 3	Examine various training and development methods
CO 4	Assess the performance appraisal process and employee compensation
CO 5	Evaluate modern HRM trends and challenges,

Course Code : BBA5 B08	
Course Title : Business Research Methods	
CO 1	Explain the fundamental concepts of business research
CO 2	Identify and apply appropriate research designs, sampling techniques
CO 3	Analyze various data analysis techniques in Business Decision Making
CO 4	Develop a structured research proposal
CO 5	Interpret research findings using statistical tools
Course Code : BBA5B09	
Course Title : Operations Management	
CO 1	Explain the fundamental, and historical evolution of Operations Management (OM)
CO 2	Analyze the factors influencing plant location, facility planning, plant layout,
CO 3	Demonstrate knowledge of capacity planning, maintenance management
CO 4	Evaluate aggregate planning techniques
CO 5	Implement quality control tools for enhance process quality and performance.
Course Code : BBA5B10	
Course Title : Income Tax Law and Practice(Elective 1)	
CO 1	Understanding Income Tax Laws and Provisions , total income and deduction
CO 2	Applying Income Tax Laws to Various Sources
CO 3	Analyzing different heads of income and deductions
CO 4	Illustrate total income and deduction
CO 5	Investigating Tax Audits and Assessment
Course Code : BBA5B11	
Course Title : Financial Markets And Institutions(Elective 2)	
CO 1	Explain the components of the financial system
CO 2	Examine the structure and functioning of the Indian money market
CO 3	Analyze the capital market and Role of DFI

CO 4	Assess the functioning of the industrial securities market
CO 5	Evaluate financial derivative and Role in Price Fixing
SEMESTER 6	
Course Code : BBA6B12	
Course Title : Organisational Behavior	
CO 1	Basic assumptions and Contributions of Organizational Behaviour (OB)
CO 2	Analyze the factors influencing individual behaviour
CO 3	Enhance team performance and collaboration in an organizational setting
CO 4	Assess various motivation and leadership theories to develop
CO 5	Identify sources of workplace stress and conflicts, and implement organizational development
Course Code : BBA6B13	
Course Title : Management Science	
CO 1	Understand the significance of Management Science in modern business management
CO 2	Formulate and solve Linear Programming Problems (LPP) using graphical methods
CO 3	Construct network diagrams for project management and apply PERT and CPM
CO 4	Apply decision theory techniques to solve complex business problems
CO 5	Solve transportation problems using different optimization methods
Course Code : BBA6B14	
Course Title : Project Management	
CO 1	Define the key concepts of project management
CO 2	Analyze project feasibility in terms of market, technical, and financial aspects
CO 3	Assess financial viability and investment decisions
CO 4	Identify various project financing options
CO 5	Develop a structured approach to project implementation
Course Code : BBA6B15	

Course Title : Financial Services (Elective III)	
CO 1	Define financial services and classify
CO 2	Apply the different fund investment options
CO 3	Examine the role of investment and merchant banking
CO 4	Evaluate lease financing and venture capital finance in Real term situation
CO 5	Explain credit rating and factoring services
Course Code : BBA6B16	
Course Title : Investment Management (Elective IV)	
CO 1	Define investment and distinguish it from speculation and gambling
CO 2	Analyze risk-return trade-offs in investment management
CO 3	Evaluate fundamental analysis using the EIC
CO 4	Examine technical analysis strategies, interpret chart patterns
CO 5	Apply modern portfolio theories such as the Markowitz Model and CAPM
Course Code : BBA6B17	
Course Title : (PR) Three Weeks Project and Viva- Voce	
CO 1	Apply theoretical knowledge to real-world business scenarios, enhancing their problem-solving and decision-making skills.
CO 2	Develop the ability to conduct research, analyze business data, and derive meaningful insights for managerial decision-making.
CO 3	Remembering fundamental business concepts, theories, and frameworks relevant to their project topic.
CO 4	Understanding business data, industry trends, and organizational challenges in relation to their project.
CO 5	Creating innovative business solutions, demonstrating creativity and strategic thinking during the Viva Voce..
SEMESTER 5	
OPEN COURSE OFFERED BY BBA FINANCE	
Course Code : BBA5D03	

Course Title : Business Organisation and Communication	
CO 1	Understand Business Structures and Functions
CO 2	Application of Effective Business Communication Skills.
CO 3	Develop Business Correspondence Skills
CO 4	Enhance Interpersonal and Organizational Communication
COMPLEMENTARY COURSES	
SEMESTER 1	
Course Code : BBA1C01	
Course Title : Managerial Economics	
CO 1	Understand on principles of managerial economics, including value maximization and its limitations.
CO 2	Apply the concepts of demand and supply, including elasticity, utility, and demand forecasting
CO 3	Analyze production and cost concepts, including production functions, laws of production, cost functions, and economies of scale
CO 4	Evaluate Compare and contrast different market structures and determine price-output decisions
CO 5	Recheck on phases of the business cycle and apply economic and business forecasting methods
SEMESTER 3	
Course Code : BBA3C02	
Course Title : Business Regulation	
CO 1	Understanding of Business Laws and Regulations
CO 2	Application of Business Regulations in Real-World Contexts
CO 3	Analyzing the Impact of Regulatory Frameworks on Business Operations
CO 4	Evaluating Legal and Ethical Implications of Business Decisions
CO 5	Communicating Business Regulation Knowledge Effectively

SEMESTER 4	
Course Code : BBA4C03	
Course Title : Corporate Regulations	
CO 1	Understand the features and different types of companies
CO 2	Aware as to the formation of companies and also as to different documents of Companies
CO 3	Understand the share capital and other relevant provisions
CO 4	Understand the management, CG, CSR
CO 5	Conducting meetings and also the winding up
Course Code : BBA4C04	
Course Title : Quantitative Techniques For Business	
CO 1	Define & Explain Fundamental QT and their applications in Financial Decision making
CO 2	Interpret Financial Data with Statistical Tools
CO 3	Utilize Quantitaive Models to solve Real Financial Problems
CO 4	Examine Financial Statements & market Trends
CO 5	Assess the QT methods for Financial Strategy & Risk

NAME OF THE PROGRAMME : B.Com COMPUTER APPLICATIONS

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Emphasizes the foundational knowledge required in Commerce, covering both theoretical and practical aspects.
PSO 2	Focuses on the ability to apply learned concepts in real business scenarios, boosting employability and problem-solving skills.
PSO 3	Highlights the importance of using digital technologies to manage business functions in a fast-evolving commercial landscape..
PSO 4	Graduates will be able to effectively utilize computer applications, including accounting software and business tools, to solve real-world business problems and enhance organizational efficiency.
PSO 5	Graduates will possess the skills to manage, analyse, and interpret business data using various computer applications, including spreadsheets, databases, and office automation tools.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **BCMIB01**

Course Title : **Business Management**

CO 1	Students will be able to define and explain key concepts, characteristics, and functions of management, including various schools of thought and management

	approaches such as Management by Objectives and Management by Motivation.
CO 2	Students will gain an understanding of various motivational theories (McGregor, Maslow, Herzberg) and leadership styles, and be able to apply them to enhance organizational effectiveness
CO 3	Students will develop a strong foundation in business ethics, including the major ethical theories and issues, and understand their relevance and application in real-world business settings.
CO 4	Students will learn the importance of CSR, its relationship with business ethics, and how to implement CSR initiatives, with a specific focus on the CSR landscape in India.
CO 5	Students will gain knowledge of contemporary management practices such as TQM, ISO, Change Management, and Flexi-working, and will understand how these contribute to improved organizational performance and sustainability.
SEMESTER 2	
Course Code :BCM2B02	
Course Title : Financial Accounting	
CO 1	understanding Fundamental accounting concepts, Principles and conventions
CO 2	Explain the process of recording financial transactions
CO 3	Differentiate between various types of financial report and their significance in decision making
CO 4	Assess financial performance by Analysing profit & loss Account & Balance sheets.
CO 5	Preparation of Financial Statements
SEMESTER 3	
Course Code :BCM3B03	
Course Title : Business Regulation	
CO 1	Recall the definition and purpose of key business regulations.
CO 2	Recognize the basic principles, concepts, and legal provisions of Limited Liability Partnerships (LLPs).

CO 3	Apply the basic duties and rights of consumers under the Consumer Protection Act in real-world scenarios to resolve consumer complaints or disputes.
CO 4	Examine the role of regulatory bodies in ensuring fair business practices.
CO 5	Evaluate the effectiveness of the Sale of Goods Act in protecting the rights of buyers and seller.
Course Code :**BCM3B04**	
Course Title : **Corporate Accounting**	
CO 1	Understand the fundamental concepts and principles of corporate accounting, including financial statement preparation and analysis
CO 2	Prepare and present corporate financial statements, including balance sheets, income statements, and cash flow statements.
CO 3	Apply corporate accounting concepts and principles to real-world business scenarios.
CO 4	Critically evaluate corporate financial statements and identify potential issues or discrepancies.
CO 5	Develop and implement innovative accounting solutions to address emerging business needs.
SEMESTER 4	
Course Code: BCM4B05	
Course title: Cost Accounting	
CO 1	To understand cost management concepts
CO 2	To evaluate cost effectiveness and operational efficiency of an organization.
CO 3	To help students to determining various costing techniques to allocate cost of products and services
CO 4	To gain proficiency in preparing and managing budgets and cost control
CO 5	To develop the ability to apply cost accounting data to solve real life business problems and improve decision making.

Course Code: BCM4B06	
Course title: Corporate Regulations	
CO 1	Identify the key provisions of corporate laws, including company formation, governance, compliance, and regulatory frameworks.
CO 2	Explain the significance of corporate regulations in maintaining transparency, accountability, and ethical business practices
CO 3	Apply corporate regulatory principles to real-world business scenarios, ensuring compliance with legal and ethical standards.
CO 4	Assess the effectiveness of corporate regulations in addressing financial fraud, corporate misconduct, and investor protection.
CO 5	Create strategic solutions and compliance frameworks that align business practices with corporate regulatory requirements.
SEMESTER 5	
Course Code: BCM5B07	
Course title: Accounting For Management	
CO 1	To understand core management accounting concept and relevance
CO 2	Enable students to use accounting and costing data for planning, controlling and decision making
CO 3	To evaluate financial ratios and key performance indicators related to organization.
CO 4	Help students to differentiate business situations and make them able to make decisions.
CO 5	Students will learn to apply accounting concepts to solve business problems.
Course Code: BCM5B08	
Course title: Business Research Methods	
CO 1	Discuss the basic concepts of Business Research and its Theoretical Framework

CO 2	Analyse various Research Design and Methodologies
CO 3	Apply different methods Data Collection Techniques and Sampling Methods in research
CO 4	Conduct Data Processing and Statistical Analysis
CO 5	Develop and Present Research Reports Effectively
Course Code: BCM5B09	
Course title: Income Tax Law And Accounts	
CO 1	Describe key concepts related to direct and indirect taxation, including GST, customs regulations, and income tax laws.
CO 2	Examine the effects of taxation policies on businesses and individuals, focusing on regulatory compliance and economic outcomes.
CO 3	Implement tax computation methods, develop tax-saving strategies, and ensure adherence to legal tax frameworks.
CO 4	Assess the functioning of tax authorities, statutory provisions, and dispute resolution mechanisms in taxation.
CO 5	Develop comprehensive tax solutions for individuals and organizations by integrating financial, accounting, and legal perspectives.
Course Code: BCM5B10	
Course title: Computer Applications In Business	
CO 1	Students develop an understanding of computer systems, networks, and their applications in business, evaluating factors for selecting appropriate computing solutions.
CO 2	Students develop familiarity with the fundamental concepts of HTML and CSS, identifying key web design principles and their applications in a business context.
CO 3	Students explore the functionality of basic HTML elements such as tables, hyperlinks, images, and multimedia, analysing their impact on user experience and business communication.
CO 4	Students will analyse various e-commerce models (B2B, B2C, C2C, etc.) and apply digital payment methods, understanding their requirements, security aspects,

	and business impact.
CO 5	Students can identify security threats related to e-commerce and the internet, evaluate cybersecurity measures such as encryption and firewalls, and apply IT Act provisions for secure digital transactions.
Course Code: BCM5B11	
Course title: Business Information System	
CO 1	Understand the basics of Management Information Systems (MIS) and their role in business.
CO 2	Identify and compare different types of MIS, such as Transaction Processing Systems (TPS) and Decision Support Systems (DSS)
CO 3	Explain and evaluate various Database Management System (DBMS) models and their uses.
CO 4	Apply the concepts of Enterprise Resource Planning (ERP) and understand its benefits and challenges.
CO 5	Develop improvements in business processes using Business Process Reengineering (BPR).
SEMESTER 6	
Course Code: BCM6B12	
Course title: Income Tax And GST	
CO 1	Explain the Concepts of Income Tax and Computation of Individual Tax Liability
CO 2	Analyze Income Tax Authorities, Assessment Procedures, and Tax Compliance
CO 3	Understand the Scope and Framework of Goods and Services Tax (GST)
CO 4	Apply GST Registration, Returns, and Compliance Procedures
CO 5	Evaluate Payment, Recovery, and Audit Procedures in Taxation
Course Code: : BCM6B13	

Course title: Auditing And Corporate Goverance	
CO 1	Understand the fundamental concepts and principles of auditing, including auditing standards and frameworks.
CO 2	Analyse and evaluate financial statements and other financial information to identify potential audit risks and issues.
CO 3	Conduct audit procedures, including testing transactions, balances, and disclosures.
CO 4	Apply auditing standards and frameworks to real-world scenarios and case studies.
CO 5	Prepare and present audit reports, including communicating audit findings and recommendations to management and other stakeholders.
Course Code: : BCM6B14	
Course title: Office Automation Tools	
CO 1	Students will be able to perform basic document formatting tasks in MS Word, enhancing document presentation for professional and business use.
CO 2	Students will create error-free, dynamic spreadsheets in MS Excel, tailored to the accounting, finance, and marketing functions of a business.
CO 3	Students will use various presentation options in MS PowerPoint, including templates and wizards, to effectively communicate information in business settings.
CO 4	Students will analyze and understand the role of internet protocols, such as DNS, IP addresses, and domain allocation systems, in the operation and functioning of modern internet applications.
CO 5	Students will apply their knowledge of internet protocols, DNS, and internet applications in various domains, including business, education, and governance.
Course Code: : BCM6B15	
Course title: Computerised Accounting With Tally	
CO 1	Students will develop strong foundation in fundamental accounting concepts, distinguishing between manual and computerized accounting systems, and efficiently navigating the Tally interface for business applications.

CO 2	Students will be capable of effectively managing the inventory in Tally by implementing stock categorization, utilizing inventory vouchers, processing orders, and applying appropriate inventory valuation methods.
CO 3	Students will demonstrate proficiency in managing GST and other tax-related functionalities in Tally, including tax invoice generation, input tax credit management, and accurate tax computations.
CO 4	Students will prepare, analyze, and interpret financial and inventory reports in Tally, such as the Profit and Loss Account, Balance Sheet, Cash Flow Statements, and Ratio Analysis, to support informed decision-making.
CO 5	Students will be able to utilize advanced Tally features, including Tally Audit, Tally Vault, data backup and restoration, and online support, to enhance data security, accuracy, and operational efficiency.
Course Code: : BCM6B16	
Course title: PROJECT	
CO 1	To make students conversant with the procedure, techniques and tools to conduct research to facilitate management in decision making activity
COMPLEMENTARY COURSES	
SEMESTER 1	
Course Code: BCM1C01	
Course title: Managerial Economics	
CO 1	Students will gain a foundational understanding of managerial economics, its characteristics, nature, scope, and the role of the managerial economist in decision-making and forward planning
CO 2	Students will develop the ability to analyse consumer behaviour using both cardinal and ordinal approaches, including understanding demand curves, elasticity, and the effects of income and price changes on consumption.
CO 3	Students will be able to differentiate between various market structures (perfect competition, monopoly, monopolistic competition, and oligopoly) and understand the price-output determination and profit-maximization processes

	within each.
CO 4	Students will acquire knowledge of the Indian economy's key characteristics, growth challenges, and the implications of economic policies post-1991, including issues like unemployment, poverty, and inequality.
CO 5	Students will understand the structure and direction of India's foreign trade, trade policies, and the role of foreign capital, MNCs, and small-scale industries in shaping the economy, with a special focus on Kerala's economic landscape.
SEMESTER 2	
Course Code:BCM2C02	
Course title: Marketing Management	
CO 1	Identifying key marketing terminologies theories
CO 2	Explain the marketing Mix
CO 3	Applying marketing concepts to develop effective marketing strategies for product
CO 4	Differentiate between various pricing, promotion & distribution strategies
CO 5	Design innovative marketing campaigns using digital & traditional marketing tools.
SEMESTER 3	
Course Code:BCM3C03	
Course title: Human Resource Management	
CO 1	Identify the basic functions and role of HRM in organisational culture
CO 2	Apply HRM concepts to solve practical HR-related issues in an organization.
CO 3	Analyse HR challenges in contemporary organizations, such as managing diversity, handling conflict, and improving employee performance.

CO 4	Evaluate the effectiveness of recruitment and selection methods.
CO 5	Assess the impact of compensation and benefits packages on employee retention.
SEMESTER 4	
Course Code:BCM4C04	
Course title: Quantitative Techniques For Business	
CO 1	Define Quantitative techniques & explain there classification , applications in B-S.
CO 2	Apply set theory concepts & venn diagrams to Solve business related problems Involving probabilities.
CO 3	Able to formulate & solve linear programming problems graphically To optimize resource allocation.
CO 4	Solve decision making problems using decision tree analysis & different types of models
CO 5	To familiarize students with the use of Quantitative techniques in managerial Decision Making
OPEN COURSE OFFERED BY B.Com. CA	
SEMESTER 5	
Course Code: :BCM5D02	
Course title: Basics Of Entrepreneurship And Management	
CO 1	Will Understand the Business Fundamentals
CO 2	Gaining Entrepreneurial Insights
CO 3	Excellence in Management Concepts
CO 4	Exploring Management Functions
CO 5	Develops Leadership and Organizational Skills

NAME OF THE PROGRAMME : B.Com FINANCE

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Understand the basic concepts of commerce, management, accounting and economics.
PSO 2	Students can also get the practical skills to work as accountant, audit assistant, tax consultant, computer operator as well as other financial supporting services.
PSO 3	Students will be able to do their higher education and can make research in the field of finance and commerce.
PSO 4	Students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day-to-day business activities.
PSO 5	Students are able to play roles of businessmen, entrepreneurs, managers, consultants which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **BCMIB01**

Course Title : **Business Management**

CO 1	Students will be able to define and explain key concepts, characteristics, and functions of management, including various schools of thought and management approaches such as Management by Objectives and Management by Motivation.
CO 2	Students will gain an understanding of various motivational theories (McGregor, Maslow, Herzberg) and leadership styles, and be able to apply them to enhance

	organizational effectiveness
CO 3	Students will develop a strong foundation in business ethics, including the major ethical theories and issues, and understand their relevance and application in real-world business settings.
CO 4	Students will learn the importance of CSR, its relationship with business ethics, and how to implement CSR initiatives, with a specific focus on the CSR landscape in India.
CO 5	Students will gain knowledge of contemporary management practices such as TQM, ISO, Change Management, and Flexi-working, and will understand how these contribute to improved organizational performance and sustainability.
SEMESTER 2	
Course Code : **BCM2B02**	
Course Title : **Financial Accounting**	
CO 1	Understanding Fundamental accounting concepts, Principles and conventions
CO 2	Explain the process of recording financial transactions
CO 3	Differentiate between various types of financial report and their significance in decision making
CO 4	Assess financial performance by Analysing profit & loss Account & Balance sheets.
CO 5	Preparation of Financial Statements
SEMESTER 3	
Course Code : **BCM3B03**	
Course Title : **Business Regulation**	
CO 1	Recall the definition and purpose of key business regulations.
CO 2	Recognize the basic principles, concepts, and legal provisions of Limited Liability Partnerships (LLPs).
CO 3	Apply the basic duties and rights of consumers under the Consumer Protection Act in real-world scenarios to resolve consumer complaints or disputes.
CO 4	Examine the role of regulatory bodies in ensuring fair business practices.
CO 5	Evaluate the effectiveness of the Sale of Goods Act in protecting the rights of buyers and seller.

SEMESTER 4	
Course Code : **BCM3B04**	
Course Title : **Corporate Accounting**	
CO 1	Understand the fundamental concepts and principles of corporate accounting, including financial statement preparation and analysis
CO 2	Prepare and present corporate financial statements, including balance sheets, income statements, and cash flow statements.
CO 3	Apply corporate accounting concepts and principles to real-world business scenarios.
CO 4	Critically evaluate corporate financial statements and identify potential issues or discrepancies.
CO 5	Develop and implement innovative accounting solutions to address emerging business needs.
Course Code : **BCM4B05**	
Course Title : **Cost Accounting**	
CO 1	To understand cost management concepts
CO 2	To evaluate cost effectiveness and operational efficiency of an organization.
CO 3	To help students to determining various costing techniques to allocate cost of products and services
CO 4	To gain proficiency in preparing and managing budgets and cost control
CO 5	To develop the ability to apply cost accounting data to solve real life business problems and improve decision making
Course Code : BCM4B06	
Course Title : **Corporate Regulations**	
CO 1	Identify the key provisions of corporate laws, including company formation, governance, compliance, and regulatory frameworks.
CO 2	Explain the significance of corporate regulations in maintaining transparency, accountability, and ethical business practices.

CO 3	Apply corporate regulatory principles to real-world business scenarios, ensuring compliance with legal and ethical standards.
CO 4	Assess the effectiveness of corporate regulations in addressing financial fraud, corporate misconduct, and investor protection.
CO 5	Create strategic solutions and compliance frameworks that align business practices with corporate regulatory requirements.
SEMESTER 5	
Course Code : **BCM5B07**	
Course Title **: Accounting For Management**	
CO 1	To understand core management accounting concept and relevance
CO 2	Enable students to use accounting and costing data for planning, controlling and decision making.
CO 3	To evaluate financial ratios and key performance indicators related to organization.
CO 4	Help students to differentiate business situations and make them able to make decisions.
CO 5	Students will learn to apply accounting concepts to solve business problems.
Course Code : **BCM5B08**	
Course Title : Business Research Methods	
CO 1	Discuss the basic concepts of Business Research and its Theoretical Framework
CO 2	Analyse various Research Design and Methodologies
CO 3	Apply different methods Data Collection Techniques and Sampling Methods in research.
CO 4	Conduct Data Processing and Statistical Analysis
CO 5	Develop and Present Research Reports Effectively
Course Code : BCM5B09	
Course Title :**Income Tax Law And Accounts**	
CO 1	Understand the Basic Concepts and Scope of Income Tax
CO 2	Comprehensive understanding of Income tax principles, including the classification of

	income and the computation of taxable income
CO 3	Apply tax provisions to real-life scenarios, accurately compute taxable income, and understand the impact of residential status on the scope of total income.
CO 4	Analyze various deductions and exemptions and comprehend the procedures involved in tax filing and compliance.
CO 5	Gain practical skills in income tax calculation and tax planning, ensuring students are well-prepared for both professional tax-related roles and personal financial management.
Course Code : BCM5B10	
Course Title :**Financial Markets And Services**	
CO 1	Understand the major types of financial markets and institutions, such as equity markets, debt markets, and insurance markets.
CO 2	Explain the roles and functions of different financial services, such as investment banking, retail banking, insurance, and mutual funds.
CO 3	Analysing structure, organisation and working of financial system in India.
CO 4	Examine the impact of market trends and economic conditions on financial services marketing strategies.
CO 5	**C**ritically evaluate the ethical practices in the marketing of financial products and services, considering customer protection and transparency.
Course Code :BCM5B11	
Course Title : **Financial Management**	
CO 1	Students can analyse financial statements to evaluate a company's financial performance and position.
CO 2	students can understand the concepts and principles of financial management and it's application in financial decision making.
CO 3	The students will be able to evaluate capital budgets through capital structure.
CO 4	Equip the students to prepare optimal capital structure through conceptual knowledge.
CO 5	Analyse a company's working capital management practice and recommend improvement.
SEMESTER 6	

Course Code : **BCM6B12**	
Course Title : Income Tax And GST	
CO 1	Explain the Concepts of Income Tax and Computation of Individual Tax Liability
CO 2	Analyse Income Tax Authorities, Assessment Procedures, and Tax Compliance
CO 3	Understand the Scope and Framework of Goods and Services Tax (GST)
CO 4	Apply GST Registration, Returns, and Compliance Procedures
CO 5	Evaluate Payment, Recovery, and Audit Procedures in Taxation
Course Code : **BCM6B13**	
Course Title : Auditing And Corporate Governance	
CO 1	Understand the fundamental concepts and principles of auditing, including auditing standards and frameworks.
CO 2	Analyse and evaluate financial statements and other financial information to identify potential audit risks and issues.
CO 3	Conduct audit procedures, including testing transactions, balances, and disclosures.
CO 4	Apply auditing standards and frameworks to real-world scenarios and case studies.
CO 5	Prepare and present audit reports, including communicating audit findings and recommendations to management and other stakeholders.
Course Code : **BCM6B14**	
Course Title : **Fundamental Of Investment**	
CO 1	The students can understand the investment environment and learn about various investment vehicles.
CO 2	Students can develop a systematic approach to investment decision making
CO 3	Students can develop skills and knowledge relevant to careers in investment analysis and management.
CO 4	Students can learn how to evaluate the environmental, social and governance performance of investments.
CO 5	Students can set their own financial goals and develop a personal investment plan.
Course Code : **BCM6B15**	

Course Title : **Financial Derivatives**	
CO 1	Students can gain understanding on various derivative instruments including options, future, forward and swap.
CO 2	**S**tudents can apply derivative instruments to manage various types of risks in investments.
CO 3	Students can assess the potential benefits and drawbacks of using derivative instruments in investments or risk management decisions.
CO 4	Students can communicate complex derivative concepts and strategies effectively to various stakeholders.
CO 5	Students can develop and present a proposal for using derivative instruments in an investment context.
Course Code : BCM6B16	
Course Title : **PROJECT**	
CO 1	To make students conversant with the procedure, techniques and tools to conduct research to facilitate management in decision making activity
COMPLEMENTARY COURSES	
SEMESTER 1	
Course Code : **BCM1C01**	
Course Title : Managerial Economics	
CO 1	Students will gain a foundational understanding of managerial economics, its characteristics, nature, scope, and the role of the managerial economist in decision-making and forward planning
CO 2	Students will develop the ability to analyse consumer behaviour using both cardinal and ordinal approaches, including understanding demand curves, elasticity, and the effects of income and price changes on consumption.
CO 3	Students will be able to differentiate between various market structures (perfect competition, monopoly, monopolistic competition, and oligopoly) and understand the price-output determination and profit-maximization processes within each.
CO 4	Students will acquire knowledge of the Indian economy's key characteristics, growth challenges, and the implications of economic policies post-1991, including issues like

	unemployment, poverty, and inequality.
CO 5	Students will understand the structure and direction of India's foreign trade, trade policies, and the role of foreign capital, MNCs, and small-scale industries in shaping the economy, with a special focus on Kerala's economic landscape.
SEMESTER 2	
Course Code : **BCM2C02**	
Course Title : Marketing Management	
CO 1	Identifying key marketing terminologies theories
CO 2	Explain the marketing Mix
CO 3	Applying marketing concepts to develop effective marketing strategies for product
CO 4	Differentiate between various pricing, promotion & distribution strategies
CO 5	Design innovative marketing campaigns using digital & traditional marketing tools.
SEMESTER 3	
Course Code :**BCM3C03**	
Course Title : Human Resource Management	
CO 1	Identify the basic functions and role of HRM in organisational culture
CO 2	Apply HRM concepts to solve practical HR-related issues in an organization.
CO 3	Analyse HR challenges in contemporary organizations, such as managing diversity, handling conflict, and improving employee performance.
CO 4	Evaluate the effectiveness of recruitment and selection methods
CO 5	Assess the impact of compensation and benefits packages on employee retention.
SEMESTER 4	
Course Code : **BCM4C04**	
Course Title : **Quantitative Techniques For Business**	
CO 1	Define Quantitative techniques & explain there classification , applications in B-S.
CO 2	Apply set theory concepts & venn diagrams to Solve business related problems Involving probabilities.

CO 3	Able to formulate & solve linear programming problems graphically To optimize resource allocation.
CO 4	Solve decision making problems using decision tree analysis & different types of models
CO 5	To familiarize students with the use of Quantitative techniques in managerial Decision Making

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SEMESTER 5

Course Code : BCM5D02

Course Title : **Basics Of Entrepreneurship And Management**

CO 1	To familiarize the students with the Concept of entrepreneurship
CO 2	Explain the role of entrepreneurs in economic development and evaluate the effectiveness of Entrepreneurial Development Programmes (EDPs).
CO 3	To analyse the causes of sickness in small industries & Suggest appropriate remedies.
CO 4	Able to evaluate a proposed project based on technical, financial & Social feasibility Study
CO 5	Able to prepare a comprehensive project report.

yuva kshetra Institute of Management Studies Ezhakkad P.O. Mundur, Palakkad Pin-678 631

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NAME OF THE PROGRAMME : B.Com TAXATION

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Gain fundamental knowledge of taxation laws, financial accounting, and regulatory frameworks, enabling students to comprehend national and international taxation systems.
PSO 2	Utilize taxation, auditing, and financial management concepts in practical business scenarios through hands-on experience, case studies, and problem-solving exercises.
PSO 3	Analyze tax policies, financial instruments, and compliance structures to assess their implications for businesses, individuals, and the economy.
PSO 4	Formulate well-reasoned tax planning and financial strategies by critically assessing legal frameworks, corporate financial structures, and economic conditions
PSO 5	Developing self-sufficiency in tax compliance and entrepreneurial ventures by independently filing income tax returns and formulating business strategies within legal and financial frameworks

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **BCM1B01**

Course Title : **Business Management**

CO 1	Students will be able to define and explain key concepts, characteristics, and functions of management, including various schools of thought and management approaches such as Management by Objectives and Management by Motivation.

CO 2	Students will gain an understanding of various motivational theories (McGregor, Maslow, Herzberg) and leadership styles, and be able to apply them to enhance organizational effectiveness
CO 3	Students will develop a strong foundation in business ethics, including the major ethical theories and issues, and understand their relevance and application in real-world business settings.
CO 4	Students will learn the importance of CSR, its relationship with business ethics, and how to implement CSR initiatives, with a specific focus on the CSR landscape in India.
CO 5	Students will gain knowledge of contemporary management practices such as TQM, ISO, Change Management, and Flexi-working, and will understand how these contribute to improved organizational performance and sustainability.
SEMESTER 2	
Course Code :BCM2B02	
Course Title : Financial Accounting	
CO 1	understanding Fundamental accounting concepts, Principles and conventions
CO 2	Explain the process of recording financial transactions
CO 3	Differentiate between various types of financial report and their significance in decision making
CO 4	Assess financial performance by Analysing profit & loss Account & Balance sheets.
CO 5	Preparation of Financial Statements
SEMESTER 3	
Course Code :BCM3B03	
Course Title : Business Regulation	
CO 1	Recall the definition and purpose of key business regulations.
CO 2	Recognize the basic principles, concepts, and legal provisions of Limited Liability Partnerships (LLPs).

CO3	Apply the basic duties and rights of consumers under the Consumer Protection Act in real-world scenarios to resolve consumer complaints or disputes.
CO 4	Examine the role of regulatory bodies in ensuring fair business practices.
CO 5	Evaluate the effectiveness of the Sale of Goods Act in protecting the rights of buyers and seller.
Course Code :**BCM3B04**	
Course Title : **Corporate Accounting**	
CO 1	Understand the fundamental concepts and principles of corporate accounting, including financial statement preparation and analysis
CO 2	Prepare and present corporate financial statements, including balance sheets, income statements, and cash flow statements.
CO 3	Apply corporate accounting concepts and principles to real-world business scenarios.
CO 4	Critically evaluate corporate financial statements and identify potential issues or discrepancies.
CO 5	Develop and implement innovative accounting solutions to address emerging business needs.
SEMESTER 4	
Course Code: BCM4B05	
Course title: Cost Accounting	
CO 1	To understand cost management concepts
CO 2	To evaluate cost effectiveness and operational efficiency of an organization.
CO 3	To help students to determining various costing techniques to allocate cost of products and services
CO 4	To gain proficiency in preparing and managing budgets and cost control

CO 5	To develop the ability to apply cost accounting data to solve real life business problems and improve decision making.
Course Code: BCM4B06	
Course title: Corporate Regulations	
CO 1	Identify the key provisions of corporate laws, including company formation, governance, compliance, and regulatory frameworks.
CO 2	Explain the significance of corporate regulations in maintaining transparency, accountability, and ethical business practices
CO 3	Apply corporate regulatory principles to real-world business scenarios, ensuring compliance with legal and ethical standards.
CO 4	Assess the effectiveness of corporate regulations in addressing financial fraud, corporate misconduct, and investor protection.
CO 5	Create strategic solutions and compliance frameworks that align business practices with corporate regulatory requirements.
SEMESTER 5	
Course Code: BCM5B07	
Course title: Accounting For Management	
CO 1	To understand core management accounting concept and relevance
CO 2	Enable students to use accounting and costing data for planning, controlling and decision making
CO 3	To evaluate financial ratios and key performance indicators related to organization.
CO 4	Help students to differentiate business situations and make them able to make decisions.
CO 5	Students will learn to apply accounting concepts to solve business problems.
Course Code: BCM5B08	
Course title: Business Research Methods	

CO 1	Discuss the basic concepts of Business Research and its Theoretical Framework
CO 2	Analyse various Research Design and Methodologies
CO 3	Apply different methods Data Collection Techniques and Sampling Methods in research
CO 4	Conduct Data Processing and Statistical Analysis
CO 5	Develop and Present Research Reports Effectively
Course Code: BCM5B09	
Course title: Income Tax Law And Accounts	
CO 1	Describe key concepts related to direct and indirect taxation, including GST, customs regulations, and income tax laws.
CO 2	Examine the effects of taxation policies on businesses and individuals, focusing on regulatory compliance and economic outcomes.
CO 3	Implement tax computation methods, develop tax-saving strategies, and ensure adherence to legal tax frameworks.
CO 4	Assess the functioning of tax authorities, statutory provisions, and dispute resolution mechanisms in taxation.
CO 5	Develop comprehensive tax solutions for individuals and organizations by integrating financial, accounting, and legal perspectives.
Course Code: BCM5B10	
Course title: Principles Of Taxation	
CO 1	Describe and illustrate the fundamental principles of taxation, including its objectives, economic impact, and key taxation theories..
CO 2	Differentiate various types of taxes, assess their significance in the Indian economy, and investigate their benefits and drawbacks.
CO 3	Appraise the implications of taxation, determine tax burden distribution, and propose strategies to curb tax evasion.

CO 4	Explore international taxation frameworks, including double taxation treaties, tax avoidance techniques, and anti-avoidance laws in India.
CO 5	Interpret constitutional taxation provisions, critically assess the taxation powers of different government levels, and formulate insights on Finance Commission recommendations.
Course Code: BCM5B11	
Course title: Indirect Tax Laws And Practice	
CO 1	Describe key concepts related to direct and indirect taxation, including GST, customs regulations, and income tax laws.
CO 2	Examine the effects of taxation policies on businesses and individuals, focusing on regulatory compliance and economic outcomes.
CO 3	Implement tax computation methods, develop tax-saving strategies, and ensure adherence to legal tax frameworks.
CO 4	Assess the functioning of tax authorities, statutory provisions, and dispute resolution mechanisms in taxation.
CO 5	Develop comprehensive tax solutions for individuals and organizations by integrating financial, accounting, and legal perspectives.
SEMESTER 6	
Course Code: BCM6B12	
Course title: Income Tax And GST	
CO 1	Explain the Concepts of Income Tax and Computation of Individual Tax Liability
CO 2	Analyze Income Tax Authorities, Assessment Procedures, and Tax Compliance
CO 3	Understand the Scope and Framework of Goods and Services Tax (GST)
CO 4	Apply GST Registration, Returns, and Compliance Procedures
CO 5	Evaluate Payment, Recovery, and Audit Procedures in Taxation

Course Code: : BCM6B13	
Course title: Auditing And Corporate Governance	
CO 1	Understand the fundamental concepts and principles of auditing, including auditing standards and frameworks.
CO 2	Analyse and evaluate financial statements and other financial information to identify potential audit risks and issues.
CO 3	Conduct audit procedures, including testing transactions, balances, and disclosures.
CO 4	Apply auditing standards and frameworks to real-world scenarios and case studies.
CO 5	Prepare and present audit reports, including communicating audit findings and recommendations to management and other stakeholders.
Course Code: : BCM6B14	
Course title: Income Tax Assessment	
CO 1	Recognize the key concepts of taxable income computation, including clubbing of income, set-off and carry-forward of losses, and exemptions
CO 2	Differentiate assessment procedures for individuals and Hindu Undivided Families (HUF), including tax planning strategies and application of Alternate Minimum Tax (AMT)
CO 3	Implement tax assessment techniques for firms, Association of Persons (AOP), and Bodies of Individuals (BOI) by computing book profits, tax liability, and income distribution
CO 4	Assess and justify the taxation structure for cooperative societies and trusts by evaluating tax exemptions, deductions, and assessment procedures
CO 5	Construct a systematic framework for income tax assessment by formulating tax filing procedures, assessment types, recovery mechanisms, and legal provisions related to penalties and appeals.
Course Code: : BCM6B15	
Course title: Corporate Taxation And Tax Planning	
CO 1	Understand the fundamental concepts of corporate taxation, including tax laws, regulations, and policies

CO 2	Recognize and apply tax planning strategies and techniques for corporate entities
CO 3	Analyze and interpret tax laws and regulations to determine their impact on corporate entities
CO 4	Conduct tax research and provide recommendations to management on tax-related matters.
CO 5	Identify and resolve complex tax problems and issues for corporate entities.
Course Code: : BCM6B16	
Course title: PROJECT	
CO 1	To make students conversant with the procedure, techniques and tools to conduct research to facilitate management in decision making activity

COMPLEMENTARY COURSES

SEMESTER 1

Course Code: BCM1C01	
Course title: Managerial Economics	
CO 1	Students will gain a foundational understanding of managerial economics, its characteristics, nature, scope, and the role of the managerial economist in decision-making and forward planning
CO 2	Students will develop the ability to analyse consumer behaviour using both cardinal and ordinal approaches, including understanding demand curves, elasticity, and the effects of income and price changes on consumption.
CO 3	Students will be able to differentiate between various market structures (perfect competition, monopoly, monopolistic competition, and oligopoly) and understand the price-output determination and profit-maximization processes within each.
CO 4	Students will acquire knowledge of the Indian economy's key characteristics, growth challenges, and the implications of economic policies post-1991, including issues like unemployment, poverty, and inequality.

CO 5	Students will understand the structure and direction of India's foreign trade, trade policies, and the role of foreign capital, MNCs, and small-scale industries in shaping the economy, with a special focus on Kerala's economic landscape.
SEMESTER 2	
Course Code:BCM2C02	
Course title: Marketing Management	
CO 1	Identifying key marketing terminologies theories
CO 2	Explain the marketing Mix
CO 3	Applying marketing concepts to develop effective marketing strategies for product
CO 4	Differentiate between various pricing, promotion & distribution strategies
CO 5	Design innovative marketing campaigns using digital & traditional marketing tools.
SEMESTER 3	
Course Code:BCM3C03	
Course title: Human Resource Management	
CO 1	Identify the basic functions and role of HRM in organisational culture
CO 2	Apply HRM concepts to solve practical HR-related issues in an organization.
CO 3	Analyse HR challenges in contemporary organizations, such as managing diversity, handling conflict, and improving employee performance.
CO 4	Evaluate the effectiveness of recruitment and selection methods.
CO 5	Assess the impact of compensation and benefits packages on employee retention.
SEMESTER 4	

Course Code:BCM4C04	
Course title: Quantitative Techniques For Business	
CO 1	Define Quantitative techniques & explain there classification , applications in B-S.
CO 2	Apply set theory concepts & venn diagrams to Solve business related problems Involving probabilities.
CO 3	Able to formulate & solve linear programming problems graphically To optimize resource allocation.
CO 4	Solve decision making problems using decision tree analysis & different types of models
CO 5	To familiarize students with the use of Quantitative techniques in managerial Decision Making

OPEN COURSE OFFERED BY B.Com. TAXATION

SEMESTER 5

Course Code: :BCM5D02	
Course title: Basics Of Entrepreneurship And Management	
CO 1	To familiarize the students with the Concept of entrepreneurship
CO 2	Explain the role of entrepreneurs in economic development and evaluate the effectiveness of Entrepreneurial Development Programmes (EDPs).
CO 3	To analyse the causes of sickness in small industries & Suggest appropriate remedies
CO 4	Able to evaluate a proposed project based on technical, financial & Social feasibility Study
CO 5	Able to prepare a comprehensive project report

NAME OF THE PROGRAMME : BA ENGLISH

PROGRAMME OUTCOMES:

PO 1	Knowledge Acquisition for sustainable development
PO 2	Communication, Collaboration, Inclusiveness, and Leadership
PO 3	Professional Skills though Critical Thinking
PO 4	Human Values, Professional Ethics and Environmental Responsibility
PO 5	Research, Innovation, and Entrepreneurship

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Understand the theoretical and mathematical foundations of Computer Science.
PSO 2	Apply fundamental computer science principles and practices to analyze, design, and implement software solutions for real-world problems.
PSO 3	Develop dynamic and interactive web and mobile applications using web technologies, frameworks, and design principles, ensuring usability, accessibility, and security.
PSO 4	Apply fundamental computer science principles and algorithmic techniques to analyze, design, and implement efficient and scalable software solutions for a variety of computational problems.
PSO 5	Configure, manage, and troubleshoot computer networks and systems, and apply basic cybersecurity principles to protect data and systems from unauthorized access and cyber threats.
PSO 6	Understand the fundamental principles, architecture and design concepts of system software, and apply this knowledge to analyze, manage and optimize system resources and services.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : ENG1A01

Course Title : ENG1B01: INTRODUCING LITERATURE

CO 1	Identify and explain the fundamental elements of literary texts, including linguistic structures, symbols, metaphors, and tropes.
CO 2	Analyze the diverse perspectives within a single text, recognizing polyphony and multiple interpretations.
CO 3	Interpret and critique dominant voices and agendas within literary and cultural texts.
CO 4	Examine the representation of marginalized voices (Dalit, transgender, female, subaltern) and assess how they counter mainstream narratives.
CO5	Apply close reading strategies to deconstruct literary texts, engaging in participatory discussions and independent interpretations.

SEMESTER 2

Course Code : ENG2B02

Course Title : APPRECIATING POETRY	
CO 1	Identify and explain the fundamental elements of poetry, including stylistic and rhetorical devices, genres, and forms.
CO 2	Analyze poetry from multiple perspectives, including gender, race, caste, ethnicity, religion, environment, and nationality.
CO 3	Compare and contrast different poetic forms and themes in British, American, and world literature.
CO 4	Interpret the evolution of poetry by tracing literary trends and their cultural and historical significance.
CO5	Develop an aesthetic and critical appreciation of poetry, engaging in independent literary analysis and discussions.
SEMESTER 3	
Course Code : ENG3B03	
Course Title :APPRECIATING PROSE	
CO 1	To enable the remembrance and understanding of the historical significance of prose writings
CO 2	To analyse and apply different contexts and literary techniques employed by authors.
CO 3	To evaluate independently the various elements put forth through prose.
CO 4	To construct well-supported arguments about the meaning and significance of prose writings.
CO5	To create the ability to explore critically the imaginative and the real aspects presented through the prose writings.
Course Code : ENG3B04	
Course Title : ENGLISH GRAMMAR AND USAGE	
CO 1	Identify and explain basic concepts of English Grammar such as Parts of Speech, phrases, clauses etc.
CO 2	Identify and correct syntactical and structural errors in English language.
CO 3	Effectively employ the mastered grammatical structures to convey desired meaning.
CO 4	Evaluate the clarity and effectiveness of communication.
CO5	Edit and enhance the coherence and over all effectiveness of a given sample.
SEMESTER 4	

Course Code : ENG4B05	
Course Title : APPRECIATING FICTION	
CO 1	Develop a Deep Appreciation for Fiction – Cultivate a love for fiction by engaging with diverse literary works and exploring the pleasure of storytelling.
CO 2	Analyze and Interpret Literary Elements – Demonstrate an understanding of key narrative elements such as plot, character, atmosphere, and narrative techniques.
CO 3	Explore Intercultural Perspectives – Foster an understanding of different worldviews by engaging with fiction from diverse backgrounds.
CO 4	Differentiate Fictional Forms – Identify and compare the structural and thematic differences between short and long fiction.
CO 5	Enhance Written and Oral Expression – Strengthen critical thinking and communication skills through discussions, presentations, and analytical writing.
Course Code : ENG4B06	
Course Title : LITERARY CRITICISM	
CO 1	CO1: Analyzing classical literary theories, including Aristotle's Poetics and Plato's Republic, and applying them to literary texts (Bloom's Level: Analyzing 4)
CO 2	CO2: Evaluating the development of English literary criticism from the 17th to the 19th century, including the contributions of major critics
CO 3	CO3: Applying 20th-century literary theories, including structuralism, poststructuralism, and postcolonialism, to literary texts
CO 4	CO4:Demonstrating an understanding of the relationship between literary theory and practice, including the application of theoretical concepts to literary texts
CO 5	Designing and conducting a critical analysis of a literary text, using appropriate theoretical frameworks and critical methodologies
SEMESTER 5	
Course Code : ENG5B07	
Course Title : APPRECIATING DRAMA AND THEATRE	
CO 1	Diachronically trace the origin of theatrical traditions from ancient Greece to modern Britain.
CO 2	Decode technical terms and theatrical terminologies.
CO 3	Analyze different dramatic texts and appreciate the theatrical diversity.

CO 4	Investigate the socio-political backdrop to the dramas.
CO 5	Cultivate a flair for drama, resulting in eventual effective production of individual theatric outputs.
Course Code : ENG5B08	
Course Title : LITERARY THEORY	
CO 1	To understand the major movements in literary theory, including Liberal Humanism, Structuralism, Poststructuralism, Psychoanalysis,Marxism, Feminism, Postcolonialism, and Ecocriticism.
CO 2	To apply key theoretical frameworks to analyze and interpret literary texts, demonstrating an ability to use concepts such as structuralist narratology, postcolonial critique, and feminist analysis in their readings of literature and culture.
CO 3	To critically assess the strengths and limitations of various literary theories, analyzing their impact on the interpretation of texts and cultural phenomena. Students will evaluate the relevance of theories like Marxism, Postmodernism, and Ecocriticism in contemporary discourse and society.
CO 4	To effectively communicate complex theoretical ideas, demonstrating a clear understanding of key concepts such as logocentrism, hybridity, and ecofeminism, both in written and oral forms.
CO 5	To engage with the ethical dimensions of literary theory, demonstrating an awareness of social justice issues, including gender, race, and colonial history.
Course Code : ENG5B09	
Course Title : LANGUAGE AND LINGUISTICS	
CO 1	To contextualise the historical roots of language development and variations across cultures.
CO 2	To comprehend fundamental branches of linguistics such as phonetics, morphology, syntax, and semantics.
CO 3	To compare and contrast different linguistic approaches to the study of language and communication.
CO 4	To develop an understanding of English syntax and be capable of providing comprehensive syntactic analyses of English sentences.
CO 5	To master the key features of standard pronunciation norms and apply them effectively in both everyday conversation and reading
Course Code : ENG5B10	
Course Title : INDIAN WRITING IN ENGLISH	
CO 1	Understand the evolution of Indian English literature, its historical development, and

	socio-cultural influences from colonial to contemporary periods.
CO 2	Analyze and interpret major Indian English literary works across genres, examining themes of nationalism, identity, and postcolonialism.
CO 3	Study significant works of prominent Indian English authors and their literary contributions.
CO 4	Develop academic writing, critical thinking, and analytical skills through literary evaluation and discussion.
CO 5	Analyze the ways through which Indian English literature represents various social realities and forms national consciousness.
SEMESTER 6	
Course Code : ENG6B11	
Course Title : VOICES OF WOMEN	
CO 1	Historicise the gender struggles of the past and evaluate them with reference to the waves of feminism.
CO 2	Distinctly differentiate the diverse gender positions and critique the societal conjectures and perceptions about gender and gender stereotypes.
CO 3	Analyze the given literary texts to locate the feminist undertones and undercurrents as well as evaluate women's writing stylistics briefed by the concept of Ecriture Feminine and scrutinize how class, race, gender and sexuality are interconnected.
CO 4	Evaluate political scenarios and legal discourses from the lens of gender and sexuality.
CO 5	Create an openminded, accommodative and therefore refined outlook towards oneself and others through a close reading of literary and cultural texts.
Course Code : ENG6B12	
Course Title : CLASSICS OF WORLD LITERATURE	
CO 1	Identify the classic literature and thereby composite cultures of the world
CO 2	Describe the literary, historical, social and cultural backgrounds of these texts
CO 3	Classify literary texts in English or English translation in terms of their main stylistic and thematic features.
CO 4	Identify some of the main theoretical and methodological issues involved in reading World Literature and develop cross cultural perspectives.
CO 5	Develop a personalized and reflective approach to advanced study in the humanities, incorporating self-directed learning, critical thinking, and intellectual

	curiosity to pursue independent research and scholarship.
Course Code : ENG6 B13	
Course Title : FILM STUDIES	
CO 1	To be able to recall and describe the fundamental terminology of filmmaking, including concepts like mise-en-scène, shot composition, camera angles, and the different types of editing techniques (e.g., continuity editing, match cuts).
CO 2	To apply the understanding of film terminology and theories to analyze and categorize various film genres (narrative, avant-garde, documentary, etc.) and movements (e.g., Italian Neo-Realism, French New Wave).
CO 3	To critically analyze selected essays by key theorists such as André Bazin, Laura Mulvey, and Bill Nichols, evaluating the relevance and application of film theories like realism, formalism, and the male gaze.
CO 4	To effectively communicate their understanding of film analysis by articulating concepts and providing insightful evaluations of classic films (e.g., The Gold Rush, The Mirror) and contemporary works.
CO 5	To integrate the knowledge gained from different areas of film theory, history, and genre and to create innovative film concepts or short film projects.
Course Code : ENG6B14	
Course Title : NEW LITERATURES IN ENGLISH	
CO 1	To comprehend historical contexts that have shaped New Literatures in English.
CO 2	To interpret major concepts in postcolonial and allied third world theories.
CO 3	To analyse how themes such as identity, resistance, and hybridity emerge in new literary texts using critical perspectives.
CO 4	To critically assess the impact of colonialism and decolonization on literary expressions and cultural identity in new literatures in English.
CO 5	Compose original literary critiques or creative works that engage with themes, styles, and perspectives from New Literatures in English.
COMPLEMENTARY COURSES	
SEMESTER 1	
Course Code : JOU1(2)C01	
Course Title : INTRODUCTION TO COMMUNICATION AND JOURNALISM	
CO 1	Analyzing the characteristics, advantages, and disadvantages of various mass media platforms, including print, film, radio, television, and online media
CO 2	Evaluating the importance of freedom of the press, understanding the reasonable restrictions, and demonstrating awareness of media laws and regulations

CO 3	Recalling the key events, personalities, and publications in the history of Indian journalism, including the freedom movement and the evolution of Malayalam journalism
CO 4	Applying ethical principles and standards to journalistic practices, including media ethics, defamation, censorship, and plagiarism
CO 5	Designing and conducting in-depth investigations, analyzing data, and uncovering hidden truths in journalistic contexts, using various research methods and tools
SEMESTER 2	
Course Code : ENG (1)C02	
Course Title : HISTORY OF ENGLISH LITERATURE-I	
CO 1	To develop an appreciation of the cultural and historical significance of literature, and its relationship to the society in which it was produced.
CO 2	To familiarize the major literary movements and authors of the English literary tradition, from the Medieval Period to the Romantic Age.
CO 3	To define and explain the key characteristics of major literary movements
CO 4	To compare and contrast literary works from different periods and genres
CO 5	To gain knowledge about prominent authors from different literary periods and their significant works.
SEMESTER 3	
Course Code : ENG (3)C02	
Course Title : HISTORY OF ENGLISH LITERATURE-II	
CO 1	To familiarize the major literary movements and authors of the English literary tradition, from the Victorian Age to the present day.
CO 2	To enable a critical understanding of the intellectual history of England
CO 3	To analyze literary texts within their specific historical, social, and cultural contexts.
CO 4	To interpret literary texts by considering the author's life, times, and intentions.
CO 5	To apply different critical approaches like feminist, Marxist, postcolonial etc to the analysis of literary texts
SEMESTER 4	
Course Code : JOU1(2)C01	
Course Title : INTRODUCTION TO COMMUNICATION AND JOURNALISM	
CO 1	Analyzing the characteristics, advantages, and disadvantages of various mass media platforms, including print, film, radio, television, and online media

CO 2	Evaluating the importance of freedom of the press, understanding the reasonable restrictions, and demonstrating awareness of media laws and regulations
CO 3	Recalling the key events, personalities, and publications in the history of Indian journalism, including the freedom movement and the evolution of Malayalam journalism
CO 4	Applying ethical principles and standards to journalistic practices, including media ethics, defamation, censorship, and plagiarism
CO 5	Designing and conducting in-depth investigations, analyzing data, and uncovering hidden truths in journalistic contexts, using various research methods and tools
OPEN COURSE OFFERED BY ENGLISH	
Course Code : ENG5D0	
Course Title : ENGLISH FOR COMPETITIVE EXAMINATIONS	
CO 1	Identify and apply the correct usage of words in various forms, including synonyms, antonyms, one-word substitutions, and idiomatic expressions.
CO 2	Analyze and correct sentence-level errors, such as error identification, sentence correction, and sentence completion, ensuring grammatical accuracy and clarity.
CO 3	Develop skills in sentence formation and structure by solving jumbled sentences and constructing coherent, grammatically correct statements.
CO 4	Enhance reading comprehension and analytical skills through practice with passage-based questions, including reading comprehension, jumbled sentences in a paragraph, and English comprehension.
CO5	Strengthen professional English skills for competitive exams by improving listening and reading comprehension abilities, enhancing overall communication proficiency.
ELECTIVE COURSES	
Course Code : ENG6B17	
Course Title : WRITING FOR THE MEDIA	
CO 1	Identify and explain the fundamental concepts and types of technical writing, including the structure of user manuals, technical descriptions, and dissertation writing.
CO 2	Analyze and compare the specificities of writing for different types of media, including radio, television, film, and digital platforms.
CO 3	Develop technical writing skills necessary for producing various forms of media content, such as scripting for radio, television, and online platforms.
CO 4	Create original content for advertisements, including copywriting for print, radio, and online platforms, focusing on the creative aspects of

	advertising.
CO5	Demonstrate proficiency in writing for digital media, including website content, blogs, vlogs, and news reporting, while adhering to online stylistics, ethics, and cyber laws.

ADDITIONA LANGUAGES-MALAYALAM

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Understand the theoretical and mathematical foundations of Computer Science.
PSO 2	Apply fundamental computer science principles and practices to analyze, design, and implement software solutions for real-world problems.
PSO 3	Develop dynamic and interactive web and mobile applications using web technologies, frameworks, and design principles, ensuring usability, accessibility, and security.
PSO 4	Apply fundamental computer science principles and algorithmic techniques to analyze, design, and implement efficient and scalable software solutions for a variety of computational problems.
PSO 5	Configure, manage, and troubleshoot computer networks and systems, and apply basic cybersecurity principles to protect data and systems from unauthorized access and cyber threats.
PSO 6	Understand the fundamental principles, architecture and design concepts of system software, and apply this knowledge to analyze, manage and optimize system resources and services.

COURSE OUTCOMES

COMMON COURSE FOR B.A & B.Sc. PROGRAMME

SEMESTER 1

Course Code : **MAL1A07(1)**

Course Title : **Malayala Sahithyam 1**

CO 1	Analyze the various periods of Malayalam literary growth
CO 2	Understand the author's writing characteristics in general.
CO 3	Understand the earliest works of Malayalam poetic literature.
CO 4	Evaluate early works of Malayalam poetic literature.
CO 5	Identify common characteristics of poems.
CO 6	Create the poems by understanding the moods of poems of different periods.

SEMESTER 2

Course Code : **MAL2A08(1)**	
Course Title : **Malayala Sahithyam 2**	
CO 1	Travel through the history of Malayalam poetry and literature.
CO 2	Understand the rhythmic and literal movements in Malayalam poetry.
CO 3	Evaluate critical forms and movements in Malayalam literature.
CO 4	Compare the imaginative evolution of Malayalam poetry from the modern phase to the post-modern phase.
SEMESTER 3	
Course Code : **MAL3A09(1)**	
Course Title : **Malayala Sahithyam 3**	
CO 1	Get general knowledge about drama and drama history.
CO 2	Compare the arts of drama and cinema.
CO 3	Read autobiographies and write autobiography in the light of life experiences.
CO 4	Understand the general nature of travel literature and evaluate changes over time
CO 5	Analyze the characteristics of screenplays.
SEMESTER 4	
Course Code : **MAL4A10(1)**	
Course Title : **Malayala Sahithyam 4**	
CO 1	Identify the grammar rules in the language.
CO 2	To inculcate social commitment and sense of democracy in students.
CO 3	Do creative critical writing.
CO 4	Understand and apply translation principles.
CO 5	Explore the history of the Malayalam novel and analyze the transformations the novel has undergone over time.
COMMON COURSE FOR B.Sc. COMPUTER SCIENCE & BCA	
SEMESTER 1	
Course Code : **MAL1A07(3)**	

Course Title : **Malayala Bhashayum Sahithyavum 1**	
CO 1	Understand the different forms of narratives.
CO 2	Review the characteristics of narratives.
CO 3	Analyze the factors that differentiate poetry from other literary forms
CO 4	Analyze the narrative features of the literary forms of story and travelogue.
CO 5	Understand the general nature of travel literature and evaluate changes over time.
SEMESTER 2	
Course Code : **- MAL1A08(3)**	
Course Title : **Malayala Bhashayum Sahithyavum 2**	
CO 1	Understand the chronological evolution of fiction.
CO 2	Analyze novels in which nature and society form the plot.
CO 3	Write short plays
CO 4	Examine the time series of the narratives.
CO 5	Get general knowledge about drama and drama history.
CO 6	Autobiographies and memoirs identify elements that differentiate them from other literary forms
COMMON COURSE FOR B.Com/BBA Programme	
SEMESTER 1	
Course Code **: MAL1A07(2)**	
Course Title **: Malayala Sahithya Padanam 1**	
CO 1	Discover commercial idioms.
CO 2	Analyze the thematic, narrative, and aesthetic elements of the essays.
CO 3	Review the characteristics of narratives.
CO 4	Prepare travel itinerary based on travel experiences.
CO 5	Analyze the novels dealing with Dalit issues in contemporary context.
SEMESTER 2	
Course Code : **MAL2A08(2)**	

Course Title : **Malayala Sahithya Padanam 2**	
CO 1	Understand the earliest works of Malayalam poetic literature.
CO 2	Identifying the characteristics of narratives
CO 3	Codify the characteristics of literature as distinct from writings in social, humanities and linguistics.
CO 4	Create dialogues for dramas based on mythological stories.
CO 5	Analyze the thematic, narrative, and aesthetic pleasure elements of autobiography.
CO 6	Understand and compare the writing styles of drama and cinema.

ADDITIONA LANGUAGES - HINDI

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Linguistic Competence and Proficiency in Hindi
PSO 2	Literary Appreciation and Critical Thinking
PSO 3	Cultural Awareness and Societal Understanding
PSO 4	Translation and Interpretation Skills
PSO 5	Research and Creative Writing
PSO 6	Employment and Professional Skill Development

COURSE OUTCOMES

COMMON COURSE FOR B.A & B.Sc. PROGRAMME

SEMESTER 1

Course Code : **HIN 1 A07(1)**	
Course Title : **Prose and Drama**	
CO 1	**Enhance literary comprehension**: Develop creative thinking and literary appreciation.
CO 2	Approach literary texts in terms of genre, gender and the canon
CO 3	Understand and use academic conventions: referencing and bibliography.
CO 4	exposed to the origin and development of Hindi drama and its various themes and forms of different ages and stages

CO 5	Helps students explore how writers use the resources language as a creativity to explore the entire range of human experience through dramas as a literary form.
SEMESTER 2	
Course Code : **HIN 2 A08(1)**	
Course Title : **Grammar and Translation**	
CO 1	Understand the differences between spoken and written Hindi
CO 2	Understand the factors that influence use of grammar and vocabulary in speech and writing
CO 3	Understand the different ways in which grammar has been described
CO 4	Define the link between translation theory and translation practice.
CO 5	Define the effects of translation theories on translation practice.
CO 6	Define the contribution of translation practice to translation theory
SEMESTER 3	
Course Code : **HIN 3 A09(1)**	
Course Title : **Poetry in Hindi**	
CO 1	**Appreciate poetic forms**: Understand free verse, traditional poetry, and different literary movements.
CO 2	**Analyze Hindi poetry**: Recognize themes, symbolism, and artistic elements in poetry.
CO 3	**Relate poetry to personal experiences**: Connect literary themes with real-life scenarios.
CO 4	Understand the common techniques underlying free verse and traditional forms of poetry
CO 5	Identify personal experiences that can be used when writing poems
CO 6	Understand the basic terminology and practical elements of poetry.
SEMESTER 4	
Course Code : **HIN 4 A10 (1)**	
Course Title : **Novel and Short Stories**	
CO 1	**Evaluate fictional narratives**: Learn how fiction shapes cultural and social values.
CO 2	**Analyze major Hindi literary works**: Study storytelling techniques, themes, and character development.

CO 3	**Develop interpretative skills**: Critically engage with texts and draw relevant conclusions
CO 4	Enables the students to analyze literature and fiction using appropriate theoretical, historical, and cultural apparatus.
CO 5	Students get to know various cultures and construction of gender, nation and race throughout the history.
CO 6	The prescribed fiction helps the students to learn human values and the behavioral patterns from great works of art, and develops the ability to understand human race.

COMMON COURSE FOR B.Sc. COMPUTER SCIENCE & BCA)

SEMESTER 1

Course Code : **HIN 1A07(3)**

Course Title : **Prose and One-Act Plays**

CO 1	Approach literary texts in terms of genre, gender and the canon
CO 2	Understand and use academic conventions: referencing and bibliography
CO 3	The learner will be aware of socio-political and economic conditions of the society from different periods
CO 4	Be familiar with the theoretical foundations of the genre;
CO 5	Be able to compare and contrast the genre with other dramatic forms;

SEMESTER 2

Course Code : - **HIN 2A08(3)**

Course Title : **Poetry and Short Stories**

CO 1	Understand the common techniques underlying free verse and traditional forms of poetry
CO 2	Identify personal experiences that can be used when writing poems
CO 3	Understand the basic terminology and practical elements of poetry.
CO 4	Students get to know various cultures and construction of gender, nation and race throughout the history.
CO 5	The prescribed fiction helps the students to learn human values and the behavioral patterns from great works of art, and develops the ability to understand human race

COMMON COURSE FOR B.Com/BBA Programme

SEMESTER 1

Course Code **: HIN 1A07(2)**	
Course Title **: Prose Forms in Hindi Literature**	
CO 1	**Understand literary prose**: Identify and analyze different prose forms, such as essays, memoirs, and travelogues.
CO 2	**Develop critical thinking skills**: Interpret literary texts based on historical and socio-political contexts.
CO 3	Approach literary texts in terms of genre, gender and the canon
CO 4	Understand and use academic conventions: referencing and bibliography.
CO 5	The learner will be aware of socio-political and economic conditions of the society from different periods.
SEMESTER 2	
Course Code : **HIN 2A08(2)**	
Course Title : **Poetry, Correspondence, and Translation**	
CO 1	Understand the common techniques underlying free verse and traditional forms of poetry
CO 2	Identify personal experiences that can be used when writing poems.Understand the basic terminology and practical elements of poetry.
CO 3	Define the link between translation theory and translation practice.
CO 4	Define the contribution of translation practice to translation theory
CO 5	Understand the importance of correspondance

COMMON COURSES OFFERED BY ENGLISH

SEMESTER 1	
Course Code : ENG1A01	
Course Title : LITMOSPHERE: THE WORLD OF LITERATURE	
CO 1	To enhance the remembrance and understanding for the thematic representations of fiction writing.
CO 2	To analyse and apply different narrative strategies and literary techniques employed by authors.
CO 3	To construct well-supported arguments about the meaning and significance of literary works and utilize those in various situations
CO 4	To evaluate critically and independently about complex issues and ideas communicated through literary texts.
CO 5	To create the ability to explore critical perspectives and contextual information related to literary works.
Course Code : ENG1A02	
Course Title : FUNCTIONAL GRAMMAR AND COMMUNICATION	
CO 1	Consider and rectify common errors in concord and collocation.
CO 2	Understand the essentials of English Grammar and overcome the inhibition to communicate.
CO 3	Aquire the skill of sentence transformation and enhance professionalism through the prim and polish of language.
CO 4	Effectively analyze the barriers to communication and innovate means to overcome them .
CO 5	Create grammatically correct sentences and cultivate effective communication skills.
SEMESTER 2	
Course Code : ENG2A03	
Course Title : READING FROM THE FRINGES	
CO 1	To enhance the remembrance and appreciation for the socially relevant themes by authors in literary writing.
CO 2	To analyse scientifically and independently about complex issues communicated through literary texts.
CO 3	To construct well-supported arguments about the meaning and significance of literary texts, using textual evidence encompassing gender, caste and social inequalities.
CO 4	To construct well-supported arguments about the meaning and significance of literary texts, using textual evidence encompassing gender, caste and social inequalities.
CO 5	To evaluate and apply different thematic strategies and literary techniques employed by authors.
Course Code : ENG2A04	
Course Title : READINGS ON KERALA	
CO 1	To familiarize students with significant works and authors in Malayalam literature, thereby deepening their appreciation and critical insight into the region's literary legacy.

CO 2	To offer perspectives on the cultural and historical contexts of Kerala, allowing students to place literary works within a wider socio-cultural landscape.
CO 3	To provide students with an understanding of the formation and evolution of Kerala's socio-cultural identity.
CO 4	To motivate students to engage in critical text analysis, promoting thoughtful and insightful interactions with literature.
CO 5	To enhance students' English language proficiency through the examination of translated works and original English texts related to Kerala, facilitating effective communication and understanding.
SEMESTER 3	
Course Code : ENG2A05	
Course Title : READING ON INDIAN LITERATURE	
CO 1	To enable the remembrance and understanding of the literary works penned by Indian authors.
CO 2	To analyse independently the various elements put forth through literary texts.
CO 3	To evaluate and apply different contexts and literary techniques employed by authors.
CO 4	To construct well-supported arguments about the meaning and significance of literary texts on the basis of literary genres.
CO 5	To create the ability to explore social and economic issues presented through the Indian literary works.
SEMESTER 4	
Course Code : ENG4A06	
Course Title : Songs and Stories of our World	
CO 1	Gain familiarity with a variety of classical and marginal literatures.
CO 2	Have an awareness of the ways in which different cultures perceive the world around them and how they capture these experiences in literature.
CO 3	Develop empathy and understanding on the face of diverse peoples and their experiences
CO 4	Analyze and evaluate the ways in which literature reflects and shapes cultural perceptions, and how it can be used to promote empathy and understanding.
CO 5	Create a comparative analysis of different literary texts and their cultural contexts.

COMMON COURSES FOR B.Sc COMPUTER SCIENCE AND BCA

SEMESTER 3	
Course Code : A11	
Course Title : PYTHON PROGRAMMING	
CO1	Understand Python fundamentals including data types, operators, expressions, and basic input/output operations.
CO2	Apply decision-making constructs and implement iterative programming using various loop structures.
CO3	Design and develop modular programs using functions, including built-in and user-

	defined functions with different parameter passing mechanisms
CO4	Implement programs using Python's built-in data structures like strings, lists, tuples, dictionaries, and sets
CO5	Create Python applications by integrating various programming concepts and data structures to solve real-world problems
Course Code : A12	
Course Title : Sensors and Transducers	
CO1	Grasp the basic idea about sensors and transducers and its types
CO2	Study Thermal and Thermoelectric Sensors:
CO3	Comprehend Pressure and Level Measurement:
C04	Learn Flow and Radiation Sensors:
C05	Understand Sound and Hall Effect Sensors
SEMESTER 4	
Course Code : A13	
Course Title : Data Communication and Optical Fibers	
CO1	Gain Knowledge of data communication, including data transmission, protocols, and networking fundamentals.
CO2	Understand different communication models, including the OSI and TCP/IP models.
CO3	Identify and describe components of optical fiber communication
CO4	Analyze properties of optical fibers including total internal reflection, refraction and dispersion
CO5	To describe principles of optical signal transmission including modulation, demodulation and detection
Course Code : A14	
Course Title : Microprocessors-Architecture and Programming	
CO1	Understand computer architecture fundamentals, memory organization, and detailed architecture of 8085 microprocessor including its registers and signals
CO2	Apply assembly language programming concepts and implement various instructions using different addressing modes of 8085 microprocessor.
CO3	Develop programs using advanced programming techniques including looping, indexing, stack operations, and subroutines in 8085.
CO4	Implement interrupt-driven programs and interface 8085 with programmable

	peripheral devices.
CO5	Understand the architecture of 8086/88 microprocessors, including execution unit, registers, flags, and addressing modes.

COMMON COURSES FOR BBA AND BCOM

SEMESTER 3

Course Code : BBA3A11

Course Title : Basic Numerical Methods

CO 1	Understand and Apply Linear Equations & Matrices
CO 2	Analyze and Compute Measures of Central Tendency
CO 3	Evaluate and Compare Measures of Dispersion, Skewness, and Kurtosis
CO 4	Apply Numerical Methods in Financial Calculations
CO 5	Develop Problem-Solving Skills Using Numerical Methods

Course Code : BBA3A12

Course Title : Professional Business Skills

CO 1	Explain the concept of professionalism, its characteristics, and the importance
CO 2	Analyze business data using modern computing techniques,
CO 3	Evaluate the role of e-learning in modern education
CO 4	Examine the impact of IT on society, including cyber ethics
CO 5	Apply digital marketing strategies by exploring different business models, online advertising

SEMESTER 4

Course Code : BBA4A13

Course Title : Entrepreneurship Development

CO 1	Understand the Basic Concepts of Entrepreneurship
CO 2	Equip with Knowledge of Institutional Support and Incentives provided
CO 3	Gain Knowledge of MSME

CO 4	Procedure Involved in setting up the Industrial Unit
CO 5	Equip with the knowledge of creation of Projects
Course Code : BBA4A14	
Course Title : Banking & Insurance	
CO 1	Understand the fundamentals of banking, including its origin
CO 2	Identify and analyze negotiable instruments and Bank Transaction
CO 3	Examine e-banking services and financial inclusion initiatives
CO 4	Describe the concepts and principles of insurance
CO 5	Analyze the functions of IRDA, and develop a proposal for life insurance

PG PROGRAMMES

NAME OF THE PROGRAMME : MA English Language and Literature

PROGRAMME OUTCOMES:

PO 1	Advanced Problem-Solving Skills
PO 2	Mastery of Advanced Research Methods
PO 3	Professional Development and Career Readiness
PO 4	Leadership and Collaborative Abilities:
PO 5	Community Engagement and Service

PROGRAMME SPECIFIC OUTCOMES:

PSO 1	Advanced Literary and Linguistic Proficiency
PSO 2	Critical Inquiry and Theoretical Engagement
PSO 3	Interdisciplinary and Global Perspectives
PSO 4	Research Excellence and Academic Contribution
PSO 5	Professional and Pedagogical Competency

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : ENG1CO1

Course Title : British Literature from Chaucer to 18th Century

CO 1	Identify and define key literary movements, authors, and major works of British literature from the 14th to the 18th century
CO 2	Explain the historical, social, and cultural contexts that influenced the development of British literature during this period.

CO 3	Analyze selected literary texts, applying appropriate critical approaches (e.g., historical, feminist, Marxist) to interpret their themes, characters, and language.
CO 4	Compare and contrast the works of different authors from this period, identifying similarities and differences in their styles, themes, and perspectives.
CO5	Critically evaluate the significance and lasting impact of selected works of British literature from the 14th to the 18th century, considering their literary merit and cultural influence.
Course Code : ENG1CO2	
Course Title : British Literature - 19th century	
CO 1	To acquire an in-depth understanding of the major literary trends and movements in 19th-century British literature, such as Romanticism, Victorianism, and Pre-Raphaelitism, and will be able to critically analyze how these movements influenced the works of key authors like Blake, Wordsworth, Shelley, and Hardy.
CO 2	To critically analyze a range of 19th-century poems, such as Blake's *The Tiger* and Keats' *Ode to a Nightingale*, and evaluate how these works reflect societal concerns and personal emotions
CO 3	To design and present a research project that contributes to the understanding of how the 19th century English novels engage with the historical and social conditions of their time, fostering their ability to conduct and disseminate scholarly inquiry.
CO 4	To effectively communicate the students' understanding of 19th-century literature through structured essays, presentations, and discussions and to analyse works from a variety of genres (poetry, drama, and fiction), students will present their ideas clearly, discussing the ways in which literature represents societal changes and addresses social issues.
CO 5	To synthesize their understanding of 19th-century British literature to create original interpretations or scholarly contributions, such as developing new analytical frameworks or creating innovative critical essays that explore unexplored themes, characters, or historical contexts within the works studied
Course Code : ENG1C03	
Course Title : History of English Language	
CO 1	Trace the development of the English language from its origins to the present

	day, including the influence of other languages and historical events.
CO 2	Explain the development of English pronunciation and grammar, including changes in syntax, morphology, and vocabulary.
CO 3	Differentiate between the grammatical structures, pronunciation patterns, and vocabulary of Old English, Middle English, and Early Modern English.
CO 4	Analyze the sources and processes of vocabulary enrichment in English, including borrowing, coinage, and compounding.
CO 5	Conduct research on language and dialectical variations by analyzing different works written over different periods.
Course Code : ENG1CO4	
Course Title : **Indian Literature in English**	
CO 1	To comprehend the historical context of Indian Writing in English and the production of key texts.
CO 2	To interpret the central themes and cultural contexts in key texts of Indian Writing in English.
CO 3	To expound an intersectional analysis of the representation of postcolonial identity, gender, and social issues in Indian Writing in English.
CO 4	To critically assess the role of Indian Writing in English in shaping national and global literary landscapes, with attention to its impact on socio-cultural and political discourse.
CO5	To develop an original research paper on a selected theme, author, or genre in Indian Writing in English, applying relevant literary theories and critical perspectives.
SEMESTER 2	
Course Code : ENG2 CO5	
Course Title : Twentieth century British Literature up to 1940	
CO 1	**Recall** major trends, movements, and authors in British literature up to 1940.
CO 2	**Explain** the intellectual currents and socio-political events that influenced the literature of the period.
CO 3	**Compare** British literary works with European texts to contextualize the broader Modernist movement.
CO 4	**Analyze** how literature reflects and refracts historical and cultural

	developments.
CO5	**Evaluate** literary texts in relation to socio-political and intellectual frameworks.
CO6	**Conduct** independent research and engage in discussions on intertextual relationships between British and European literatures.
Course Code : ENG2 CO6	
Course Title : Literary Criticism and Theory – Part 1	
CO 1	To demonstrate a comprehensive understanding of key texts in literary theory, including the works of Plato, Aristotle, Longinus, and others, and apply critical concepts from classical and early modern literary criticism to contemporary works.
CO 2	To critically analyze various literary theories from the classical period to the early twentieth century, including the concepts of Rasa, Dhwani, and Paradox, and assess their relevance and application in the study of literature today.
CO 3	To engage in scholarly inquiry by designing a research project that explores the evolution of literary criticism, drawing upon the works of theorists such as Sydney, Leavis, Eliot, and Frye to create an analytical framework for understanding critical theory in literature.
CO 4	To effectively communicate complex literary theories and their implications through both written and oral presentations, engaging in collaborative discussions and debates with peers to refine critical perspectives on literary criticism.
CO5	To develop an original, innovative framework for integrating traditional and contemporary literary theories into a cohesive model for analyzing literature, demonstrating leadership and expertise in applying this model to advanced scholarly or professional work in literary studies.
Course Code : ENG2 C07	
Course Title : AMERICAN LITERATURE	
CO 1	To engage critically with existing scholarship on American literature, identifying key areas and developing perspectives
CO 2	To examine issues of diversity, representation, and inclusion in American literature, paying attention to race, ethnicity, gender, class, sexuality, and

	other social categories
CO 3	To recognize significant American writers and their representative works from various literary periods.
CO 4	To analyze the ways in which American literature over various periods reflects and critiques the changing landscape of American identity
CO5	To apply theoretical frameworks for the analysis of American literature
Course Code : ENG2 C08	
Course Title : Postcolonial writings	
CO 1	To historically contextualise the broader socio-cultural climate and production of key literary texts in the postcolonial scenario.
CO 2	To interpret the central concepts of postcolonial theory, such as hybridity, subalternity, ambivalence, colonial discourse etc.
CO 3	To apply postcolonial critical frameworks to analyze literary texts, identifying themes such as identity, marginalisation, resistance, and decolonization.
CO 4	To critically evaluate the contributions of postcolonial writers to the reimagining of national identities, and the role of literature in challenging colonial legacies.
CO5	To develop an original research paper or project that engages with a postcolonial theme, author, or region, incorporating relevant theoretical perspectives and critical insights.
SEMESTER 3	
Course Code : ENG2 CO9	
Course Title : Twentieth century British Literature up to 1940	
CO 1	To historically contextualise the broader socio-cultural climate and production of key literary texts in Post 1940s Britain society.
CO 2	To comprehend the features of major literary movements in post-1940s British literature, such as late modernism, postmodernism, and postcolonialism.
CO 3	To compare and contrast the representations of identity, gender, race, and class in the works of post-1940s British authors.
CO 4	To critically evaluate the impact of historical events, such as World War II, decolonization, and the rise of multiculturalism, on the development of post-

	1940s British literature.
CO5	To develop an original research paper that explores a specific theme, author, or text in post-1940s British literature, applying critical theories and literary analysis.
Course Code : ENG2 C10	
Course Title : Literary Criticism and Theory- Part 2	
CO 1	To have a foundational knowledge of major literary theories, including structuralism, post-structuralism, psychoanalysis, feminism, cultural materialism, postcolonialism, ecocriticism, and their respective key theorists.
CO 2	To critically engage with texts using different theoretical frameworks, demonstrating the ability to identify, analyse, and interpret complex literary structures, meanings, and power dynamics within the context of diverse schools of thought.
CO 3	To design and conduct research projects that explore the intersection of literature and theory, using primary and secondary sources to contribute to the scholarly conversation.
CO 4	To communicate complex literary and theoretical insights effectively, both in written form and through discussions
CO5	To synthesize concepts from various literary theories (e.g., structuralism, post-structuralism, psychoanalysis, feminism, postcolonialism, ecocriticism) to produce original critical analyses of literary texts
Course Code : ENG3E02	
Course Title : EUROPEAN FICTION IN TRANSLATION	
CO 1	To trace the evolution of European consciousness and identity as reflected in its fictional narratives, from classical antiquity to the present day
CO 2	To get a historical perspective of European fiction and glimpses into European culture and society across the centuries
CO 3	To compare and contrast works from different European nations, identifying similarities and differences in themes, literary techniques, and cultural perspectives.
CO 4	To connect the themes and concerns explored in European fiction of the past to contemporary social and cultural issues and applying it in the literary analysis of a new similar text

CO5	To analyze how European fiction has depicted encounters and exchanges between different cultures within Europe and with the wider world, exploring themes of cultural identity, otherness, and cross-cultural understanding
Course Code : ENG3E03	
Course Title : WOMEN'S WRITING	
CO 1	**Examine** literary texts from diverse spatial and temporal contexts to understand the plurality of women's literary engagements in terms of form and theme.
CO 2	**Identify** the variations in women's writing across cultures while recognizing shared experiences of patriarchy.
CO 3	**Establish** connections between their perspectives as readers and the experiences represented in women's texts from different historical contexts
CO 4	**Engage** with feminist theoretical and critical perspectives to enhance their understanding of women's literature and its socio-cultural implications.
SEMESTER 4	
Course Code : ENG4C11	
Course Title : English Literature in the 21st Century	
CO 1	**Analyze** the multicultural dimensions of 21st-century English literature across diverse postcolonial contexts.
CO 2	**Examine** how English functions as a medium for both reflection and resistance in contemporary literary works.
CO 3	**Explore** the ways in which writers from diverse linguistic and cultural backgrounds engage with themes of identity, migration, and resistance.
CO 4	**Evaluate** the role of English literature in shaping and challenging cultural narratives in a globalized world.
CO5	**Create** independent critical perspectives on contemporary English literature by engaging with diverse cultural and theoretical frameworks.
Course Code : ENG4E14	
Course Title : INDIAN ENGLISH FICTION	
CO 1	**To** gain in-depth knowledge of Indian fiction in English, covering a variety of

	works from different regions, historical periods, and cultural contexts.
CO 2	**T**o analyse the complex thematic concerns of Indian fiction in English, including the effects of British colonialism, the partition of India, post-independence struggles, socio-economic disparities, and global migration.
CO 3	**To** design and conduct research on specific works or authors in Indian fiction in English and to analyze, and synthesize primary and secondary materials in order to contribute original insights into the discourse surrounding Indian literary traditions, narrative techniques, and cultural contexts.
CO 4	**To** develop skills in articulating complex ideas related to Indian literature, both in writing and through oral presentations.
CO5	**To** synthesize ideas from various critical approaches to produce original research papers, essays, or multimedia projects on the works of Indian writers in English.
Course Code : ENG4E16	
Course Title : DALIT STUDIES	
CO 1	To gain a comprehensive understanding of the historical and ongoing social, economic, political, and cultural realities of Dalits in India, including the caste system, untouchability, and various forms of discrimination and oppression
CO 2	To analyze the intersectional nature of Dalit identity, considering how caste intersects with gender, class, region, religion, and other social categories to shape Dalit experiences
CO 3	To develop advanced skills in the critical analysis of caste as a social system, its historical roots, and its contemporary manifestations
CO 4	To conduct original research on topics related to Dalit Studies, utilizing appropriate scholarly resources and methodologies, including oral histories and other forms of community-based research
CO5	To interpret and analyze Dalit literary works, recognizing the unique perspectives and experiences expressed by Dalit writers, including themes of resistance, identity, and social critique.

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NAME OF THE PROGRAMME : M. Sc. GEOGRAPHY

PROGRAMME OUTCOMES:

PO 1	Advanced Problem-Solving Skills
PO 2	Mastery of Advanced Research Methods
PO 3	Professional Development and Career Readiness
PO 4	Leadership and Collaborative Abilities:
PO 5	Community Engagement and Service

PROGRAMME SPECIFIC OUTCOMES:

PSO1	Geospatial Technology and Spatial Analysis
PSO2	Integrated Physical and Human Geography Understanding
PSO3	**S**ustainable Resource and Environmental Management
PSO4	Research and Analytical Competence
PSO5	Application of Geography in Development and Planning

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **GRY1C 01**

Course Title : GEOMORPHOLOGY

CO 1	Define and categorize geomorphic processes, distinguishing between exogenic and endogenic types.
CO 2	Explain and analyse exogenic and endogenic processes in landscape formation, evaluating their significance in landform development and the mechanisms that control them.
CO 3	Assess and interpret the influence of different spatial and temporal scales on geomorphological processes.
CO 4	Compare and discuss the characteristics and effects of various exogenic and endogenic processes.

CO 5	Classify and examine the factors influencing different types of weathering, considering their role in geomorphological changes.
Course Code : **GRY1 C02**	
Course Title : **CLIMATOLOGY**	
CO 1	Describe and explain the structure and composition of the atmosphere, weather phenomena (winds, humidity, precipitation), heat balance, and forecasting methods, including Koppen's classification and climate change theories
CO 2	Analys e and evaluate the physical basis of the natural greenhouse effect, including radiative forcing, and assess how human activities contribute to increasing greenhouse gas emissions and sulphate aerosols in the troposphere.
CO 3	Examine and interpret the challenges of detecting global warming signals amidst natural climate variability and the complexities of attributing these changes to human activities.
CO 4	Critically assess the role of the IPCC in establishing a scientific consensus on climate change while recognizing the complexities and uncertainties that provide opportunities for climate skepticism.
CO 5	Apply and illustrate knowledge of global atmospheric circulation, climatic systems, variability, and change to real-world case studies of climate patterns and disturbances.
Course Code : **GRY1 C03**	
Course Title : **CLIMAT CONCEPTS AND TRENDS IN GEOGRAPHY OLOGY**	
CO 1	Understand the historical development of Geography from ancient to modern times and its evolution as a science.
CO 2	Analyze the fundamental concepts of Geography such as space, place, environment, sustainability, scale, change, and landscape (natural & cultural), with an emphasis on their interconnections.
CO 3	Apply scientific theories and models (such as Kuhn's model and Tobler's Law) in the context of geographical study and evaluate their limitations and prospects.
CO 4	Evaluate and contrast different geographical paradigms like Positivism, Humanism, Structuralism, and Marxist Geography, considering their impact on contemporary spatial science and human-environment interactions.
CO 5	Develop critical thinking skills in geographical studies by assessing the role of technology in spatial data analytics, Geo-statistics, and geoinformatics, while applying qualitative and quantitative methods to solve geographical problems.

Course Code : **GRY1 C04**	
Course Title : **PHYSICAL GEOGRAPHY OF INDIA**	
CO 1	Define and describe the geographic location, spatial significance, and physical framework of India, including its geological and physiographical features, tectonic structures, and the evolution of the Indian platform.
CO 2	Analyze and explain the monsoon system, including its origin, driving mechanisms, features, variability, and the role of global climatic factors such as El Niño and ENSO, and how these affect the Indian subcontinent.
CO 3	Compare and contrast the major river systems of India, such as the Indus, Ganges, Brahmaputra, and others, with a focus on their drainage patterns, characteristics, and critical appraisal of theories like the Indo-Brahma theory.
CO 4	Evaluate the bio-geographical zones, soil types, and vegetation classification of India, and assess their environmental significance and the role they play in land use planning and agriculture.
CO 5	Investigate the territorial conflicts between India and neighboring countries (Pakistan, China, Bangladesh), understanding their geographical implications and the role of geography in political and social challenges.
SEMESTER 2	
Course Code : **GRY2C05**	
Course Title : **GEOGRAPHIC INFORMATION SYSTEM**	
CO 1	Define and explain the core concepts and scope of Geographic Information Systems (GIS), including its historical development, architecture, and key components.
CO 2	Analyze and evaluate the representation of geographic space, including discrete and continuous data, spatial and temporal relationships, and the different data generalization, classification, and collection methods used in GIS.
CO 3	Apply GIS concepts to understand and organize geographic data, including coordinate systems, map projections, geodetic and vertical datums, and how they relate to database management systems and spatial data acquisition.
CO 4	Design and implement geographic database systems using relational models, SQL, and GIS data structures such as vector and raster, integrating advanced techniques for data storage, compression, and visualization.
CO 5	Evaluate and apply GIS techniques in spatial analysis, such as raster and vector-based data analysis, spatial interpolation methods, and use GIS for applications in watershed management and local government planning.
Course Code : **GRY2C06**	

Course Title : **REGIONAL PLANNING AND DEVELOPMENT**	
CO 1	Define and explain the key concepts, scope, objectives, and significance of regional planning, and evaluate the principles and types of regional planning in relation to regional development.
CO 2	Analyze the various factors that govern regional development and growth, and assess the leading issues and current status of regional planning, with a focus on the role of economic systems in shaping regional outcomes.
CO 3	Apply classical and contemporary theories of economic development (e.g., Marxian, Schumpeterian, Rostow's Stages) to regional planning and development, and critically assess the relevance of these theories to modern regional growth.
CO 4	Evaluate the significance of sustainable development in regional planning, understand its objectives and policies, and apply the theory of limits to growth in the context of modern regional development challenges.
CO 5	Investigate and assess the causes of regional inequalities and imbalances, and critically analyze theories such as the vicious cycle of poverty, dependency theory, and the role of human capital formation in economic development.
Course Code : **GRY2C07**	
Course Title : **RESEARCH METHODS IN GEOGRAPHY**	
CO 1	Understand the nature, scope, and content of geographical research, including ethical considerations and philosophical foundations in geography, and the major research paradigms.
CO 2	Develop skills in identifying and defining a research problem, conducting a literature review, and formulating a research hypothesis while understanding the purpose and methodologies for data collection in geographical research.
CO 3	Demonstrate the ability to design and write a research proposal, create research schedules, and select appropriate primary and secondary data sources for various qualitative and quantitative research methods in geography.
CO 4	Apply various data analysis techniques including descriptive and explanatory statistics, geostatistics, and qualitative data analysis tools, and interpret results using geographic information systems (GIS) and remotely sensed imagery.
CO 5	Develop proficiency in writing research papers, articles, and dissertations, and effectively present research findings both in written and oral formats, adhering to academic standards, intellectual property rights, and research ethics.
Course Code : **GRY2C08**	
Course Title : **Population Geography**	

CO 1	Evaluate the evolution, scope, and contemporary research trends in population geography, including its relevance to India, and critically assess diverse data sources and their reliability for population analysis
CO 2	Analyze the determinants of population distribution and global patterns, interpret key migration theories and models (Ravenstein, Reilly, Stewart, Swift, Stouffer, Lee), and explain the significance of age-sex structure, literacy, urbanization, and occupation in shaping population characteristics.
CO 3	Relate the complex interrelationships between population and resources, critically evaluate classical and contemporary population theories (Malthus, Ricardo, Marx, Demographic Transition), and apply the concept of population-resource regions to specific contexts.
CO 4	Evaluate spatial and temporal population trends in India, including distribution, density, and growth, and formulate sustainable development strategies that address challenges posed by unbalanced population distribution.
CO 5	Critically examine population problems and prospects in developed and developing nations, evaluate the effectiveness of population policies and strategies, including those related to immigration and refugees, and propose solutions for promoting inclusive growth for gender, transgender individuals, and differently-abled populations, in line with the Sustainable Development Goals.
SEMESTER 3	
Course Code : **GRY3C09**	
Course Title : **PRINCIPLES OF REMOTE SENSING**	
CO 1	Understand and explain the basic principles of remote sensing, including energy interactions, spectral response, and the effects of atmospheric influences on sensor data.
CO 2	Analyse the principles of photogrammetry and interpret aerial photographs and imagery using the geometric and radiometric concepts of photogrammetry
CO 3	Evaluate and apply satellite remote sensing techniques for different sensor systems, including multispectral imaging, thermal infrared remote sensing, and microwave remote sensing.
CO 4	Synthesize digital image processing techniques, including geometric and radiometric corrections, image enhancement, classification, and multi-image manipulation, to extract meaningful information from remote sensing data.
CO 5	Apply remote sensing technologies in practical applications such as vegetation mapping, agriculture, urban planning, and disaster management, and assess their impact.

Course Code : **GRY3C10**	
Course Title : **URBAN GEOGRAPHY**	
CO 1	Understand and describe the historical development and evolution of urbanization, including key concepts, definitions, and terminologies related to urbanization, with a focus on India and global urbanization trends.
CO 2	Analyze and classify urban areas based on physical, functional, socio-cultural, and historical characteristics, and apply various urban land use models such as Burgess, Sector, and Multiple Nuclei Models.
CO 3	Examine and evaluate settlement systems, including primate city and central place theories, and apply models like the Rank-Size Rule and measure centrality in urban systems.
CO 4	Synthesize urban planning concepts and evaluate the role of urban development, policies, and master planning in India, including post-JnNURM developments and city-region relationships.
CO 5	Assess the urban governance structures in India, explore the challenges of urbanization, and evaluate solutions to urban problems such as pollution, slums, housing, unemployment, and climate change.
Course Code : **GRY3E01.1**	
Course Title : **GEOGRAPHY OF HEALTH**	
CO 1	Understand and explain the fundamental concepts, scope, objectives, and growth of Health Geography, with an emphasis on the methods and techniques, particularly Geographic Information Systems
CO 2	Analyse and evaluate the human ecology of disease, including the transmission and creation of infectious diseases, and the impact of nutrition, mineral elements, and ecological aspects on human health.
CO 3	Apply the landscape epidemiology approach to study regional variations in transmissible disease systems, and assess the cultural and ecological dimensions of water-based and tick-borne diseases.
CO 4	Examine the influences of climate and weather on human health, focusing on biometeorological impacts, seasonal patterns of death and birth, and the relationship between climate change and health.
CO 5	Evaluate the political ecology of non-communicable diseases, including the roles of poverty, race, and gender in health risks, and apply disease diffusion models to study the geographical spread of diseases like AIDS and influenza.
SEMESTER 4	
Course Code : **GRY4C11**	

Course Title : **ENVIRONMENTAL GEOGRAPHY**	
CO 1	Critically evaluate the multifaceted concepts of environment, environmental thought, and the historical evolution of human-environment interactions, including ecological adaptations and recent conceptual shifts.
CO 2	Analyze the complex interrelationships within ecosystems, assess the diverse impacts of human activities on the biosphere, encompassing pollution (water, soil, air), and propose sustainable solutions for mitigating these impacts in agricultural, industrial, and human settlement contexts.
CO 3	Assess global environmental issues, including all eco-crisis, and evaluate the effectiveness of international environmental laws, agreements and protocols in addressing these challenges, including the role of the UN and other multinational authorities.
CO 4	Formulate strategies for environmental management and planning, including ecosystem management, EIA, environmental mapping using remote sensing and GIS, and critically appraise national environmental policies, regulatory frameworks (Green Tribunal), and pollution control acts (Water, Air, Environment Protection) in the context of India.
CO 5	Evaluate the role of environmental movements in India, particularly concerning the Himalayas and Western Ghats, and formulate strategies for biodiversity protection and promoting environmental sustainability through recent concepts like environmental justice, ecological footprint, green economy, and relevant schemes.
Course Code : **GRY4C12**	
Course Title : **AGRICULTURAL GEOGRAPHY**	
CO 1	Demonstrate a comprehensive understanding of the theoretical foundations of agricultural geography, including its historical development, key concepts, approaches, and the major agricultural hearths and their diffusion.
CO 2	Analyze and evaluate the applicability of various models and theories, such as the Von Thünen model, and agricultural development theories by Schultz, Mellor, Boserup, Lewis, and Ranis, in explaining agricultural patterns and development.
CO 3	Apply appropriate techniques to measure, classify, and regionalize agricultural land use, assess crop suitability, and understand the contributions of significant figures like L.D. Stamp, M. Shafi, and D. Whittlesey
CO 4	Critically assess contemporary strategies and issues in agriculture, including sustainable practices, farm management, agricultural marketing, the impact of global trade agreements (GATT, WTO), and the relationship between agriculture, economic development, and the environment.

CO 5	Evaluate the specific challenges and prospects of Indian agriculture in the context of its agro-climatic and agro-ecological diversity, land reforms, five-year plans, Green Revolution, and new agricultural policies.
Course Code : **GRY4E03.2**	
Course Title : **GEOGRAPHY OF WATER RESOURCES**	
CO 1	Explain the fundamental concepts of hydrology, including the hydrological cycle, water balance, precipitation types and measurement, and the processes of evaporation, infiltration, and streamflow generation.
CO 2	Analyze the characteristics of surface and groundwater systems, including drainage basins, aquifers, Darcy's Law, and the principles of water quality, encompassing physical, chemical, and biological parameters.
CO 3	Evaluate water quality standards, various types of water pollution (agricultural, domestic, industrial), and saline water intrusion, while understanding the concept and practice of water management.
CO 4	Analyze traditional water harvesting methods, modern water management practices (surface and groundwater), rainwater harvesting techniques, artificial groundwater recharge, and the significance of wetlands and micro-watershed management.
CO 5	Criticize contemporary issues related to water resources, including water conflicts (Cauvery, Krishna, etc.), water policy of India, water footprint mapping, wastewater reuse, and the interplay between water, climate change, and sustainable development.

NAME OF THE PROGRAMME : M.Sc. PSYCHOLOGY

PROGRAMME OUTCOMES:

PO 1	Advanced Problem-Solving Skills
PO 2	Mastery of Advanced Research Methods
PO 3	Professional Development and Career Readiness
PO 4	Leadership and Collaborative Abilities:
PO 5	Community Engagement and Service

PROGRAMME SPECIFIC OUTCOMES:

PSO1	Develop an in-depth and comprehensive understanding of contemporary psychological theories, principles, clinical skills and research methodologies to apply it in diverse settings.
PSO2	Demonstrate ethical, legal, and culturally sensitive psychological practice, guided by Constitutional and moral values to promote social responsibility and integrity.
PSO3	Conduct empirical research with a scientific and critical approach to contribute to psychological knowledge and evidence-based practice.
PSO4	Develop leadership, communication, and collaboration skills to work effectively in multidisciplinary teams across academic, clinical, and organizational settings.
PSO5	Promote mental health awareness, environmental sustainability, and community well-being through outreach, policy advocacy, and intervention programs.

COURSE OUTCOMES

CORE COURSES

SEMESTER 1

Course Code : **PSY 1C 01**

Course Title : COGNITIVE PSYCHOLOGY – I

CO 1	Students will be able to explain the fundamental concepts, historical antecedents, and various theoretical perspectives of cognitive psychology, and apply different cognitive research methodologies to investigate human

	cognition in diverse settings.
CO 2	Students will be able to analyze different theoretical approaches to perception and models of attention, and evaluate their applications in understanding cognitive processes, considering ethical and cultural sensitivities.
CO 3	Students will be able to apply classical and operant conditioning principles, cognitive learning theories, and behaviorist approaches in real-life scenarios, and design intervention strategies to enhance learning and mental health awareness.
CO 4	Students will be able to demonstrate leadership and teamwork in multidisciplinary projects, develop communication strategies for promoting cognitive and behavioral research findings, and evaluate the impact of psychological interventions on community well-being and environmental sustainability.
Course Code : **PSY 1C 03**	
Course Title : **PERSONALITY AND PERSONAL GROWTH**	
CO 1	Students will be able to understand core theories and concepts.
CO 2	Students will be able to Evaluate theories with ethical considerations.
CO 3	Students will be able to apply assessment techniques with empirical and ethical sensitivity.
CO 4	Students will be able to Compare different assessment and research applications.
CO 5	Students will be able to Understand personal growth and its applications in mental health and counselling.
Course Code : **PSY 1C 02**	
Course Title : RESEARCH METHODOLOGY	
CO 1	Students will be able to demonstrate a comprehensive understanding of the scientific research process, including the identification of research problems, formulation of hypotheses, and selection of appropriate research methods (experimental, non-experimental, qualitative, quantitative).
CO 2	Students will be able to apply ethical principles in the design and conduct of psychological research, ensuring integrity, empathy, and adherence to ethical guidelines throughout the research process.
CO 3	Students will be able to synthesize and analyze existing literature in psychological research, utilizing various sources and methods (index cards, databases) to inform research questions and methodologies.

CO 4	Students will be able to design, implement, and analyze experimental and quasi-experimental research, applying appropriate data collection techniques (interviews, questionnaires, psychological tests) and using statistical analysis methods (parametric and non-parametric).
CO 5	Students will be able to prepare research reports and proposals with accurate structure, formatting, and data presentation, using computer applications for data analysis, simulation, and experiment documentation.
Course Code : **PSY 1C 04**	
Course Title : PHYSIOLOGICAL PSYCHOLOGY	
CO 1	**Explain the neurobiological and biological basis of behavior** by identifying key structures and functions of the central and peripheral nervous systems, hormonal influences, and neural transmission processes.
CO 2	**Analyze sensory processing mechanisms** by evaluating receptor properties, sensory pathways, and theories of vision, audition, and pain perception.
CO 3	**Evaluate the physiological correlates of emotion and motivation** by assessing the role of the limbic system, autonomic responses, endocrine factors, and neural mechanisms in emotional and motivated behaviors.
CO 4	**Examine the physiological basis of learning and memory** by investigating the roles of the cortex, hippocampus, synaptic connections, and brain damage in cognitive functions.
CO 5	**Apply neuropsychological testing techniques** to assess functional anomalies related to cognitive and behavioral deficits, demonstrating the ability to interpret results in a clinical or research setting.
CO 6	**Collaborate with a multidisciplinary team to design behavioral interventions** by integrating knowledge of neural mechanisms, physiological functions, and cognitive processes in real-world psychological and clinical applications.
SEMESTER 2	
Course Code : **PSY 2C 05**	
Course Title : PSYCHOPATHOLOGY	
CO 1	Students will be able to identify and classify various maladaptive behaviors based on categorical, dimensional, and hierarchical models, and assess abnormal behaviors using methods such as case history, mental status

	examination, and psychometric tests.
CO 2	Students will be able to analyze the causal factors of maladaptive behaviors, distinguishing between biological and psychosocial factors, and evaluate their impact on mental health.
CO 3	Students will be able to assess and differentiate various patterns of maladaptive behaviors, including anxiety, mood, stress, personality disorders, substance use, and sexual dysfunctions, using appropriate diagnostic frameworks (ICD-10, DSM-IV).
CO 4	Students will be able to explain and evaluate brain disorders and cognitive impairments, including acute and chronic organic disorders, and their effects on adult behavior and functioning.
CO 5	Students will be able to understand and assess disorders in childhood and adolescence, such as emotional disorders, mental retardation, and specific learning disorders, and plan appropriate interventions for child and adolescent mental health.
Course Code : **PSY 2C 06**	
Course Title : COUNSELLING PSYCHOLOGY	
CO 1	Define the fundamental concepts of counseling, including its goals, historical development, and counseling processes.
CO 2	Demonstrate relaxation techniques used in counseling, including Jacobson's Progressive Muscular Relaxation (JPMR), yoga-based relaxation, and biofeedback methods.
CO 3	Compare different theoretical approaches to counseling, including affective, cognitive,and behavioral methods.
CO 4	Examine counseling applications across various settings, such as family, education,vocational, hospital, and community settings.
CO 5	Develop strategies for addressing special counseling problems like human sexuality,divorce, drug abuse, and crisis intervention.
Course Code : **PSY 2C 07**	
Course Title : COGNITIVE PSYCHOLOGY – II	
CO 1	Students will be able to **Explain** the fundamental models of memory, problem-solving, decision-making, intelligence, and cognitive development.
CO 2	Students will be able to **Analyze** the relationship between cognition, intelligence, and creativity, and assess their applications in artificial intelligence and real-world settings.

CO 3	Students will be able to **Apply** cognitive principles to understand the impact of emotions and consciousness on attention, memory, and decision-making.
CO 4	Students will be able to **Develop** interventions to mitigate cognitive biases associated with anxiety and depression, promoting mental health awareness and well-being
Course Code : **PSY 2C 08**	
Course Title : APPLIED PSYCHOLOGY	
	Evaluate the role of professional psychology fields such as educational, forensic, health, and rehabilitation psychology by assessing their key theories, interventions, and ethical considerations.
	Analyze psychological principles in specialized domains like sports, environmental, career, and vocational psychology by examining real-world applications and emerging trends
	Apply psychological concepts in community settings by designing interventions that promote individual and family wellness, social justice, and empowerment.
	Critically assess cross-cultural influences on psychological practices by exploring cultural differences, peace psychology concepts, and conflict resolution strategies.
	Develop skills to work as a professional psychologist in diverse fields such as education, sports, media, health, and organizations by integrating theoretical knowledge into practical applications.
SEMESTER 3	
Course Code : **PSY 3C 09**	
Course Title : ADVANCED SOCIAL PSYCHOLOGY	
CO 1	Students will be able to describe the history, theories, research methods, and evaluation techniques in applied social psychology.
CO 2	Students will be able to analyze the role of social psychology in various real-world contexts, including health, education, organizations, media, sports, and the criminal justice system.
CO 3	Students will be able to evaluate the influence of social psychological principles on personal relationships, cognitive biases, student-teacher interactions, and well-being
CO 4	Students will be able to develop evidence-based social interventions considering ethical, cultural, and policy-related aspects.

CO 5	Students will be able to demonstrate leadership and collaborative skills in implementing social psychological strategies to influence social policy and community well-being.
Course Code : PSY 3E I	
Course Title : CLINICAL PSYCHOLOGY	
CO 1	**Analyze the historical evolution and philosophical foundations of clinical psychology** by examining key scientific methods and measurement techniques used in clinical research
CO 2	**Critically examine the theoretical models applied in clinical psychology** by comparing and contrasting psychodynamic, behavioristic, phenomenological, interpersonal, and biological approaches to mental health.
CO 3	**Evaluate the role of clinical psychologists in interdisciplinary settings** by assessing ethical considerations, professional responsibilities, and collaboration with other healthcare professionals.
CO 4	**Demonstrate competency in clinical diagnostic methods** by applying standardized tools such as interviews, personality inventories, intelligence tests, Rorschach Inkblot Test, and Thematic Apperception Test (TAT) to differentiate psychological disorders.
CO 5	To understand about the development and clinical picture of various psychological disorder.
CO 6	To familiarize the various concepts, assessment tools and classification techniques of Clinical psychology.
SEMESTER 4	
Course Code : **PSY 4C 11**	
Course Title : CURRENT TRENDS IN PSYCHOLOGY	
CO 1	Apply addiction psychology theories to assess causes, maintenance, and counseling strategies for addiction.
CO 2	Critically analyze societal development through psychological perspectives, including colonial and global influences.
CO 3	Examine human factors, ergonomics, and psychological treatment approaches in cases of terrorism.
CO 4	Compare and critique mainstream and critical perspectives in psychology, including industrial, abnormal, and clinical psychology.

CO 5	Assess psychometric tools for cognition, intelligence, personality, and their applications in psychology and law.
Course Code : **PSY 4C 12**	
Course Title : **SELF DEVELOPMENT TECHNIQUES**	
CO 1	Explain the theoretical foundations and practical applications of Eastern and Western psychological techniques for holistic health and well-being.
CO 2	Demonstrate proficiency in various meditation techniques such as Transcendental Meditation and Yogic Meditation to enhance relaxation and mindfulness.
CO 3	Analyze different relaxation methods including Yoga Nidra, Deep Breathing, and Progressive Muscle Relaxation (Jacobson's Technique) to understand their physiological and psychological benefits.
CO 4	Evaluate the effectiveness of Biofeedback training by utilizing EEG, EMG, and GSR techniques to regulate physiological responses for stress reduction.
CO 5	Develop self-awareness and interpersonal skills by practicing social skill development, stress management techniques, and counselling skills in personal and professional settings.
CO 6	Integrate relaxation, meditation, and biofeedback techniques into therapeutic and self-development practices to enhance psychological well-being and performance.
Course Code : **PSY 4E II**	
Course Title : **PSYCHOTHERAPEUTICS – 1**	
CO 1	Students will be able to explain the fundamental principles of psychotherapy, including factors promoting change, therapeutic perspectives, and research evaluation methods.
CO 2	Students will be able to analyze the core concepts, goals, and processes of psychoanalytic therapy, evaluating its relevance in contemporary practice.
CO 3	Students will be able to compare and contrast various humanistic-existential therapies, including Client-Centered Therapy, Logotherapy, Gestalt Therapy, and Rational Emotive Therapy, assessing their practical applications.
CO 4	Students will be able to demonstrate ethical and culturally sensitive approaches in the application of family therapy, group therapy, and psychodrama to address interpersonal challenges.
	Students will be able to develop evidence-based intervention plans by integrating different psychotherapeutic approaches for individuals and groups,

CO 5	ensuring professional integrity and social responsibility.
Course Code : **PSY 4E III**	
Course Title : **PSYCHOTHERAPEUTICS – II**	
CO 1	Apply relaxation-based techniques, biofeedback, and yoga-based methods in clinical settings.
CO 2	Apply relaxation-based techniques, biofeedback, and yoga-based methods in clinical settings.
CO 3	Examine the theoretical basis and techniques of Cognitive Behavioral Therapy (CBT), including Rational Emotive Therapy and Beck's CBT.
CO 4	Assess the effectiveness of cognitive therapy approaches in psychosis and self-control techniques.
CO 5	Critically evaluate the current practices, future trends, and ethical issues in behavior modification and therapy.

NAME OF THE PROGRAMME : MCOM FINANCE

PROGRAMME OUTCOMES:	
PO 1	Advanced Problem-Solving Skills
PO 2	Mastery of Advanced Research Methods
PO 3	Professional Development and Career Readiness
PO 4	Leadership and Collaborative Abilities:
PO 5	Community Engagement and Service
PROGRAMME SPECIFIC OUTCOMES:	
PSO1	To acquaint a student with conventional as well as contemporary areas in discipline of commerce.
PSO2	To provide in-depth understanding of all core areas specifically advanced management, security market operations, Business Environment, Research Methodology and Tax planning.
PSO3	To train the student to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to financial management of a business.
PSO4	The candidate can acquire the qualification of NET/JRF and do M.Phil/Ph.D. and can become Assistant Professor in Govt. College/ Govt. Aided Colleges/Self Financing Colleges or Universities.
PSO5	Can commence Business Incubation centers and can develop new platforms to connect the entrepreneurs and the general public.
COURSE OUTCOMES	
CORE COURSES	
SEMESTER 1	
Course Code : MCM1C01	
Course Title : BUSINESS ENVIRONMENT AND POLICY	
CO 1	Helps to gain understanding market dynamics, government policies, and global trends.

CO 2	To make students able to assess potential risks and develop strategies to mitigate them.
CO 3	Helps to gain ability to analyze and assess the impact of various environmental factors on business success.
CO 4	Make students competent in Strategic Decision-Making related to Business
CO 5	To apply the factors and develop a business model in accordance to Business Environment.
Course Code : MCM1C02	
Course Title : CORPORATE GOVERNANCE AND BUSINESS ETHICS	
CO 1	Define key terms and concepts related to corporate governance and business ethics.
CO 2	List the major stakeholders in corporate governance and their respective evolution
CO 3	Explain the evolution and significance of corporate governance principles.
CO 4	Differentiate between various corporate governance theories and models.
CO 5	To analyze the impact of corporate governance failures on stakeholders and organizational performance
Course Code : MCM1C03	
Course Title : QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS	
CO 1	Students will be able to define and explain fundamental quantitative concepts and techniques, including descriptive statistics, probability distributions, and hypothesis testing.
CO 2	Students will be able to apply appropriate quantitative methods, such as linear programming, regression analysis, and decision tree analysis, to solve business problems in various functional areas like finance, marketing, and operations.
CO 3	Students will be able to analyse complex business scenarios and identify the relevant quantitative techniques needed for effective decision-making. They will also be able to interpret the results of quantitative analyses and explain their implications for business strategy.
CO 4	Students will be able to evaluate the strengths and weaknesses of different quantitative methods and justify their selection of a particular technique for a given business problem. They will also be able to critique the assumptions and

	limitations of quantitative models.
CO 5	Students will be able to develop and implement a comprehensive quantitative analysis plan to address a real-world business challenge, including data collection, model building, and interpretation of results.
Course Code : MCM1C04	
Course Title : MANAGEMENT THEORY AND ORGANISATIONAL BEHAVIOUR	
CO 1	Recall fundamental management theories and concepts related to organizational behaviour.
CO 2	Explain the significance of different management approaches and organizational behaviour models.
CO 3	To Summarize the historical development and evolution of management thought.
CO 4	To analyse the relationship between organizational structure, culture, and individual behaviour.
CO 5	Evaluate the effectiveness of various leadership styles and motivational techniques in organizational settings
Course Code : MCM1C05	
Course Title : ADVANCED MANAGEMENT ACCOUNTING	
CO 1	Analyze and interpret management accounting data to inform business decisions and drive performance.
CO 2	Develop and implement management accounting systems that support business strategy and objectives.
CO 3	Evaluate and manage costs using techniques such as cost-volume-profit analysis, break-even analysis, and variance analysis.
CO 4	Develop and implement performance measurement systems that align with business strategy and objectives and implement sustainability reporting that aligns with business strategy and objectives.
CO 5	Evaluate and manage risk using techniques such as sensitivity analysis, scenario planning, and risk assessment.
SEMESTER 2	
Course Code : MCM2C06	
Course Title : ADVANCED CORPORATE CCOUNTING	

CO 1	Students will be able to define and explain key accounting concepts and standards related to consolidated financial statements, mergers and acquisitions, foreign currency transactions, and other complex corporate accounting topics.
CO 2	Students will be able to apply relevant accounting standards and procedures to prepare consolidated financial statements, account for business combinations, translate foreign currency transactions, and address other complex accounting issues in practical scenarios.
CO 3	Students will be able to analyse complex corporate financial transactions and identify the appropriate accounting treatment under various accounting standards (e.g., IFRS, US GAAP). They will also be able to interpret the financial implications of these transactions for the reporting entity.
CO 4	Students will be able to evaluate different accounting methods and justify their selection of a particular method for a given corporate transaction, considering the ethical implications and the impact on financial reporting. They will also be able to critique the accounting policies and disclosures of real-world companies.
CO 5	Students will be able to develop and present a comprehensive financial reporting and analysis plan for a complex corporate scenario, including the application of relevant accounting standards, the preparation of pro forma financial statements, and the interpretation of key financial metrics.
Course Code : MCM2C07	
Course Title : ADVANCED STRATEGIC MANAGEMENT	
CO 1	Students will be able to define and explain key strategic management concepts, frameworks, and models, including SWOT analysis, Porter's Five Forces, the Resource-Based View, and competitive strategies.
CO 2	Students will be able to interpret and summarize complex industry analyses and competitive landscapes, identifying key trends, opportunities, and threats facing organizations.
CO 3	Students will be able to analyze internal strengths and weaknesses of organizations, identify core competencies and competitive advantages, and assess the alignment of resources and capabilities with strategic goals
CO 4	Students will be able to analyze the effectiveness of different strategic options and evaluate their potential impact on organizational performance, considering various stakeholder interests and ethical implications
CO 5	Students will be able to analyze and evaluate the strategic decision-making processes within organizations, identify potential biases and cognitive

	limitations, and recommend improvements to enhance strategic decision quality.
Course Code : MCM2C08	
Course Title : ADVANCED STRATEGIC MANAGEMENT	
CO 1	Apply techniques such as activity-based costing, target costing, and life-cycle costing to real-world scenarios.
CO 2	Analyze and interpret cost accounting data to inform business decisions and drive performance.
CO 3	Develop and implement cost accounting systems that support business strategy and objectives.
CO 4	Evaluate and manage costs using techniques such as cost-volume-profit analysis, break-even analysis, and variance analysis.
CO 5	Apply cost accounting principles to strategic decision-making, including capital budgeting, investment appraisal, and risk management.
CO 6	Evaluate and manage risk using techniques such as sensitivity analysis, scenario planning, and risk assessment and implement cost reduction strategies that align with business strategy and objectives.
Course Code : MCM2C09	
Course Title : INTERNATIONAL BUSINESS	
CO 1	Helps to understand about global financial systems.
CO 2	Will develop the ability to create strategies for businesses to enter and compete in international markets
CO 3	To learn how to conduct market research, analyze foreign markets, and choose appropriate entry modes
CO 4	Encourages students to set up business ideas suitable for International Market.
CO 5	To understand different global trade agreement and trade opportunities.
Course Code : MCM2C10	
Course Title : MANAGEMENT SCIENCE	
CO 1	Students will be able to define and explain fundamental concepts and techniques in operations research, including linear programming, network optimization, queuing theory, and simulation.

CO 2	Students will be able to apply appropriate operations research models and techniques to solve practical business problems in areas such as production planning, inventory management, transportation, and resource allocation.
CO 3	Students will be able to analyze complex decision-making scenarios and formulate appropriate operations research models to represent these situations. They will also be able to interpret the results of model solutions and explain their implications for managerial decision-making.
CO 4	Students will be able to evaluate the strengths and limitations of different operations research models and justify their selection of a particular model for a given problem. They will also be able to critique the assumptions and limitations of the models and the sensitivity of the solutions to changes in input parameters.
CO 5	Students will be able to develop and implement a comprehensive operations research study to address a real-world business challenge, including problem definition, data collection, model building, solution implementation, and sensitivity analysis.
SEMESTER 3	
Course Code : MCM3C11	
Course Title : FINANCIAL MANGEMENT	
CO 1	Interpret and analyze financial statements to make informed decisions.
CO 2	Apply financial management concepts, including time value of money, risk and return, and capital budgeting.
CO 3	Evaluate investment opportunities using various criteria, including risk, return, and liquidity and to assess risk and return trade-offs in financial decision-making.
CO 4	Develop comprehensive financial plans, including budgeting, forecasting, and financial modeling and thereby helps to valuate financial performance using various metrics, including profitability, liquidity, and solvency.
CO 5	Develop strategic financial decisions, including capital structure, dividend policy, and mergers and acquisitions.
Course Code : MCM3C12	
Course Title : INCOME TAX: LAW,PRACTICE AND TAX PLANNING	
CO 1	Calculate taxable income from various sources, including salary, business/profession, house property, investments and other sources after

	applying tax deductions and exemptions under various sections of the Income Tax Act, 1961.
CO 2	Prepare and file income tax returns, including Form ITR-1, ITR-2, and ITR-3.
CO 3	Apply tax laws and regulations, including the Income Tax Act, 1961, and the Income Tax Rules, 1962
CO 4	Evaluate tax risks and opportunities, including tax audits, assessments, and appeals.
CO 5	Develop tax advisory skills to provide guidance on tax planning, compliance, and litigation.
Course Code : MCM3C13	
Course Title : RESEARCH METHODOLOGY	
CO 1	Students will be able to define and explain core research concepts, including research design, sampling methods, data collection techniques, and ethical considerations in research
CO 2	Students will be able to apply appropriate research methods and techniques to develop a research proposal, including formulating research questions, selecting a suitable research design, and choosing appropriate data analysis tools.
CO 3	Students will be able to analyze existing research studies, critically evaluate their methodologies, and identify potential strengths and weaknesses in their research designs, data collection, and data analysis.
CO 4	Students will be able to evaluate the appropriateness of different research methodologies for addressing specific research questions and justify their selection of a particular approach based on the research objectives and the nature of the data. They will also be able to assess the ethical implications of research studies.
CO 5	Students will be able to develop and execute a small-scale research project, from formulating research questions and developing a research design to collecting and analysing data and presenting their findings in a clear and concise manner.
Course Code : MCM3E01	
Course Title : INVESTMENT MANAGEMENT	
CO 1	To develop an understanding of the legal and ethical standards that govern investment.

CO 2	To evaluate different investment opportunities using various techniques.
CO 3	To develop the ability to assess the risk associated with various investments.
CO 4	To develop the practical skills needed to analyze and make decisions regarding investment opportunities
CO 5	To develop an optimum investment strategy.
Course Code : MCM3E02	
Course Title : FINANCIAL MARKETS AND INSTITUTIONS	
CO 1	To gain insight into the different types of financial markets and how they facilitate trade.
CO 2	To explore the regulatory environment governing financial markets and institutions.
CO 3	To analyze the impact of global dynamics in trading of financial instruments
CO 4	To apply the understanding of Financial Markets in developing Business ideas and taking up entrepreneurship.
CO 5	To investigate the impacy of fintech, cryptocurrency and global financial trends in economy.
SEMESTER 4	
Course Code : MCM4C14	
Course Title : FINANCIAL DERIVATIVES AND RISK MANAGEMENT	
CO 1	To gain a solid foundation in the different types of derivatives in financial market.
CO 2	To evaluate different derivatives using various valuation techniques
CO 3	To analyze and calculate risk in derivative investment.
CO 4	To apply theories and build a optimum strategy in derivative investment.
CO 5	To develop an optimum strategy in trading.
Course Code : MCM4C15	
Course Title : INCOME TAX: LAW, PRACTICE AND TAX PLANNING II	
CO 1	A comprehensive understanding of income tax laws, regulations and planning strategies in India

CO 2	Optimize tax liability for AOP/BOI , Firm including minimising tax payments and maximizing tax benefits.
CO 3	Develop tax planning strategies to minimize tax liability and maximize tax savings.
CO 4	Analyze the tax implications of various financial decisions, including investment, borrowing, and employment.
CO 5	Develop tax advisory skills to provide guidance on tax planning, compliance, and litigation.
Course Code : MCM4E03	
Course Title : INTERNATIONAL FINANCE	
CO 1	It helps students to recall fundamental concepts of international finance.
CO 2	Encourages students to illustrate the impact of global events on international financial markets and economies.
CO 3	Makes students efficient to use financial tools to conduct currency risk management for international businesses
CO 4	Helps compare the various international financial systems.
CO 5	Encourages to integrate financial theories and real-world data to create a model for predicting foreign exchange rate movements or analysing the impact of international economic events.
Course Code : MCM4E04	
Course Title : ADVANCED STRATEGIC FINANCIAL MANAGEMENT	
CO 1	Define key concepts and terminologies related to strategic financial management, such as shareholder value creation, economic value added, and financial leverage.
CO 2	Identify various financial strategies and tools used in corporate financial decision-making.
CO 3	Explain the principles and importance of financial strategies aimed at maximizing a firm's market value.
CO 4	Describe the impact of capital structure decisions on shareholder risk and firm valuation.
CO 5	Analyze the effects of financial leverage on a firm's earnings and risk profile.

CO 6	Examine the implications of dividend policy decisions on shareholder value and firm performance
CO 7	To Analyze the various financial positions of the parties involved in corporate restructuring
Course Code : MCM4E03	
Course Title : INTERNATIONAL FINANCE	
CO 1	It helps students to recall fundamental concepts of international finance.
CO 2	Encourages students to illustrate the impact of global events on international financial markets and economies.
CO 3	Makes students efficient to use financial tools to conduct currency risk management for international businesses
CO 4	Helps compare the various international financial systems.
CO 5	Encourages to integrate financial theories and real-world data to create a model for predicting foreign exchange rate movements or analysing the impact of international economic events.
Course Code : MCM4PV01	
Course Title : PROJECT WORK AND COMPREHENSIVE VIVA VOCE	
CO 1	Apply learned concepts in real life and make a self study report on the project