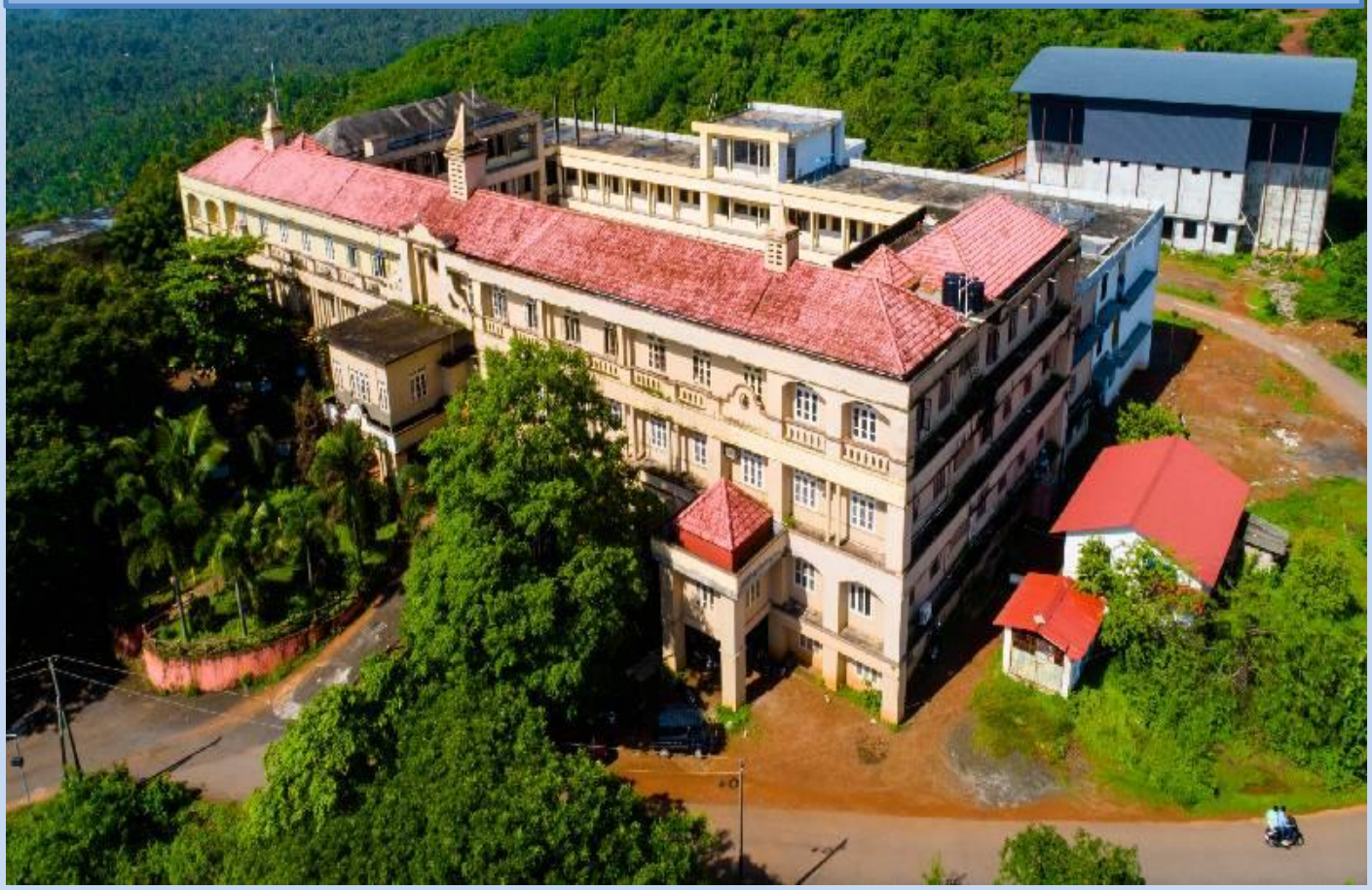
NAM COLLEGE KALLIKKANDY

(Accredited by NAAC with 'B' Grade)

Vidyagiri, P O Kallikkandy, Kannur Dist., PIN 670693



PROGRAMME OUTCOMES,

PROGRAMME SPECIFIC OUTCOMES FOR ALL PROGRAMMES

COURSE OUTCOMES FOR ALL COURSES

(2019 ONWARDS)

Department of Statistics

Complementary Elective Course Outcome

BSc Mathematics and Computer Science

Semester	Couse Code	Course Title	Course Outcome
1	1C01 STA	BASIC STATISTICS	CO1: understand the different types ofdata. CO2: compute various measures of central tendency, measures of variation. CO3: analyze the relationship betweentwo variables. CO4: acquire knowledge in time series data and compute various index numbers.
2	2C02 STA	PROBABILITY THEORY AND RANDOM VARIABLES	CO 1: evaluate the probability of events. CO 2: understand the concept of random variables with examples in real life. CO3: calculate the probability distributionof discrete and continuous random variables. CO 4: understand the change of variable technique.
3	3C03 STA	PROBABILITY DISRIBUTIONS	CO1: compute mathematical expectationof a random variable. CO2: familiarize with different discrete probability distribution associated with real life situations. CO3: understand the characteristics of different continuous distributions. CO4: identify the appropriate probability model that can be used.

4	4C04 STA	STATISTICAL INFERANCE	CO 1: understand the uses of Chebyshev's Inequality and Central Limit Theorem. CO 2: apply various method of estimation CO 3: understand the concept of testing statistical hypotheses and its importancein real life situation CO 4: apply ANOVA

BBA

Programme Outcome

1. To equip the students with requisite knowledge, skills & right attitude necessary to provideeffective leadership in a global environment.
2. To develop competent management professionals with strong ethical values, capable of assuming a pivotal role in various sectors of the Indian Economy & Society, aligned with thenational priorities.
3. To develop proactive thinking so as to perform effectively in the dynamic socio-economicand business ecosystem.
4. To harness entrepreneurial approach and skill sets.

Programme Specific Outcome

Following are the abilities that a BBA Programme professional should have after successfulcompletion of the program.

A graduate will have

i. An ability to apply knowledge, skills and right attitude necessary to provide effectiveleadership in a global environment.

ii. An ability to develop competent management professionals with strong ethical values, capable of assuming a pivotal role in various sectors of the Indian Economy & Society, alignedwith the national priorities.

iii. An ability to develop proactive thinking so as to perform effectively in the dynamic socio-economic and business ecosystem.

iv. An ability to communicate effectively.

COURSE OUTCOME 2018,19,20

COURSE CODE	COURSE NAME	COURSE OUTCOME
1B01 BBA	Principles & Practice of Management	1. To understand the principles and practices of GeneralManagement. 2. To know the process of business management and itsfunctions and 3. To familiarize the students with current managementpractices.
1C01 BBA	Business Statistics	To familiarize the students with the basic Statistical toolsused to Summaries and analyze quantitative information for decision making.
1C01 BBA	Business Economics	1. To expose students to basic micro economic concepts. 2. To apply economic analysis in the formulation ofbusiness policies. 3. To use economic reasoning to problems of business.
2B02 BBA	Business Environment	To give the students an exposure to the dynamics of business environment and enable them to analyse business prioritiesin the changing environmental conditions.
2B03 BBA	Business Communication	1. To understand the concept, process and importance ofcommunication. 2. To gain knowledge of media of communication. 3. To develop skills of effective communication-bothwritten and oral. 4. To help students to acquaint with application of communication skills in the business world
2C03 BBA	Quantitative Techniques for Business Decisions	To familiarize the student with the use of quantitativetechniques in managerial decision making, Also the subject aims at developing analytical thinking and logical reasoning for effective decision making.

3A11/BBA	IT in Business	1. To acquaint with the Information technologyinfrastructure 2. To understand the concept and application ofmanagement information system 3. To understand the scope and key issues involved inmanaging electronic commerce initiatives 4. To enable the optimum utilization of internet
3A12/BBA	Numerical Skills	1. To provide a sound working base in numerical methods
		2. To increase the student's ability to apply propermathematical tools to specific business situation 3. To exposes the students to the study of numerical skills aspowerful tool in scientific computing
3B04BBA	Financial Accounting	The objective of this course is to provide knowledge aboutAccounting Principles and their application in different business situations.
3B05BBA	Operations Management	The objective is to get the students acquainted with thedesign aspects of operations and materials management and todevelop relevant skill in managing the same.
3B06BBA	Managerial skill Development Course(MSDC)	1. To enable the students to understand various budgetproposals and its impact on the business sector 2. To understand the economic scenario of the nation
3C04 BBA	Legal Aspects ofBusiness	The purpose of this course is to acquaint students withvarious laws, forces and regulatory measures governing business operations in India
4A13/BBA	Entrepreneurship Development& Project Management	This course is intended to acquaint the students with the basic theories of Entrepreneurship and Project management and to motivate them to take up Entrepreneurial Activities.
4A14/BBA	Business Ethics andCSR	To give an overview of the ethical aspects of Business andCorporate Social Responsibility

4B07 BBA	Marketing Management	To acquaint the students with the Marketing principles andpractices, and, to understand the process of Marketing in a businessfirm
4B08 BBA	Corporate Accounting	The objective of this course is to help the students to acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing thefinancial statements.
4B09 BBA	Financial Management	To familiarize the students with the fundamental principles of financial management and to equip them with the tools of effectively managing the finance of an enterprise.
4C05 BBA	Business Research Methods	To enable students for acquiring basic knowledge inbusiness Research methods and to develop basic skills in them toconduct survey researches and case studies.
5B11 BBA	Cost Accounting	To acquaint students with methods and techniques of costand management accounting at an advanced field for managerial decision making
5B12 BBA	Human Resource Management	To give a conceptual understanding of human resourcepractices in organizations.
5B13 BBA	Banking TheoryLaw & Practice	To give the students an exposure to the dynamics ofbanking business environment and enable them to analyse business prioritiesin the changing banking industry
5B14 BBA	Organizational Behaviour	To familiarize the students with the basic concepts of the organizational behaviour and to enhance their understandingof the interaction between the individuals and the organizations.
5B15 BBA	Retail management	Understand effective methods and strategies required forretail management. Understand how to utilize resources andtechniques used in retail management.
6B16 BBA	Strategic Management	The course intends to provide a theoretical frame work ofstrategic management and to develop an understanding about thestrategic processes and their impact on a firm

6B17 BBA	Capital Market& Investment Management	To give an overview of the conceptual aspects of CapitalMarket and Investment Management
6B18 BBA	International business	To enlighten the students on International Business Environment, which includes international Financial management, International Marketing and international Currency and to study the impact of globalization on Indian Industry.
6B19 BBA	Event Management	To enable the students to understand the essentials ofplanning an event 2. To study the concept and significance of eventmanagement 3. To expose students to Practical aspects of organizingevents of various forms.
6B20 BBA	Management Accounting	To provide the students an understanding about the managerial use of data, for planning, control and decision making.
6B21 BBA	Placement Training & Project Report	To Practically understand Research Process. To gain experience and confidence in carrying out aresearch To acquire the quality to collect data, analyze and interpret.

SYLLABUS 2019

PAPER CODE	Course Title*	COURSE OUTCOMES
SEMESTER1	Principles and Practices ofManagement	CO 1:Acquaint with the basics of management.
		CO2: Understand the process and functions of management.
		CO3: Familiarize the students with the current management practices.
		Co4: Develops administrative skills
	Statistics for businessdecisions	CO1: Understand the importance and relevance of statistics, primary data, secondary data and the statistical technique as applicable to business
		CO2: Classify, tabulate and represent the statistical data in appropriate manner using statistical methods
		CO3: Analysis trend and seasonality in a time series data
		CO4: Construct index numbers and enable to compare the price movements of commodities over different time periods.
		CO5: Identify the correlation between variables
		C06: Problem solving and fit the regression line which enable todraw conclusion about data distribution.
	Managerial Economics	CO1.Understand basic managerial economic concepts
		CO2.Understands economics and related disciplines and relationships
		CO3. Apply economic analysis in the formulation of businesspolicies
		CO4.Use economic reasoning to problems of business
SEMESTER2	Business Environment	CO 1: Acquire in-depth knowledge about different environment in business climate.
		CO2: Understand the minor and major factors affecting the business in various streams
		CO3: Familiarize the role of socio-cultural factors on development of economy and business.
		CO4: Develop good business policies.
	Quantitative Technique forBusiness Decisions	CO1. Understands concepts of quantitative techniques
		CO2. Develops analytical thinking and logical reasoning foreffective decision making
		CO3. Apply probability theories in real life situations
		CO4. Understands theoretical distributions and hypothesis testing and its applications in live situations
	Entrepreneurship Development	CO 1: Understand different stages of business and create innovative thinkers to take forward new initiatives.
		CO2: Acquaint them with the challenges faced by the entrepreneur
		CO3: Familiarize the students the entrepreneurship opportunities available in the society.

		CO4: Develop the motivation to enhance entrepreneurialcompetency.
SEMESTER3	Numerical skills	CO1: Understands accounting concepts and principles
		CO2: Apply knowledge regarding concepts in the preparation of

		final accounts of sole trader
		CO3: Understands the basic concepts of company, shares and share capital
		CO4: Demonstrates skills in preparation of final accounts of companies
	Personality developmentand communication skills	CO 1: Understand the 'self' through analysis of one's own strengths, weaknesses, opportunities and threats to face thechallenging and competitive world.
		CO2: Set new goals specific, measurable, achievable, realisableand time-bounded to reshape the personality and identify the shortcomings to be corrected.
		CO3: Develop inter personal skills and problem solving skills.
		CO4: Understand the role of body language in effectivecommunication.
		CO5: Critically evaluate the need for stress management and experience the essence of different techniques in reducing stress.
		CO6: Perform effectively the assigned work to the fullest satisfaction; with utmost concentration and self motivation to achieve success in near future
	Financial Accounting	CO1: Understands accounting concepts and principles
		CO2: Apply knowledge regarding concepts in the preparation of final accounts of sole trader
		CO3: Understands the basic concepts of company, shares and share capital
		CO4: Demonstrates skills in preparation of final accounts of companies
	Marketing Management	CO 1.Develop knowledge on the concept modern marketing, marketing environment, marketing mix, market segmentationand target marketing.
		CO 2. Enhance knowledge on product decision, product mix, product life cycle, pricing strategies and price discrimination
		CO 3. Apply the concept of market promotion, market promotion mix and sales promotion techniques in real business situations.
		CO 4. Understand the new market realities, direct marketing,online marketing and customer relationship marketing.
		CO 5. Identify the key characteristics of customer relationship marketing and common draw back.
		CO 6. Develop idea on branding and strategies of branding
	Legal Aspects of Business	CO 7. Acquire skill in preparing advertisement copy very effectively.
		CO 1. Understand the conditions and rules that are applicable toa contract and the importance of law in business.

		CO 2. Identify the important and relevant documents needed for registering Indian companies.
		CO 3. Awareness about the latest amendments in the Indian Companies Act
		CO 4. Develop knowledge on the Sale of Goods Act, GST, the application of CGST, SGCT and its challenges and opportunities.
SEMESTER 4	Human Resource Management	CO 5. Apply the knowledge on consumer protection Act, rights of consumer and dispute redressal agencies in real life situations.

		CO1:understand basic concept and principles of Human ResourceManagement.
		CO2: sensitize to the training process and methods.
		CO3: equip with the importance of the performance management system in enhancing employee performance.
	Financial Management	CO 1.Understand the concept and objective of financial management
		CO 2. Develop the ability to select the feasible and viable investment proposal
		CO 3. Apply decision making tools in organisational context
		CO 4. Ability to assess the risk and return of investment projects
	Operations management	CO 1:Understand the transformation system.
		CO2:Identify the components involved in designing effectiveoperations system.
		CO3:Understand the meaning and importance of managingquality.
		CO4:Understand the meaning and importance of productivity andways to improve productivity.
		CO5:Understand the decisions and process of operations management in business firms.
	IT Tools for business	CO 1: Understand the working on word, PowerPoint, Excel etc.
		CO2: Develop basic computer awareness for letter drafting, Slidemaking, Payroll preparation
		CO3: Understand the various shortcuts for faster functioning on the computer system
	Environmental studies	CO1.Acquire knowledge about environment and enable to contribute towards maintaining and improving the quality of the environment.
		CO2. Understand the importance of protecting the environmentand effect of environmental hazards
		CO3. Analysis the ecosystem and the bio diversity nature of our country
		CO4. Apply the awareness to point our Hot -spot of bio diversityin India and its conservation
		CO5.Identify the effect of environmental Degradation and therole of Government in protecting the environment
		CO6. Formulate some action plan to engage in activities forpreventing environmental degradation.
SEMESTER5	Business Research Methods	CO 1. Acquire basic concepts of research and its types
		CO 2. Gain insight and acquire the ability to apply different research designs
		CO 3. Acquire skill of data processing in terms of tabulation and classification
		CO4.Generate the ability to write research reports based on approved formats.

	Accounting for management	CO 1.Understand the concepts of cost and management accounting
		CO 2.Prepare cost sheet and budgets of an organisation
		CO 3. Analyse financial statements of corporate organisations

		using accounting ratios
		CO4. Apply the concepts of marginal costing and standard costing in decision making
SEMESTER6	OrganisationBehaviour	CO1.Understand concepts, theories and techniques in the field ofhuman behavior at individual, group and organization level.
		CO 2. Understand personality determinants within personal and organizational context.
		CO3. Understand concepts of learning and motivation and its context in organizational setting.
		CO4. Identify the role and relevance of group dynamics in organizational management
	Banking Theory and Practice	CO1. Acquire knowledge about basics of banking
		CO2. Understands the law and practices of banking
		CO3. Understands the various banking terminologies
		CO4. Acquire knowledge of modern banking practices

COPUTER SCIENCE

B.Sc COMPUTER SCIENCE	
PROGRAMME OUTCOME (PO)	**PO 1. Critical Thinking:** 1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts, actions and interventions. 1.2. Develop the ability to chart out a progressive direction for actions and interventions by learning to recognize the presence of hegemonic ideology within certain dominant notions. 1.3. Develop self-critical abilities and also the ability to view positions, problems and social issues from plural perspectives.
	PO 2. Effective Citizenship: 2.1. Learn to participate in nation building by adhering to the principles of sovereignty of the nation, socialism, secularism, democracy and the values that guide a republic. 2.2. Develop and practice gender sensitive attitudes, environmental awareness, the ability to understan and resist various kinds of discriminations and empathetic social awareness about various kinds of marginalisation. 2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post-colonial society.
	PO 3. Effective Communication:

	3.1. Acquire the ability to speak, write, read and listen clearly in person and through electronic media in both English and in one Modern Indian Language.

	3.2. Learn to articulate analysis, synthesis, and evaluation of situations and themes in a well-informed manner. 3.3 Generate hypothesis and articulate assent or dissent by employing both reason and creative thinking.	
	PO 4.Interdisciplinarity:	
	4.1. Perceive knowledge as an organic comprehensive, interrelated and integrated faculty of the human mind. 4.2. Understand the issues of environmental contexts and sustainable development as a basic interdisciplinary concern of all disciplines. 4.3.Develop aesthetic, social, humanistic and artistic sensibilities for problem solving and evolving a comprehensive perspective.	
PROGRAMME SPECIFIC OUTCOMES (PSO)	PSO1	Understand the concepts of Computer Science and Applications.
	PSO2	Understand the concepts of System Software and Application Software.
	PSO3	Understand the concepts of Algorithms and Programming.
	PSO4	Understand the concepts of Computer Networks and Operating Systems
	PSO5	Design, develop, implement and test software systems to meet the given specifications, following the principles of Software Engineering.

Semester	**Course Code**	**Course title**	**Course outcome**
1	**1B01CSC**	**CORE COURSE – I : 1B01CSC- INTRODUCTION TO C PROGRAMMING**	**CO1:** Aware about basics of programming. **CO2:** Capable to analyze the problem and design algorithm and flowchart. **CO3:** Familiar the basics of high-level language – C. **CO4:** Able to develop efficient and error free programs in C.
2	**2B02CSC**	**CORE COURSE - II : 2B02CSC - ADVANCED C PROGRAMMING**	**CO1:** Familiar with advanced concepts of C program. **CO2:** Capable to work with user defined as well as library functions. **CO3:** Skilled to solve more complex problems. **CO4:** Able to develop C programs using structure, union, pointers and files.

2	**2B03CSC**	**CORE COURSE III :2B03CSC - ADVANCED C PROGRAMMING - LAB**	
3	**3A11CSC**	**GENERAL AWARENESS COURSE I :3A11CSC - PROGRAMMING IN C++**	**CO1:** Describe the Object-Oriented Paradigm **CO2:** Understand dynamic memory management techniques **CO3:** Analyze a problem and construct a C++ program that solves it **CO4:** Discover errors in a C++ program and describe how to fix them
3	**3A12CSC**	**GENERAL AWARENESS COURSE II :3A12CSC- DATABASE MANAGEMENT SYSTEM**	**CO1:** Familiar with organized data collection. **CO2:** Able to design data bases. **CO3:** Skilled to normalize the data bases. **CO4:** Capable to frame queries for various purposes
3	**3B04CSC**	**CORE COURSE IV :3B04CSC -DATA STRUCTURES**	**CO1:** Able to analyze the complexity of algorithm. **CO2:** Familiar with linear and nonlinear data structures. **CO3:** Acquire the ability to select appropriate data structure for a given problem. **CO4:** Obtain skill for systematic approach to programming.
4	**4A13CSC**	**GENERAL AWARENESS COURSE III: 4A13CSC- DIGITAL ELECTRONICS**	**CO1:** Introduce the basic and important concepts of Digital Principles and Applications. **CO2:** Familiarize with basic building blocks of Digital systems, Digital Logic and Digital Circuits. **CO3:** Design simple combinational digital systems. **CO4:** Familiarize different number systems, codes and data representation.

4	**4A14CSC**	**GENERAL AWARENESS COURSE IV: 4A14CSC OPERATING SYSTEMS**	**CO1:** Familiarize with basics of design of operating systems. **CO2:** Introduce basic working process of operating systems. **CO3:** To understand the importance process and scheduling. **CO4:** To understand the issues in memory management.
4	**4B05CSC**	**CORE COURSE V: 4B05CSC SOFTWARE ENGINEERING**	**CO1:** To understand the Software Development Life Cycle Models. **CO2:** To familiarize with Software Requirement Analysis and Specification. **CO3:** To familiarize with Classical Software Design Techniques. **CO4:** To familiarize with various Software Testing Techniques and Tools.
4	**4B06CSC**	**CORE COURSE VI: 4B06CSC LAB 2 – DATA STRUCTURES USING C++**	
4	**4B07CSC**	**CORE COURSE VIII: 4B07CSC -WEB TECHNOLOGY**	**CO1:** Understand different components in web technology and WWW. **CO2:** Learn to develop interactive Web pages. **CO3:** Present a web document with server-side scripting using PHP. **CO4:** Know the basics of AJAX.
5	**5B09CSC**	**CORE COURSE IX: 5B09CSC JAVA PROGRAMMING**	CO1: Know the overall structure and concept of logic building activity of Java programming language CO2. Identify the real-world things as well as the relationship between them and understand transforming them into their corresponding computer representations. CO3. Realize how to achieve code reusability using inheritance, interfaces and packages and expedite application development activities. CO4. Familiarize simple and robust way of handling multitasking and runtime error as well as

			such kind of abnormal situations within a program. CO5. Design GUI based applications and applications that can be transmitted over internet.
5	**5B10CSC**	**CORE COURSE X: 5B10CSC COMPUTATION USING PYTHON**	**CO1:** Learn Python for expressing computation **CO2:** Familiarize with functions and modules in python **CO3:** Understand object-oriented programming concepts **CO4:** Learn the techniques for database connectivity and GUI programming in Python
5	**5B11CSC-A**	**CORE COURSE XI: 5B11CSC-AA ALGORITHM DESIGNING**	**CO1:** Capable to select suitable algorithm design technique. **CO2:** Able to design optimum algorithms for problems. **CO3:** Skilled to design solutions for real problems.
5	**5B11CSC-B**	**CORE COURSE XI: 5B11CSC-B LINUX ADMINISTRATION**	**CO1:** To learn basic Linux commands and understand the file system structure **CO2:** To understand the Boot loaders and the configuration files **CO3:** To learn different system services, maintenance and configuring these **CO4:** To experience Shell Scripting
5	**5B11CSC-C**	**CORE COURSE XI: 5B11CSC-C COMPUTER GRAPHICS**	**CO1:** Understand basic concepts of graphics input and display devices. **CO2:** Learn line and circle drawing algorithms. **CO3:** Familiarization with 2D and 3D transformations and projections. **CO4:** Understand fundamentals of image processing.
6	**6B12CSC**	**CORE COURSE XII: DATA COMMUNICATION AND COMPUTER NETWORKING**	**CO1:** Understand state-of-the-art in network protocols, architectures and application. **CO2:** To acquire knowledge about different computer networks **CO3:** To understand the use of layer architecture for networking systems.

6	**6B13CSC**	**CORE COURSE XIII: 6B13CSC COMPILER DESIGN**	**CO1:** Learn the basic principles of compiler. **CO2:** Get an idea about the related programs. **CO3:** Understand different components of a compiler. **CO4:** Understand the phases of a compiler.
6	**6B14CSC**	**CORE COURSE XIV: 6B14CSC COMPUTER ORGANIZATION**	**CO1:** Understand the basic terminology of computer system. **CO2:** Understand the functional units of a computer system. **CO3:** Understand the basic operations of a computer system. **CO4:** Understand the memory organization in a computer system.
6	**6B15CSC**	**CORE COURSE XIV: 6B15CSC-A INFORMATION SECURITY**	**CO1**: To understand the need of information security and to master information security Concepts, mechanisms and services as well as issues related to information Security. **CO2**: To be familiar with cryptography and its categories. **CO3:** Distinguish public and private key crypto systems and familiarize the rsa crypto System. **CO4**: To attain the knowledge of digital signature and its security services.
6	**6B15CSC**	**CORE COURSE XIV: 6B15CSC-B DATA MINING**	**CO1:** To Introduce the Concepts of Data Mining and its Applications. **CO2:** To Understand Investigation of Data using practical Data Mining Tools. **CO3:** To Introduce Association Rules Mining. **CO4:** To Introduce Clustering and Classification.
6	**6B15CSC**	**CORE COURSE XIV: 6B15CSC-C BIOINFORMATICS**	**CO1:** Understand Bioinformatics and biological databases. **CO2:** Understand Concept of Biology. **CO3:** Understand Sequence alignment and Similarity search tools. **CO4:** Structural bioinformatics and

			Bioinformatic tools.
6	**6B16CSC**	**CORE COURSE XVI: 6B16CSC LAB 4 – JAVA PROGRAMMING**	
6	**6B18CSC**	**CORE COURSE XVIII: 6B18CSC PROJECT**	

B.SC. COMPUTER SCIENCE GENERIC ELECTIVE COURSES			
STUDENTS OF OTHER DEPARTMENTS CAN CHOOSE **ANY ONE OF THE GENERIC ELECTIVE COURSES FROM THE POOL OF FIVE COURSES.**			
Semester	**Course Code**	**Course title**	**Course outcome**
5	**5D01CSC**	**GENERIC ELECTIVE COURSEI:5D01CSC PROGRAMMING IN C**	**CO1:** To understand the basic knowledge of programming **CO2:** To develop C programs **CO3:** To develop skill in advanced program constructs **CO4:** To develop skill in programming
5	**5D02CSC**	**GENERIC ELECTIVE COURSE II: 5D02CSC Web Technology**	**CO1:** To understand the knowledge of HTML **CO2:** To understand the knowledge of various HTML tags **CO3:** To enable students to program for the World Wide Web using HTML **CO4:** To understand the basic knowledge of Java Script
5	**5D03CSC**	**GENERIC ELECTIVE COURSE III: 5D03CSC DATABASE MANAGEMENT**	**CO1:** To understand the fundamentals of database management system **CO2:** To develop Skill in designing database

		SYSTEM	**CO3:** To understand the concept of SQL commands **CO4:** To develop Skill in writing queries
5	**5D04CSC**	**GENERIC ELECTIVE COURSE IV: 5D04CSC FUNDAMENTALS OF COMPUTERS AND PROGRAMMING**	**5DCO1:** To know the working principle of a computer **CO2:** To understand the concept of number system **CO3:** To understand the basics of computer network **CO4:** To understand the basics of programming
5	**5D05CSC**	**GENERIC ELECTIVE COURSE IV: 5D05CSC INTRODUCTION TO PYTHON PROGRAMMING**	**CO1:** Learn Python for expressing computation **CO2:** Learn about program control statements in python **CO3:** Familiarize with functions and modules in python **CO4:** Learn the techniques for data visualization in python

COMPLEMENTARY ELECTIVE COURSE FOR B.SC. MATHEMATICS/STATISTICS/PHYSICS/ ELECTRONICS PROGRAMMES AND GENERIC ELECTIVE COURSES

Semester	Course Code	Course title	Course outcome
1	**1C01CSC**	**COMPLEMENTARY ELECTIVE COURSE I: INTRODUCTION TO COMPUTERS AND PROGRAMMING**	**CO1:** Familiarize with the hardware components of a digital computer **CO2:** Understand the basic idea of how data is represented in computers **CO3:** Familiarize with types of software **CO4:** Ability to design algorithmic solutions to problems

2	**2C02CSC**	**COMPLEMENTARY ELECTIVE COURSE II: PROGRAMMING IN C**	**CO1:** Understand the building blocks of C programming language **CO2:** Familiarize with program control structures in C **CO3:** Learn procedural programming using functions **CO4:** Understand user defined data type
3	**3C03CSC**	**COMPLEMENTARY ELECTIVE COURSE III: WEB TECHNOLOGY WITH DATABASE MANAGEMENT SYSTEM**	**CO1:** Develop skills to design a web page using HTML **CO2:** Understand HTML Forms and CSS Styling **CO3:** Develop skills to develop database and retrieve data using SQL **CO4:** Learn basics of server-side programming with PHP
4	**4C04CSC**	**COMPLEMENTARY ELECTIVE COURSE IV: COMPUTATION USING PYTHON**	**CO1:** Learn Python for expressing computation **CO2:** Familiarize with functions and modules in python **CO3:** Understand object-oriented programming concepts **CO4:** Learn the techniques for data visualization in python
4	**4C05CSC**	**COMPLEMENTARY ELECTIVE COURSE V: LAB 1 – PROGRAMMING IN C, WEB PROGRAMMING AND PYTHON PROGRAMMING**	**CO1:** Achieve skills to use C language for problem solving **CO2:** Understand SQL and basic web programming **CO3:** Achieve skills to use Python for problem solving

Department of Malayalam

BSc Maths, BA History and English

Semester	Course Code	Course Title	Course Outcome
			Co. 1 Develop an awareness of the influence of various literacy genres on the evolution of Malayalam language and

1	1A 07 MAL	SAHITHYA GANANGAL	literature Co.2 Enable Students to enjoy literature and analyze literacy lesson Co.3 Gain the ability to critically approach art forms such as drama and cinema while enjoying them Co.4 Motivate Students to make reading and enjoying the arts as a continuous process
2	2A 08 MAL	GADHYA ROOPANGAL	Co.1 Gain a general understanding of the origin, growth and evolution of prose forms such as novel and autobiographies/memoir Co.2 Encourage reading prose works and enjoying them with a critical attitude Co.3 Develop a Serious theatrical culture Co.4 Get acquainted with different prose styles Co.5 Develop the applicability of prose language.
3	3A09 MAL	MALYALA KAVITA	Co.1 Introduce the literacy form of poetry in general which is concentrated form of Language that express life situations complexities and experiences and develops poetic taste. Co.2 Raise awareness of poetic and poetic models who played a crucial role In the growth and development of Malayalam poetry. Co.3 Introduce the aesthetic changes in

			Malayalam poetry during the ancient, medieval, renaissance, modern and post modern periods. Co.4 Provide training in the evaluation of critical intelligence to identify the Socio cultural contexts and their politics that make poetry possible through the unique use of language.
4	4A10MAL	RACHANA-VIVARTANAM	Co.1 Enable the learners to correct the mistake that may occur dealing with the Malayalam Language Co.2 Empower students to use language accurately and effortlessly. Co.3 Introduce students to the field of translation literature. Co.4 Provide students with a general understanding of world class work in different Languages

BCom

Semester	Course Code	Course Title	Corse Outcome
1	1A07-1	SAHITHY AROOPANGAL	Co.1 Introduce Students to travelliterature critical evaluate travel experience, narrative marketing and polities. Co.2 Introduce the structure theme and narrative of the various prose forms in general. Co.3 Develop a reading experience of biographical forms such as autobiography, biography, memoir etc.

			Co.4 Interest students in the field of literature given above encourage further reading. Co.5 Organize study tour / trips, enjoy the journey and make notes of enjoyment.
2	1A08-1	GADHYA MATHRKAKAL	Co1. Enable students to analyze literacy lessons and enjoy literature Co 2. Enjoy literature forms like story,novel, etc., and gain the ability to approach them critically. Co3. Help students to excel in the language along with studying literature. Co 4. Raise awareness of the emergence of short stories and novels.

BSc Computer Science , Polymer Chemistry (LRP)

Semester	Course Code	Course Title	Course Outcome
1	1A07-2 MAL	SAHITHYAVUM VIVARTANAVUM	Co.1 To aid in an overall development of knowledge and understanding of Malayalam literature and world literature Co.2 Introduce students to the field of translations literature. Co.3 To strengthen students to use language accurately and without difficulty.
	1A08-2 MAL		Co. 1 To impart knowledge to the students about the unique visual art traditional of Kerala and it richness. Co.2 Evaluating visual arts such as drama, cinema and the literary lesson that lead to

2		GADHYA MATHRKAK AL	it. Co.3 Analyze the role of work of art, such as drama, as the motivating force of social reform and psycho analysis. Co.4 Embedding new experiences artistically and literary Experiences of lifeconsciousness along with poetic experiences.

Dept. of Polymer Chemistry

Programme Outcomes, Programme Specific Outcomes & Course Outcomes (2019 Onwards)

PROGRAMME OUTCOMES (PO)	**PO 1.Critical Thinking:** 1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts, actions and interventions. 1.2. Develop the ability to chart out a progressive direction for actions and interventions by learning to recognize the presence of hegemonic ideology within certain dominant notions. 1.3 Develop self-critical abilities and also the ability to view positions, problems and social issues from plural perspectives. **PO 2.Effective Citizenship:** 2.1. Learn to participate in nation building by adhering to the principles of sovereignty of the nation, socialism, secularism, democracy and the values that guide a republic. 2.2. Develop and practice gender sensitive attitudes, environmental awareness, empathetic social awareness about various kinds of marginalisation and the ability to understand and resist various kinds

	of discriminations. 2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post-colonial society. **PO 3.Effective Communication:** 3.1. Acquire the ability to speak, write, read and listen clearly in person and through electronic media in both English and in one Modern Indian Language 3.2. Learn to articulate, analyse, synthesise, and evaluate ideas and situations in a well-informed manner. 3.3. Generate hypotheses and articulate assent or dissent by employing both reason and creative thinking. **PO 4.Interdisciplinarity:** 4.1. Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of the human mind. 4.2. Understand the issues of environmental contexts and sustainable development as a basic interdisciplinary concern of all disciplines. 4.3. Develop aesthetic, social, humanistic and artistic sensibilities for problem solving and evolving a comprehensive perspective.
Programme Specific Outcomes (PSOs)	**After successful completion of three year degree program in Polymer Chemistry a student should be able to;** **PSO 1** Understand the basic concepts, preparation methods and processing techniques of polymers and its importance in the present society. **PSO 2** Demonstrate procedural knowledge about polymers that affects different areas of life like communication, nutrition, clothing, recording history, buildings and highways etc.; **PSO 3** Employ critical thinking and the scientific method to design, carry out, record and analyze the production of polymers. **PSO 4** Use chemical techniques relevant to academia and industry, generic skills and global competencies, including knowledge and skills that enable students to undertake further studies in the field of polymer chemistry or a related field, and work in the chemical and non-chemical industry sectors. **PSO 5** Undertake hands on lab work and practical activities which develop problem solving abilities required for successful career in pharmaceuticals, chemical industry, teaching, research, environmental monitoring, product quality, consumer goods industry, food products, cosmetics industry, etc. **PSO 6** Understand safety of chemicals, transfer and measurement of chemical, preparation of solutions, and find out the green route for polymer synthesis for sustainable development. **PSO 7** Create an awareness of the impact of polymers on

		the environment, society, and development outside the scientific community.	
Semester I	**1B01PCH**	**Theoretical And Inorganic Chemistry**	**CO 1:** State the fundamental assumptions of atomic theory and explain the quantum mechanical model of the atom **CO2:** Understand the nature of chemical bonding and analyse the structure of molecules **CO3:** Describe the arrangement of elements in the periodic table and relate the arrangement to electronic configuration, bonding, and properties. **CO4:**Summerise nuclear disintegration, nuclear fission , fusion and half life period and distinguish natural radio activity, artificial radio activity and artificial transmutation **CO5:**familiarise the industrial importance of the compounds like cements, glass and medicines
Semester II :	**2B02PCH**	**Analytical And Inorganic Chemistry – I**	**CO 1:** Determine the error, standard deviation and relative standard deviation of analytical data. **CO 2:** Understand statistical treatment of analytical data and the principles underlying volumetric titrations. **CO 3:** Understand basic principles behind selective precipitation of cation. **CO 4:** Explain the properties of the representative elements on the basis of electronic configuration. **CO 5:**Familiarise the theories of acids and bases and the properties of aqueous and nonaqueous solvents **CO 6:**Familiarise different types of smart materials.
SEMESTER III	**3B04PCH/CHE**	**Organic Chemistry I**	**CO 1:** Explain the types of electron displacement in organic molecules and predict the properties of molecules based on electron displacement effect **CO2:** Understand the concept of aromaticity , distinguish aromatic ,

			anti aromatic and non aromatic compounds and ions and Illustrate the mechanism of aromatic electrophylic substitution **CO 3:** Classify stereo isomers, understand the property of chirality , apply CIP rules to recognize the configuration and explain the stabilityof conformations drawing energy profile diagram **CO4:** Explain the mechanism of polymerization, synthesis and application of industrially important Polymers **CO5:** Explain the classification and the methods of preparation of important dyes **CO6:** Illustrate the preparative methods and synthetic applications of important synthetic reagents
SEMESTER III	**3A11PCH : GENERAL AWARENESS COURSE-I**	**POLYMER CHEMISTRY- I**	**CO1:** Understand the basic concepts of monomers, polymers and polymerisation reactions **CO2:**Familiarise the preparation, properties and applications of some synthetic polymers. **CO3:** Understand the importance of molecular weight and the distribution of molecular weight in polymers. **CO4:**Summerise the techniques available for testing and characterization of polymers
SEMESTER III	**3A12PCH: GENERAL AWARENESS COURSE II**	**POLYMER CHEMISTRY-II**	**CO1:** Familiarize the different techniques of polymerisation. **CO2:** Understand the chemistry of polymerisation **CO3:** Understand the kinetics of polymerisation **CO4:**Summerise the process of polymer dissolution and polymer fractionation.
SEMESTER III	**3A12(A)PCH: GENERAL AWARENESS COURSE PRACTICAL**	**POLYMER CHEMISTRY II – PRACTICAL - I**	**CO1:** Apply the theoretical concepts while performing experiments. **CO2:** Acquire practical skill to identify different types of plastics and rubbers.

			CO3: Estimate the synthesis of different polymers by various techniques. **CO4:** Acknowledge experimental errors and their possible sources. **CO5:** Design, carry out, record and analyze the results of chemical experiments
Semester IV	**4B06PCH/CHE**	**Organic Chemistry – II**	**CO1:**i) Describe mechanisms for substitution and elimination reactions, and predict the effect of nucleophile, leaving group, and solvent on the relative rates of SN1 versus SN2 reactions, and E1 versus E2 reactions, as well as on the relative rates of substitution versus elimination. ii) Explain Chugaev and Cope eliminations and E1CB mechanism **CO2:** Illustrate the preparative methods and important properties of Hydro carbons, halogen compounds , Hydroxy compounds and Carbonyl Compounds **CO3:** Explain the mechanism of important name reactions including rearrangements involving hydroxyl and Carbonyl functional groups
SEMESTER IV	**4A13PCH : GENERAL AWARENESS COURSE III :**	**POLYMER CHEMISTRY-III**	**CO1:** Understand the basic principles of plastic processing and processing techniques. **CO2:**Familiarise various methods for testing of polymers and polymer products. **CO3:** Understand the Molecular forces and chemical bonding polymers **CO4:** Understand the preparation and properties of inorganic polymers.
SEMESTER IV	**4A14PCH GENERAL AWARENESS COURSE IV**	**POLYMER CHEMISTRY-IV**	**CO1:** Understand the preparation and properties of natural and synthetic rubbers **CO2:** Describe the type of polymer degradation. **CO3:** Describe various methods used for latex technology and

			compounding of rubber. **CO4:**Familiarise the special topics in polymer science.
SEMESTER III & IV	**SEMESTER III & IV (3B03PCH/CHE & 4B03PCH/CHE): CORE COURSE PRACTICAL I**	**Volumetric Analysis**	**CO1:** Apply the theoretical concepts while performing experiments. **CO2:** Acquire practical skill to estimate acid, base, oxidizing agents etc. by volumetric titration method **CO3:** Estimate the metallic ions by complexometric titration method **CO4:** Acknowledge experimental errors and their possible sources. **CO5:** Able to prepare inorganic complexes **CO6:** Design, carry out, record and analyze the results of chemical experiments
SEMESTER III& IV	**(3B05PCH/CHE & 4B05PCH/CHE): CORE COURSE PRACTICAL II**	**Inorganic Qualitative Analysis**	**CO1:** Apply the theoretical concepts while performing experiments. **CO2:** Acquire practical skill to analyse the anions and cations qualitatively present in a mixture of inorganic salts **CO3:** Able to design, carry out, record and analyze the results of chemical experiments **CO4:** Learns the effective usage of chemicals
SEMESTER IV	**4A13(A)PCH: GENERAL AWARENESS COURSE PRACTICAL**	**POLYMER CHEMISTRY III – PRACTICAL -II**	**CO1:** Apply the theoretical concepts while performing experiments. **CO2:** Acquire practical skill to determine ammonia content of latex. **CO3:** Estimate the molecular weight of polymers by viscometer. **CO4:** Develop skills to determine acid value/hydroxyl value of polymers. **CO4:** Acknowledge experimental errors and their possible sources. **CO5:** Design, carry out, record and analyze the results of chemical experiments
Semester V:	**5B07PCH/CHE**	**Analytical and**	**CO1:** Understand the qualitative

		Inorganic chemistry-II	and quantitative aspects of analysis and separation techniques **CO2**: Explain instrumentation and working principle of different analytical techniques –TGA, DTA and radio chemical method of analysis. **CO3**: Familiarize with the preparation, properties and uses of some inorganic compounds like hydrides of boron, sulphur and silicon based inorganic polymers and understand their importance **CO4**: Explain the classification of refractories. **CO5**: Know the position, electronic configuration and physical properties of noble gases and explain hybridization and geometry of different xenon compounds **CO6:** Explain various steps involved in metallurgical operations and power metallurgy and understand Corrosion, theories of Corrosion and factors affecting Corrosion
Semester V	**5B08 PCH/CHE**	**Inorganic Chemistry**	**CO1:** Understand the behavior of transition and inner transition elements and explain the separation of lanthanides by ion exchange method and lanthanide contraction **CO2:** Understand key features of co-ordination compounds and illustrate the theories of coordination complexes, stability of complexes and explain factors affecting crystal field splitting. **CO3:** Explain biological functions of metal ions. **CO4:** Familiarize new elements in periodic table and Understand recent developments in inorganic chemistry.
Semester V	**5B09 PCH/CHE**	**Physical Chemistry I**	**CO1:** Know the fundamental idea about gaseous state and familiar with different equations related to gaseous state and explain applications of theories of gaseous state

			CO2 : Compare different theories of liquid state and identify the properties of liquid state. **CO3:** Understand the properties of ideal and non-ideal solutions and explain phase equilibrium **CO4:** Explain colligative properties of dilute solution and determine the molecular weight of a solute **CO5:** Identify different crystallographic systems and various types of crystal defects **CO6:** Describe X ray diffraction to explain internal structure of solids
Semester V	**5B10 PCH/CHE**	**Physical Chemistry II**	**CO1:** Understand the laws of thermodynamics and its relation to universe, principles of thermo chemistry and chemical equilibrium. **CO2:** Identify the parameters for spontaneous chemical reactions and predict feasibility of reactions. **CO3:** Understand the concept of entropy and how the whole universe is related to it. **CO4:** Construct phase diagrams and study the equilibrium exists between various states of matter. and apply principles phase diagram to separation processes and for property modification of different type of system. **CO5:** Understand basic principles of surface chemistry and its application in various fields **CO6:** Prepare different types of colloidal particles and to explore the applications in day today life.
SEMESTER V	**5D03PCH/CHE GENERIC ELECTIVE COURSE**	**Environmental Studies**	**CO1:** Differentiate the environmental segments and understand the importance of environmental segments **CO2:** Identify the types of environmental pollution and the various sources of the pollution **CO3:** Understand the consequences of environmental pollutions **CO4:** Explain the measures of control of environmental pollution **CO5:**Recognise various sustainable

			energy sources
Semester VI	**6B14PCH/CHE**	**Organic Chemistry - III**	**CO1**: Acquaint with the classification, structures and properties of carbohydrates, explain the configuration of glucose and fructose, their inter conversion , illustrate Killiani-Fischer synthesis and Ruff degradation **CO2**: Illustrate the preparative methods and the properties of different classes of organic acids , nitrogen containing compounds and heterocyclic compounds . **CO3**: Classify amino acids and peptides and explain the synthesis of simple peptides by *N*protection (t-butyloxycarbonyl and phthaloyl) &C-activating groups and Merrifield solidphase synthesis. Explain the methods of determination of primary structure of peptides **CO4**: Distinguish the components of nucleic acids and lipids and their roles in biological system and the biological importance of various natural products .Familiarise with important drugs and their therapeutic applications **CO5**: Recognise the types and characteristics of pericyclic reaction and analyse the pericyclic reactions by FMO methods. Understand the photochemistry of carbonyl compounds **CO6** : Understand the principles of Green Chemistry and the importance of green synthesis and recognize the impact of green chemistry on human health and the environment
Semester VI	**6B15PCH/CHE**	**Physical Chemistry - III**	**CO1:** Understand the mechanism of electrical conductance, theories of electrical conductance, and coductometric titrations **CO2:** Understand the basic principle of ionic equilibrium and its application in laboratories **CO3:** Design different types of electro chemical cell and able to calculate its potential.

			CO4: Familiarise with electro analytical methods **CO5:** Acquaint with kinetics of simple, complex, enzymatic and surface reactions **CO6:** Understand basic principles of photochemistry and its application in spectro photometry
Semester VI	**6B16PCH/CHE**	**Physical Methods In Chemistry**	**CO1 i)** Explain the important principles of spectroscopy **ii)** Apply spectroscopic techniques in analyzing the structure of simple organic molecules **CO2:** Acquainting the working principles of various instruments and their functions **CO3:** Understand the basic principles of symmetry and group theory and its applications in chemistry **CO4:** Study the basic principles of nanochemistry and understand the various nanofabrication methods **CO 5** Explain the important principles for quantum chemical and molecular mechanic methods of computing the geometry and energy of molecules
SEMESTER VI	**6B17PCH/CHE-C: (DISCIPLINE SPECIFIC ELECTIVE COURSE)**	**POLYMER CHEMISTRY**	**CO1:** Classify polymers and explain the configuration of polymers and properties like glass transition temperature and melting point of polymers **CO3:** Illustrate the preparation, properties and applications of polymers **CO4:** Interpret the mechanism of polymerization **CO5:** Acquaint various polymer processing technologies and explain thermal methods of analysis of polymers **CO6:** Know the recent advances in polymer chemistry
SEMESTER V& VI	**5B11PCH/CHE & 6B11PCH/CHE :** **CORE COURSE PRACTICAL III**	**GRAVIMETRIC ANALYSIS**	**CO1:** Make use of standardised procedures for the Gravimetric analysis **CO2:** learn the skills of Precipitation process, digestion, filtration, incineration etc.

			CO3:Aquire practical Knowledge of co-precipitation **CO4:** Handle sintered glass vessels **CO5:** Acknowledge experimental errors and their possible sources. **CO6**: Able to design, carry out, record and analyze the results of chemical experiments
SEMESTER V& VI	**5B12 PCH/CHE & 6B12PCH/ CHE : CORE COURSE PRACTICAL IV**	**ORGANIC CHEMISTRY**	**CO1:** Apply the theoretical concepts while performing experiments. **CO2:** Acquire practical skill in qualitative analysis of organic compounds **CO3:** Acquire practical skill in preparing organic compounds and in their purification by crystallisation **CO4:** Separate organic compounds in a mixture –by steam distillation, TLC and Column Chromatography **CO5:** Acquire the habit of working safely with the chemicals and handling of equipments
SEMESTER VI	**6B18PCH/CHE: CORE COURSE PRACTICAL V**	**PHYSICAL CHEMISTRY**	**CO1:** Acquire practical skill in physical chemistry experiments such as Cryoscopy, Transition Experiments ,Phase Rule Experiments, Conductometric titrations ,Potentiometric titrations , colorimetry and Chemical Kinetics **CO2:** Learn statistical approach for evaluating data **CO3:** Able to carry out and record these experiments in a skilful manner **CO4:** Acquire the habit of working safely with the chemicals and handling of equipments
SEMESTER VI	**INDUSTRIAL VISIT & PROJECT**	**INDUSTRIAL VISIT & PROJECT**	Students are required to visit at least one Laboratory/factory/Research Institute of eminence during the course and submit the Study tour report separately along with practical records at the time of practical Exam (6th Semester). **CO 1)** Able to enhance the skills of managing the resources, time and team work.

			CO2) Students will be able to function as a member of an interdisciplinary problem solving team. Students should undertake a group project work related to Polymer chemistry / Chemistry and submit the report along with practical records during VI semester practical.

MATHEMATICS

PROGRAMME:BSc.

Mathematics

PROGRAMME

OUTCOMES (PO)

PO 1. Critical Thinking

1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts, actions andinterventions.

1.2. Develop the ability to chart out a progressive direction for actions and interventions by learning torecognize the presence of hegemonic ideology within certain dominant notions.

1.3 Develop self-critical abilities and also the ability to view positions, problems and social issues fromplural perspectives.

PO 2. Effective Citizenship

2.1. Learn to participate in nation building by adhering to the principles of sovereignty of the nation,socialism, secularism, democracy and the values that guide a republic.

2.2. Develop and practice gender sensitive attitudes, environmental awareness, empathetic social awareness about various kinds of marginalisation and the ability to understand and resist various kindsof discriminations.

2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post-colonial society**.**

PO 3. Effective Communication

3.1. Acquire the ability to speak, write, read and listen clearly in person and through electronic mediain both English and in one Modern Indian Language

3.2. Learn to articulate, analyse, synthesise, and evaluate ideas and situations in a well-informedmanner.

3.3. Generate hypotheses and articulate assent or dissent by employing both reason and creative thinking.

PO 4. Interdisciplinarity

4.1. Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of the human mind.

4.2. Understand the issues of environmental contexts and sustainable development as a basic interdisciplinary concern of all disciplines.

4.3. Develop aesthetic, social, humanistic and artistic sensibilities for problem solving and evolving a comprehensive perspective.

PROGRAMME SPECIFIC OUTCOMES OF B.SC. MATHEMATICS PROGRAMME

PSO 1: Understand the basic concepts and tools of Mathematical logic, Set theory, Number theory, Geometry, Calculus, Algebra, Abstract structures, Linear Algebra, Analysis, Laplace transforms, Fourier series, Graph theory, and Optimization and methods of proofs.

PSO 2: Model real world problems into Mathematical problems and find solutions and understand the application of Mathematics in other Sciences and Engineering

COURSE OUTCOME

SEM	COURSE CODE	Title of the Course	COURSE OUTCOME
1	1B01 MAT	Set Theory, Differential Calculus and NumericalMethods	**CO1**: Understand limit of a function, limit laws, Continuity, Inverse functions and their derivatives **CO2-** Understand functions of several variables, limitand continuity, partial derivatives, chain rule, homogenous functions and Euler's theorem on homogenous functions **CO3**: Understand successive differentiation and Leibnitz theorem **CO4**: Understand functions of several variables, limitand continuity, partial derivatives, chain rule, homogenous functions and Euler's theorem on homogenous functions **CO5** :Understand bisection method, Regula-falsimethod and Newton Raphson method to solve algebraic and transcendental equations
2	2B02 MAT	INTEGRAL CALCULUS AND LOG	**CO1:** Understand Reduction formulae for trigonometric functions and evaluation of definite integrals **CO2:** Understand Double integrals in Cartesian andPolar form. **CO3**: : Understand triple integrals in rectangular, cylindrical and spherical co-ordinates, Substitution in multiple integrals

			CO4: Understand Understand Numerical integration: Trapezoidal rule, Simpson's 1/3rd rule **CO5**: Understand Logic and methods of proofs ,Propositional functions, truth set and Negation of quantified statement
3	3B03 MAT	Elements of Mathematics I	**Co1:** Understand Finite and Infinite sets, Countable and uncountable sets, Cantor's theorem, Logic and proof **CO2:** Understand Relation between roots and coefficients, Symmetric functions of roots, Sum of the powers of roots, Newton's theorem on sum of the powers of roots, Transformation of equations, Reciprocal equations. **CO3;** Understand Descartes rule of signs, Multiple roots, Sturm's theorem, Cardon's method, Solution of biquadratic equation,Fundamental theorem of algebra **CO4:** Understand Divisibility theory in the integers – thedivision algorithm, the greatest common divisor, the Euclidean algorithm, the Diophantine equation
4	4B04 MAT	Elements of Mathematics II	**Co1:** Understand Relations, Types of relations, Partitions, Equivalence relation, Partial ordering relation, Functions, Composition of functions, One to one, Onto and invertible function **CO2:** Understand Ordered sets, Partially ordered sets and Hasse diagrams, Minimal and maximal elements, First and last elements, Supremum and infimum, Lattices. **CO3;** Understand Chords of contact of tangents from a given point, Pair of tangents from a point, pole and polar with respect to conic sections, Equation of a chord in terms of middle point, Parametric representation of points on conics **CO4:** Understand Rank of a matrix – Elementary transformation,reduction to normal form, row reduced echelon form
5	5B05 MAT	Real Analysis	**CO1 :**Understand Algebraic Properties, OrderProperties and Absolute values of $\mathbb{R}$. Understand the Completeness Property of $\mathbb{R}$ and its applications to derive Archimedean Property. **CO2** :Understand intervals in the real line. **CO3** :Understand Sequences and their Limits, LimitTheorems, Monotone Sequences. **CO4**:Understand Subsequences and the Bolzano-Weierstrass Theorem, The Cauchy Criterion. **CO5** Understand Infinite Series, Absolute Convergence. Comparison test, Root test, Ratio test, Integral test andRaabe's test for Absolute convergence. **CO6**:Understand Alternating series test, Dirichlet's testand Abel's test for Non Absolute convergence.
	5B06 MAT	Abstract Algebra	**CO1:** Understand definition and elementary properties of Groups, Subgroups and Cyclic groups **CO2:** Understand Groups of Permutations, orbits,

			Alternating groups and theorem of Lagrange, group homomorphisms , factor Groups , Homomorphism Theorems **CO3:** Understand definition and properties of rings and fields **CO4:** Understand Ring homomorphisms andisomorphisms **CO5**:Understand zero divisors , integral domains ,characteristic of a ring and their properties
	5B07 MAT	Differential Equations, LaplaceTransform and Fourier Series	**CO1:** Understand Separable ODEs, Exact ODEs, LinearODEs, Bernoulli equation and methods to solve these ODEs **CO2** :Understand the theorem of Existence and Uniqueness of solutions of first and second order ODEs **CO3** :Understand Homogeneous Linear ODEs of Second Order and solve homogeneous linear ODEs of second order with constant coefficients and Euler-Cauchy equation **CO4:** Understand Nonhomogeneous ODEs and solve byvariation of parameters **CO5:** Understand Laplace Transform and inverse Laplace Transformation **CO6 :**Understand The first and The second shiftingtheorems and their applications, methods to find Laplace transforms of derivatives and integrals of functions **CO7** Understand the method of differentiating and integrating Laplace transform
	5B08 MAT	Vector Calculus	**CO1:** Understand lines and planes in space, curves in space, their tangents, normal, curvature, tangentialand normal curvature of acceleration **CO2:** Understand Directional derivatives and gradient vectors, tangent planes and differentials. Solve extreme value problems using Lagrange multipliers **CO3:** Understand Partial derivatives with constrained variables and Taylor's formula for two variables **CO4:** Understand Line integrals. Solve for work, circulation and flux using line integrals **CO5:**Understand path independence conservative fields and potential functions Green's theorem and solve problems using Green's theorem **CO6**: Understand Surface area and surface integrals
	5B09 MAT	Graph Theory	**CO1**: Understand a graph, subgraph ,different types of graphs and their properties **CO2**:Understand a path, cycle, trees, bridges and their properties **CO3**: Understand cut vertices and connectivity of graphs **CO4:** Understand Eulerian graphs, Hamiltonian graphs,The Chinese Postman Problem and The Travelling Salesman Problem.

	5D01MAT Open Course	Business Mathematics	**CO1**:Understand the concept of Limit and continuity, methods of finding limits definition, Differentiation-rules of differentiation, Parametric function logarithmic differentiation. **CO2** :Understand the Successive differentiation, Localmaximum and local minimum and solves problems **CO3**: Understand the Rules of integration, Some standard results, Consumer's surplus, Producer's surplus, Consumer's surplus **CO4** :Understand rate of interest, Continuous compounding, Compound interest, Present valve, interest and discount, Rate of discount, Equation of value
6	6B10 MAT	Linear Algebra	**CO1**: Understand the concept of Vector spaces, subspaces, linear combinations ad system of equations. **CO2 :**Understand the concept of Linear Dependence and Linear Independence, Bases and Dimension, Maximal Linearly Independent Subsets **CO3:** Understand the concept of LinearTransformations, Null Spaces, and Ranges, The Matrix Representation ofa Linear Transformation. **CO4 :**Understand Rank of a matrix, Elementary transformations of a matrix, Invariance of rank through elementary transformations, Normal form, Elementary matrices. **CO5:** Understand the concept System of linear homogeneous equations Null space and nullity of matrix, Range of a matrix, Systems of linear non homogeneous equations. Cayley-Hamilton theorem.
	6B11 MAT	Numerical Methods and Partial Differential Equations	**CO1:**Understand Interpolation techniques: Interpolation with unevenly spaced points, Langrange interpolation, Newton's divided differences interpolation, Finite difference operators and finite differences, Newton's interpolation formulae and Central difference interpolation. **CO2;** Understand Numerical differentiation usingdifference formulae **CO3**: Understand Picard's method, Solution by Taylorseries method, Euler method and Runge- Kutta methods. **CO4** :Understand Fourier Series: Arbitrary period, Even and Odd Functions, Half-Range Expansions and FourierIntegrals. **CO5**: Understand Partial Differential eqations, Solutionby Separating Variables.The use of Fourier Series in solving PDE: D'Alembert's Solution of the Wave Equation.
	6B12 MAT	Complex Analysis	**CO1**: Understand Analytic Function, Cauchy–RiemannEquations. Laplace's Equation. **CO2** :Understand Exponential Function, Trigonometric Functions, Hyperbolic Functions, Logarithmic functionsand General Power of complex numbers ***CO3:***Understand line integral in the complex plane ,Cauchy's

			integral theorem , Cauchy's integral formula and derivatives of analytic functions **CO4** Understand convergence of Sequences and Series of complex functions, power series, functions given by power series, Taylor series, Maclaurin's Series and Laurent Series **CO5:**Understand singularities and zeros of complexfunctions residue integration
	6B13 MAT	Mathematical Analysis and Topology	**CO1:** Understand Riemann Integral and Riemann-integrable Functions **CO2:**Understand Sequence & series of functions: Point wise and uniform convergence – Interchange of limits – Series of Functions **CO3** Understand open sets, closed sets, convergence, completeness and Baire's theorem. CO4: Understand the concept of Metric Spaces
	6B14A MAT	Operations Research	**CO1:** Understand LPP, formulate and solve usinggraphical method **CO2** Understand General LPP, canonical and standardforms of LPP **CO3** Understand simplex method and solve LPP,basicsolution, degenerate solution, basic feasible solution,optimum basic feasible solution , fundamental properties of solution and simplex method **CO4:** Understand primal-dual pair, formulation of dualand duality theorems **CO5**: Understand LP formulation of transportation problem and its solution , Mathematical formulation of Assignment problem and Hungarian Assignment.
	MAT	Project	
Complementary Courses- Mathematics for Polymer Chemistry			
1	1C01 MAT-CH	Mathematics for Chemistry I	**CO1:** Understand Calculation of the n th derivative – some standard resuls-Leibniz's theorem, Maclaurin's Theorem and Taylor's Theorem **CO2** Understand Rolle's theorem, Lagrange's mean value theorem, Meaning of the sign of derivative, Cauchy's mean value theorem,Indeterminate forms **CO3** Understand Polar, Cylindrical and Spherical co-ordinates **CO4:**. Understand Rank of a matrix, elementary transformation of a matrix, equivalent matrices, elementary matrices, Gauss-Jordan method of finding the inverse, normal form of a matrix and partition method of finding the inverse. **CO5** Understand solution of linear system of equations – method of determinants – Cramer's rule, matrix inversion method, consistency of linear system of equations, Rouche's theorem, procedure to test the consistency of a system of equations in n unknowns **CO6:** Understand methods of curve fitting

2	2C02MAT-CH	Mathematics for Chemistry II	**CO1:** Understand Functions of two or more variables, limits and continuity. **CO2** Understand partial derivatives, homogeneous

			functions, Euler's theorem on homogeneous functions, total derivative, differentiation of implicit functions and change of variables. **CO3** Understand Reduction formulae for trigonometric functions and evaluation of definite integrals **CO4:** Understand Substitutions and the area between curves, arc length, areas and length in polar coordinates. **CO5**: Understand Double and Iterated Integrals over rectangles, double integrals over general regions, area by double integration, double integrals in polar form and triple integrals in rectangular co-ordinates **CO6**: Understand Eigen values, Eigen vectors, properties of Eigen values, Cayley- Hamilton theorem, reduction to diagonal form, similarity of matrices, powers of a matrix, reduction of quadratic form to canonical form and nature of a quadratic form
3	3C03 MAT-CH	Mathematics for Chemistry III	**CO1:** Understand First Order Ordinary Differential Equations Basic concepts, Separable ODEs, Exact ODEs, Integrating Factors, Linear ODEs, Bernoulli Equation **CO2** Understand Second Order Ordinary Differential Equations, Homogeneous Linear ODEs of second order,Homogeneous Linear ODEs with constant coefficients, Euler-Cauchy Equation, Wronskian, Nonhomogeneous ODEs, Solution by variation of Parameters **CO3**Understand Laplace Transform, Inverse Transform,Linearity, s-Shifting, Transforms of Derivatives and Integrals, t- Shifting, Convolution, Integral Equations, Differentiation and integration of Transforms. **CO4:** Understand Fourier series, Functions of any periodp = 2L,Half-range Expansions Partial differential Equations,Wave Equation, Solution by Separating Variables, D-Alembert's solution of the wave equation, Heat Equation, Solution by Fourier Series.
4	4C04 MAT-CH	Mathematics for Chemistry I V	**CO1:** Understand Vector and scalar functions and Fields, Derivatives, Gradient of a scalar field;Divergence of a vector field, Curl of a Vector Field.**CO2** Understand Line Integrals, Green's Theorem in thePlane ,Surface Integrals, Triple Integrals, Divergence theorem of Gauss, Stoke's theorem **CO3**Understand Solution of Algebraic and Transcendental Equation: Bisection Method, Newton-Raphson Method ,Finite Differences,Interpolation, Divided differences and their properties, Numerical Differentiation and Integration ,Trapezoidal Rule, Simpson's 1/3- Rule **CO4:** Understand Numerical Solutions ofODE: Solutionby Taylor's series, Picard's method of successive approximations, Euler's method, Modified Euler's method, Runge-Kutta method.
Complementary Courses Mathematics for Computer Science			
1	1C01MAT-CS	Mathematics for Computer Science I	**CO1:** Understand Calculation of the n th derivative – some standard resuls-Leibniz's theorem,

			Maclaurin's Theorem and Taylor's Theorem **CO2** Understand Rolle's theorem, Lagrange's mean value theorem, Meaning of the sign of derivative, Cauchy's mean value theorem,Indeterminate forms **CO3** Understand Polar, Cylindrical and Spherical co-ordinates **CO4:**. Understand Rank of a matrix, elementary transformation of a matrix, equivalent matrices, elementary matrices, Gauss-Jordan method of finding the inverse, normal form of a matrix and partition method of finding the inverse. **CO5** Understand solution of linear system of equations – method of determinants – Cramer's rule, matrix inversion method, consistency of linear system of equations, Rouche's theorem, procedure to test the consistency of a system of equations in n unknowns
2	2C02 MAT-CS	Mathematics for Computer Science II	**CO1:** Understand Functions of two or more variables, limits and continuity. **CO2** Understand partial derivatives, homogeneous functions, Euler's theorem on homogeneous functions, total derivative, differentiation of implicit functions and change of variables. **CO3** Understand Reduction formulae for trigonometric functions and evaluation of definite integrals **CO4:** Understand Substitutions and the area between curves, arc length, areas and length in polar coordinates. **CO5**: Understand Double and Iterated Integrals over rectangles, double integrals over general regions, area by double integration, double integrals in polar form and triple integrals in rectangular co-ordinates **CO6**: Understand Eigen values, Eigen vectors, properties of Eigen values, Cayley- Hamilton theorem, reduction to diagonal form, similarity of matrices, powers of a matrix, reduction of quadratic form to canonical form and nature of a quadratic form
3	3C03 MAT-CS	Mathematics for Computer Science III	**CO1:** Understand First Order Ordinary Differential Equations Basic concepts, Separable ODEs, Exact ODEs,Integrating Factors, Linear ODEs, Bernoulli Equation **CO2** Understand Second Order Ordinary Differential Equations, Homogeneous Linear ODEs of second order,Homogeneous Linear ODEs with constant coefficients, Euler-Cauchy Equation, Wronskian, NonhomogeneousODEs, Solution by variation of Parameters **CO3**Understand Laplace Transform, Inverse Transform, Linearity, s-Shifting, Transforms of Derivatives and Integrals, t- Shifting, Convolution, Integral Equations, Differentiation and integration of Transforms. **CO4:** Understand Fourier series, Functions of anyperiod p = 2L,Half-range Expansions Partial differential Equations,Wave Equation, Solution by Separating Variables, D-Alembert's solution of thewave equation, Heat Equation, Solution by Fourier

			Series.
4	4C04 MAT-CS	Mathematics for Computer Science IV	**CO1:** Understand Vector and scalar functions and Fields, Derivatives, Gradient of a scalar field;Divergence of a vector field, Curl of a Vector Field.**CO2** Understand Line Integrals, Green's Theorem in thePlane ,Surface Integrals, Triple Integrals, Divergence theorem of Gauss, Stoke's theorem **CO3**Understand Solution of Algebraic and Transcendental Equation: Bisection Method, Newton-Raphson Method ,Finite Differences,Interpolation, Divided differences and their properties, Numerical Differentiation and Integration ,Trapezoidal Rule, Simpson's 1/3- Rule **CO4:** Understand Numerical Solutions ofODE: Solutionby Taylor's series, Picard's method of successive approximations, Euler's method, Modified Euler's method, Runge-Kutta method.

.

MSc MATHEMATICS

PROGRAMME OUTCOMES (PO)

PO1.Inculcatecriticalthinkingtocarryout scientificinvestigationobjectivelywithout beingbiasedwithpreconceivednotions.
PO2.Equipthestudent withskillstoanalyzeproblems,formulateanhypothesis,evaluateandvalidateresults, anddrawreasonableconclusions.
PO3.Preparestudents forpursuingresearchorcareers inindustryin mathematicalsciences andalliedfields
PO4. Imbibeeffectivescientificand/ortechnicalcommunicationinbothoralandwriting.
PO5.Continuetoacquirerelevantknowledgeandskills appropriatetoprofessionalactivities anddemonstratehigheststandardsofethicalissuesinmathematicalsciences.
PO6.Createawarenesstobecomeanenlightenedcitizenwithcommitmenttodeliverone’sresponsibilitie swithinthescope ofbestowedrightsandprivileges.

PROGRAMMESPECIFICOUTCOMES(PSO)

PSO.1. Understandingofthefundamentalaxiomsinmathematicsandcapabilityofdevelopingideas basedonthem.
PSO.2.Inculcatemathematicalreasoning.
PSO.3.Prepareandmotivatestudentsforresearchstudiesinmathematicsandrelatedfields.
PSO.4.Provideknowledgeofawiderangeofmathematicaltechniquesandapplicationofmathematicalmethods/toolsinotherscientificand engineeringdomains.
PSO.5.Provideadvancedknowledgeontopicsinpuremathematics,empoweringthestudentstopursuehigherdegreesatreputedacademicinstitutions.
PSO.6.Goodunderstandingofnumbertheory whichcanbeused in modernonlinecryptographictechnologies.
PSO.7.Nurtureproblemsolvingskills,thinking,creativitythroughassignments,projectwork.
PSO.8 Assiststudentsinpreparing(personalguidance,books)for competitiveexamse.g. NET,GATE,etc.

COURSEOUTCOMES			
Semester	**Course Code**	**Coursetitle**	**Courseoutcome**
I	MAT1C01	BasicAbstractAlgebra	CO1.IdentifyandanalyzedifferenttypesofAlgebraic structurestounderstandandusethefundamentalresultsinalgebra. CO2. Analyze and implement the concept of homomorphism andisomorphismbetweengroupsandringsforsolvingdifferenttypesofproblems. CO3.Applyingtheconceptofgroupactionandsylow-theorems. CO4.Understandtheconcept offinitelygeneratedabeliangroups,idealsandfieldshelpstoexploretheexistingresults.
I	MAT1C02	Linear Algebra	CO1:Make better understanding linear transformation andrelatedconcepts-isomorphism,matrixoflineartransformation,linearfunctionalandthedoubledualoflineartransformation CO2. Gives an overview of characteristic values, annihilatingpolynomials,invarientsubspaces,diagonalizationandtriangulation. CO3.Enablestudents tounderstandtheconcepts ofelementarycanonicalform, the rational canonical form and Jordan form. Given then an ideaaboutinnerproductspaces. CO4.Students cangaintheskilllikemodelingofproblemsand matrixmanipulation.
I	MAT1C03	RealAnalysis	CO.1Studentsachieveagoodgraspofthebasicconceptsofrealanalysis.CO2. Understand the basics of metric spaces and generalize the conceptsoflimits,continuousfunctionsinmetricspaces. CO.3.Applytheconceptsofderivatives,Meanvaluetheoremsforvectorvaluedfunctionsindifferentfields. CO.4.Recognizethedifferences betweenboundedvariationandtotalvariationof functions. CO.5. Understandtheconcept rectifiablecurves.
I	MAT1C04	BasicTopology	CO.1.Introducetheconcepts oftopologicalspaceandthebasicdefinitionssuch as open sets,neighbourhoods, interior, exterior, closure and theiraxiomsfordefiningtopologicalspaces. CO.2.Understandtheconcepts ofbasesandSub bases.Createnewspacesfromoldones. CO.3.Highlightthefeaturesofcontinuity,connectedness,homeomorphism,topologicalproperties.

I	MAT1C05	Differential Equations	CO.1.Applyvariouspower seriesmethodstoobtainseriessolutionofdifferentialequations . CO.2. Ability to handle differential equation and solve themunderappropriateassumption. CO.3.Discussvariouskindsofspecialfunctions indetail,theirpropertiesandrelation. CO.4.Studentswillhaveworkingknowledgeofbasicapplicationprobl ems described by homogeneous linear system with constantcoefficients. CO.5. Introduce Picard's theorem and enable them to solveapproximationproblems.
II	MAT2C06	Advancedabstr actalgebra	CO1.Enablestudentstounderstand UniqueFactorizationDomains,Euclidean Domains, Gaussian Integers and Multiplicative Norms,IntroductiontoExtensionFields CO2.UnderstandtheconceptofAlgebraicExtensions,GeometricCo nstructions,FiniteFields,AutomorphismsofFields. CO3.AnalyzetheconceptofIsomorphismExtensionTheorem,Spli ttingFields,SeparableExtensions.GaloisTheory
II	MAT2C07	Measure andIntegrati on	CO1:Introducethedefinitionandpropertiesoflebesgueoutermeasure. CO2:Understandtheconceptofmeasurablesets ,andconstructionofnon-measurablesets,measurablefunctionsofarealvariable CO3.Enablestudents tounderstandRiemannandlebesgueintegral,concept of Abstractmeasurespaces
II	MAT2C08	Advanced Topology	CO1:Enable students to review the fundamentals of topologyCO2:Understandtheconcept ofcompactness andrelationbetweenvariousformsof compactness CO3:Recognizehowpointsof spaceareseparatedbyopensetsandunderstandtheseparationaxioms CO4:Acquireknowledgeaboutmetrizabilityandhomotopyofpaths
II	MAT2C09	Foundations ofComplexana lysis	CO1:Design, analyze and implement the concept ofAnalytic Functions,ComplexIntegration,PowerSeriesrepresentationofAnalyticFunctio ns Zeroes of an analyticfunction , Cauchy's Theorem and Integral Formula ,Goursat'sTheorem CO2:AnalyzedifferenttypeofSingularities,Classificationofsingularities,Resid ues,The Argument Principle, theMaximum Modulus Theorem, theMaximumPrinciple,Schwarz'sLemma. CO3:UnderstandtheconceptofCompactnessandConvergenceinthe

			SpaceofAnalyticfunctions,theSpacesofcontinuousfunctionsC(G, Ω), Spacesofanalyticfunctions,theRiemannMappingTheorem,WeierstrassFactorizationTheorem.
II	MAT2C10	Partialdifferentialequations andintegralequations	CO1**:**Solvingfirstorderpartialdifferential equationusingMethodofCharpitsandJacobi.Introducethenonlinearfirstorderpde CO2: Identify and solve different types of second order pde including thesolutionofOnedimensionalWaveEquation..Laplace's Equationand discuss Problems-TheCauchyProblem,TheDirchletProblem,Introduceintegralequation. CO3:Developskillsintheformulation,solutionunderstandingandinterpretation of pdeModels
III	MAT3C11	Number theory	CO1:Makeabetterunderstandingofdivisibilityandrelatedalgorithms CO2:Discussthedistributionofprimesandintroducevariousarithmeticalfunctionsandrelatedresults CO3:Enablestudents tounderstandthedefinitionandbasicproperties ofcongruences. CO4:Introducetheconceptofquadraticresidues andquadraticreciprocity law,Primitiveroots ,IntroducetheconceptofcodingandcryptographyCO5:Givesanoverview ofalgebraic numbertheory
III	MAT3C12	Functional Analysis	CO1:IntroducetheConceptofnormedlinearspacesandinnerproductspaces,Bounded linearoperatorsbetween thesespaces. CO2:Make a better understanding of orthonormal sets, approximation andoptimizationanddiscusstheProjectionandRieszrepresentationtheorem CO 3:Enable students to compare the differences between Banach andHilbertSpaces CO4:Studentsachieveagoodideatoshowthat certainspacesof functionsarecomplete
III	MAT3C13	ComplexFunctionTheory	CO1:IntroduceEllipticFunctions,Simpleperiodicfunctions, Doubly periodic functions, The Riemann Zeta function and related results.CO2 : Discuss Runge's Theorem , Simple Connectedness, MittagLefler'sTheoerem,MondromyTheorem,Harmonic Functions CO3:UnderstandbasicPropertiesofharmonicfunctions,Subharmonic andsuperharmonicfunctions,entireFunctions,Jensen'sformula
III	MAT3C14	Advanced realAnalysis	CO1:MakebetterunderstandingofSequenceandseries ofFunctions. Uniform Convergence,UniformConvergence andContinuity,UniformConvergenceandIntegration,UniformConvergence

			andDifferentiation,EquicontinousFamilyofFunctions,The Stone-WeierstrassTheorem, CO2:IntroduceSomeSpecialFunctionsandrealatedalgorithms CO3:DiscussmoreaboutLinearTransformations,Differentiation,TheInverseFunctionTheorem,TheImplicitFunctionTheorem.
IV	MAT4C15	Operatortheory	CO1:Introducetheconcept ofSpectrumofaBounded Operator,WeakandWeak*Convergence CO2:DiscussabouttheSpacesofBoundedLinearFunctionals;Reflexivity,Compact Operators onNormedSpaces,SpectrumofaCompactOperator. CO3:Understandtheconcept ofBoundedOperators onHilbertSpaces, Adjoints,Normal, UnitaryandSelfAdjointOperators,SpectrumandNumericalRange,CompactSelfAdjointOperators.
IV	MAT4C16	Differential Geometry	CO1. Introduce the concept of Graphs and Levels Sets, Vector Fields, TheTangentSpace,Surfaces,Vectorfields onSurfaces,Orientation CO2: Give an overview of the Gauss map, Geodesics, Parallel TransportTheWeingartenMap,CurvatureofPlaneCurves. CO3:UnderstandtheconceptofarcLengthandLineIntegrals,CurvatureofSurfaces, Parameterized Surfaces, and Local Equivalence of Surfaces andParameterizedSurfaces.
IV	MAT4D01	Projectwork	CO1.Inculcateatasteforresearchinmathematics CO2.Developoralandwrittenpresentationskills
IV	MAT4VO1	Viva–Voce	CO1.To evaluate the students perfomance apart from the Written examCO2.Tocheckhowfarthestudents attainthevariousCourseobjective.

LISTOFELECTIVEPAPERS

Semester	Coursecode	Coursetittle	Courseoutcome
III	MAT3E03	Calculus ofVariations	CO1:UnderstandtheconceptofElements oftheTheory,FurtherGeneralizations CO2:Discuss theGeneralVariationsofaFunctional,TheCanonicalFormof theEulerEquations andrelatedtopics CO3:UnderstandtheconceptofSecondVariation,Sufficient conditionforaWeakExtremum.
IV	MAT4E02	Fourierandwavelet analysis	CO1:TheyareabletoConstructWaveletsonZn,theFirstStage. andConstructWavelets onZn,theItrationStep. Introducetheconceptof theHaarSystem,theShannonwavelets andtheDaubechies'sD6wavelets onZn. CO2:Understandl^2(Z),CompleteOrthonormalsets inHilbert Spacesl^2 (Z),and The Fouriertransforms andconvolutiononl^2 (Z),FirstStageWaveletsonZ, CO3:Discussabout L^2(R)andApproximateIdentities.

DEPARTMENT OF
HISTORY PROGRAMME: BA
HISTORY(2019-20)

I PROGRAMME OUTCOME

PO 1. Critical Thinking:

Acquire critical thinking which enables self-critical abilities and problem-solving capacities among the pupils

PO 2. Effective Citizenship: Learn to participate in nation building in tune with modern democratic values and ideals including gender equality, environmental awareness, and to fight against all kinds of discriminations.

PO 3. Effective Communication: Acquire the ability to speak, write, read and listen clearly in person and through electronic media in both English and in one Modern Indian Language.

PO 4. Interdisciplinarity: Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of the human mind and to develop interdisciplinary competency

II PROGRAMME SPECIFIC OUTCOME

PSO.1. Understand factual and conceptual aspects of historical changes in multiple areas of the world

PSO.2. Think contextually and critically about the past to understand human experiences

PSO.3. Analyze why and how historical events take place based on the verification of diverse evidences and arguments

PSO.4. Design and write research papers based on primary and secondary sources

PSO.5. Make logical oral presentation of factual and theoretical knowledge of historical events and changes

PSO.6. Develop rational, humanitarian, democratic and secular outlook based on historical knowledge and contemporary societal, economic and political issues

COURSE OUTCOME			
Semester	**Course Code**	**Course title**	**Course outcome**
I	IBOIHIS	History of IndiaI: Pre-historic Times to c.200 CE	CO. 1 Recognize important primary sources for the study of ancient Indian history CO. 2 Identify early Indian settlements, centers of political and cultural importance CO. 3 Demonstrate factual and theoretical knowledge of social, economic, cultural and political transformations in early India CO. 4 Analyze and Explain the significance of different religious and philosophical trends in ancient India
II	2B02HI	Cultural Transformations in Europe	CO. 1 Recognize the geographic locations of Greek and Roman states and medieval towns CO. 2 Understand the broad pattern of political and cultural changes in Europe before 1500 CE CO. 3 Discuss cultural and intellectual legaciesof Greek and Roman civilizations to Modern West CO. 4 Evaluate cultural differences between ancient and medieval societies in Europe
III	3B03HIS	Methodology and Perspectives of Social Science	CO.1 Familiarize Social Science methodology CO.2.Analyze the concept of Objectivity inSocial Science CO.3 Conceptualize the interdisciplinarity ofsocial science CO.4 Discern the postmodern theories of social science

III	3B04HIS	Culture in Transition	CO. 1 Recognize the geographic locations of Greek and Roman states and medieval towns CO. 2 Understand the broad pattern of political and cultural changes in Medieval Europe CO. 3 Discuss cultural and intellectual legacies of Greek and Roman civilizations toModern West CO. 4 Evaluate cultural differences between ancient and medieval societies in Europe
IV	4B05HIS	Kerala Historyand Culture inPre-Modern Period	CO. 1 Identify sources for the study of ancient and medieval Kerala history CO.2 Locate prehistoric and early historicsettlements, ports, towns and political boundaries in Kerala CO.3 Describe social, economic, political and cultural formations of Kerala in ancient and medieval times CO.4 Produce monographs on any aspects of Kerala history using primary and secondary sources
IV	4B06HIS	Ideologies and Revolutions in the modern World	CO. 1 Understand origin, stages and results of selected revolutions in the modern world CO. 2 Analyze and explain differentinterpretations of world revolutions CO. 3 Relate the results of modern world revolutions to contemporary developments in the world CO.4 Produce written work on ideological, humanistic and secular aspects of any of the modern world revolutions

V	5B07HIS	Social Formation inMedieval India	CO1.Understand socio-politicalformations in Medieval India CO 2. Describe the evolution of Indo-Saracenic art and architecture CO 3. Analyze and explain the formationof secular political values in India CO 4. Locate centers of cultural, political and commercial importance
V	5B08HIS	Social Movements and Political Awakening in Modern Kerala	CO.1 Understand factual knowledge of modern Kerala history CO.2 Explain political, social, cultural, religious and intellectual factors that led to the formation of modern Kerala CO.3 Analyze and discern the influence ofcaste and communal organizations in Kerala society and politics CO.4 Understand the significance of secular and egalitarian values and forces in the making of the cultural identity of Kerala
V	5B09 HIS	HISTORIOGRAPHY	CO: 1 Understand basic terms, concepts and categories of historiography CO: 2 Describe the origin and growth ofhistory as a branch of knowledge from ancient times CO: 3 Analyze and explain ideological andmethodological foundations of historical writing in ancient, medieval and modern period in world history CO. 4 Discuss the relevance of interdisciplinary research and objectivity in historical writings

V	5B10HIS	Method and Writing of History	CO. 1 Distinguish between primary and secondary sources CO. 2 Use historical and interdisciplinarymethods of research and research tools CO. 3 Analyze and synthesize historicaldata collected from different sources CO. 4 Create reasonable arguments and interpretations with the support of documentary evidences
V	5B11HIS	Archival Studiesand Social Informatics	CO.1 Familiarize theories and concepts of Archival science CO. Understand the context of archives keeping in the modern world CO.3. Conceptualize the developments in Social informatics CO.4 Use online sources for the study of history
VI	6B12	Indian Historiography	CO.1.Understand the historical traditions and writings in Ancient and Medieval IndiaCO.2 Demonstrate comprehensive understanding of the origin and growth of major schools of modern Indian historiography CO.3 Explain theoretical and methodological differences in historical writings CO.4 Develop a critical approach inassessing the work of a historian

VI	6B13HIS	Problems in Contemporary World	CO.1.understand major political issues and events in the world since World War II. CO.2Analyze international problems in the context of diverse political interests and ideological movements CO.3.Interpret the present political issues in relation with pertinent international events in the twentieth century CO.4.Develop anti-colonial and anti-racistattitude and universal citizen concept
VI	6B14HIS	Colonialism and Transformation of Indian Society	CO.1 Understand Context of colonialism CO.2.Analyze the political, social and economic background of Social reform movement and its role in the making of modern India CO.3.Understand the nature of the revolt of 1857 and its impact CO.4 Analyze the role of modern Education in the Indian NationalMovement
VI	6B15HIS	Freedom Struggle in India	CO.1 Understand political, social and economic background of freedom struggle CO.2 Specify major stages of freedom struggle and their ideological distinctions CO.3 Analyze the role of nationalist movement in the making of modern India CO.4 Develop an attitude of nationalism cutting across limited boundaries of religion and caste in order to resist communal forces
VI	6B16HIS	PROJECT	CO.1 Learn how to select a research topic and prepare research plan/proposal CO.2 Understand processes of data collection and research methods CO.3 Undertake critical analysis of data and make interpretations CO.4 Prepare a well written and authentic research work with proper references and select bibliography
OPEN COURSE V SEMESTER			

V	VD01HIS	Social Reform Movement in Kerala	CO.1.Understand the role of Western education, missionary activities and indigenous reform movements in the making of modern Kerala CO.2.Evaluate the ideas, programmes and tactics of social reformers CO. 3. Promote critical thinking about various social and religious issues in Kerala CO.4.Analyze and explain secular foundations of Kerala society
COMPLEMENTARY COURSES FORBA ENGLISH PROGRAMME **I&II SEMESTER**			
I	IC01HIS	History of England I:Earliest Times to c.1600 CE	CO.1 Identify geographical features and early settlements CO.2 Understand the evolution of social and political life in England CO.3 Describe the origin and growth of English language and literature CO.4 Analyze and explain historical background of social and cultural transitions
II	2C02HIS	History of EnglandII: From 1600 to 2000 CE	CO.1 Understand the growth of English literature in different stages CO.2 Explain the political and social history of modern England CO.3 Analyze how history of England andEnglish literature are intertwined CO.4 Assess new features of new literary trends in English

Department of Urdu

ABOUT THE DEPARTMENT

The NAM College, Kallikkandy Established in 1995 and in the same year the Department of Urdu wasestablished. The Department of Urdu offers only the second language for UG students. With the establishment of the Urdu department, Professor N. Kunhammed was appointed as The Principal of The College and Head of the department also He was The Chairman Board of Studies Urdu, Kannur University. Dr. Shaik Apseer Basha, Associate Professor was appointed in the department in the year1998. He subsequently became the Member Board of Studies Urdu and Chairman of the Board of Studies Urdu, Kannur University. The Department of Urdu Organised UGC National Seminar On 'CONTRIBUTIONS OF MOULANA ABUL KALAM AZAD TO URDU LITERATURE' on 19th January 2012 The
Department of Urdu offers the following courses to the UG students.

- **ADDITIONAL COMMON COURSE 1-URDU PROSE (For BA/B Sc-Conventional)**

COURSE OUTCOME:

CO1: Ability to listen, understand read and write Urdu.

CO2: Awareness of the major literary trends in Urdu

Literature. CO3: Analyse the humanitarian and social

aspects in Urdu literature.CO4: Try to write letters in

Urdu.

- **ADDITIONAL COMMON COURSE II : URDU POETRY-I (For BA/BSc Conventional)**

COURSE OUTCOME:

CO1: Listen, understand and read Urdu poems.

CO2: Recite Urdu Poems with correct

Pronunciation.CO3: Aware the poetical

trends and Urdu culture.

CO4: Understand the feelings of humanity and keep human values like Universal Brotherhood, Patriotism,Religious tolerance and nonviolence.

- **ADDITIONAL COMMON COURSE III: DRAMA AND FICTION (BA/BSc)**

COURSE OUTCOME:

CO1: Ability in listening, speaking and reading Urdu both at the theoretical and

practical levels.CO2: Develop basic communication skill in Urdu.

CO3: Aware famous short story writers and play writers in Urdu.

CO4: Understand the social & moral values in Urdu stories and dramas.

- **ADDITIONAL COMMON COURSE IV: URDU POETRY-II (BA/BSc)**

COURSE OUTCOME:

CO1: Identify a variety of forms and genres of Urdu poetry like Ghazal, Qaseeda, Masnavi, Marsiya, Rubayi andfilmi Geeth.

CO2: Develop the perceptive power.

CO3: Understand the poetic perception of Urdu

Ghazal. CO4: Present Ghazal and Geeth with

correct pronunciation.

- **ADDITIONAL COMMON COURSE V: URDU NASAR (BCom/BBA//BBARTM/BBATTM/BBAAH/BTTM)**

COURSE OUTCOME:

CO1: Ability to listen, understand read and

write Urdu. CO2: Awareness of major literary

trends in Urdu literature.

CO3: Analyse the humanitarian and social aspects in

Urdu literatureCO4: Acquire ability to evaluate Urdu

prose pieces.

- **ADDITIONAL COMMON COURSE VI: Urdu Shayari (BCom/BBA//BBA RTM)**

COURSE OUTCOME:

CO1: Understand different poetic genres of Urdu.

CO2: Acquire appreciative skills in assessing and

interpreting poems.CO3: Evaluate the aesthetic values of

Urdu poetry.

CO4: To gloat over the aesthetic elegance and nicety of Urdu poems.

- **ADDITIONAL COMMON COURSE V1I: Modern Urdu Prose {BCA/BSW//BSc (LRP)}**

COURSE OUTCOME:

CO1: To enable the students to listen understand read and write

Urdu. CO2: Acquire an awareness of the major Literary trends

in Urdu literature.CO3: Analyse the humanitarian and social

aspects in Urdu literature.

CO4: Acquire the ability to write letters in Urdu.

- **ADDITIONAL COMMON COURSE VIII: URDU POETRY {BCA/BSW//BSc (LRP)}**

COURSE OUTCOME

CO1: Listen, Understand and read Urdu

poems. CO2: Recite Urdu poems with

correct pronunciation.

CO3: Understand the human sentiments and uphold human values like fraternity Tolerance and

patriotic zest.CO4: Understand the poetical trends and Urdu cultural heritage.

COMMERCE(BCom)

PROGRAMME OUTCOMES (PO)

PO 1.Critical Thinking:

1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts, actions and interventions.

1.2. Develop the ability to chart out a progressive direction for actions and interventions by learning to recognize the presence of hegemonic ideology within certain dominant notions.

1.3 Develop self-critical abilities and also the ability to view positions, problems and social issues from plural perspectives.

PO 2.Effective Citizenship:

2.1. Learn to participate in nation building by adhering to the principles of sovereignty of the nation, socialism, secularism, democracy and the values that guide a republic.

2.2. Develop and practice gender sensitive attitudes, environmental awareness, empathetic social awareness about various kinds of marginalisation and the ability to understand and resist various kinds of discriminations.

2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post-colonial society.

PO 3.Effective Communication:

3.1. Acquire the ability to speak, write, read and listen clearly in person and through electronic media in both English and in one Modern Indian Language

3.2. Learn to articulate, analyse, synthesise, and evaluate ideas and situations in a wellinformed manner.

3.3. Generate hypotheses and articulate assent or dissent by employing both reason and creative thinking.

PO 4.Interdisciplinarity:

4.1. Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of the human mind.

4.2. Understand the issues of environmental contexts and sustainable development as a basic interdisciplinary concern of all disciplines.

4.3. Develop aesthetic, social, humanistic and artistic sensibilities for problem solving and evolving a comprehensive perspective.

PROGRAMME SPECIFIC OUTCOME OF B.COM DEGREE

After the successful completion of the B.Com Degree Pragramme, the students shall be able to;

PSO 1: Understand the concepts and techniques of commerce and its application in businessenvironment

PSO 2: Conceive the ideas on entrepreneurship and develop the skills for setting up and management ofbusiness organizations

PSO 3: Develop the skills and abilities to become competent and competitive in the business world

PSO 4: Develop the competency to take wise decisions at personal and professional level

PSO 5: Appraise the impact of other disciplines on the working of business

COURSE

OUTCOME

SEMESTER I

CORE COURSE I : - MANAGEMENT CONCEPTS AND PRINCIPLES

After studying the course, students shall be able to;

CO1:- Understand the evolution of management thoughts, concept of management, scope and itsfunctions.

CO2:- Familiarize with current management

practices. CO3:- Understand the importance

of ethics in business.

CO4:- Acquire knowledge and capability to develop ethical practices for effective

management.CO5:- Describe the emerging trends in management.

GENERAL AWARENESS COURSE I : BUSINESS STATISTICS AND BASIC NUMERICALSKILLS

After studying this course, students shall be able to;

CO 1: Define statistics and explain its importance, scope, applications and limitations

CO 2: Understand the basic knowledge of statistical techniques, which are applicable to business.

CO 3: Understand basic concepts in mathematics, which are applied in the managerial decision

making.CO 4: Develop the basic mathematical skill needed for analyzing numeric problems

related to business **SEMESTER II**

CORE COURSE II : FUNCTIONAL APPLICATIONS OF MANAGEMENT

After studying this course, the students shall be able to;

CO 1: Describe nature and scope of financial management and the elements in the management offinance

CO 2: Enumerate marketing management and its different aspects

CO 3: Explain Human Resources Management and the activities

involved in itCO 4: Understand the modern global marketing trends

and its challenges

COMPLEMENTARY COURSE I: QUANTITATIVE TECHNIQUE FOR BUSINESS DECISIONS

After studying the course, students should be able to,

CO 1:- Acquaint with the basic statistical tools, which can be applied in business and economicsituations.

CO 2:- Develop knowledge in quantitative techniques, which help in tackling various problems formodern business.

CO 3:- Understand and solve problems in probability, correlation and

regression.CO 4:- Understand the effect of trend and seasonal

variations on business.

CO 5:- Familiarize with the testing of hypothesis.

SEMESTER III

GENERAL AWARENESS COURSE II : ENTREPRENEURSHIP DEVELOPMENT

After the completion of the course the learners should

be able toCO 1: Identify the characteristics of an

entrepreneur

CO 2: Describe the importance of entrepreneurs in the economic developmet

of a nationCO 3: Identify the different types of entrepreneurs

CO 4: To strengthen their skill and quality as an entrepreneur

CORE COURSE III : ADVANCED ACCOUNTING

After studying the course, the students shall be able to;

CO 1. Understand the theoretical and practical knowledge of the basics of

accounting. CO 2. Acquire the knowledge of accounting for royalty,

Consignment and Hire PurchaseCO 3. Imbibe the accounting concepts of

Inland Branch Business.

CO 4. Comprehend the procedure for determining profit and financial position from incomplete records.

CORE COURSE IV(Elective): CO-OPERATION I – CO-OPERATIVE PRINCIPLES

After studying this course, students shall be able to;

CO 1: Understand the concepts and principles of Cooperative movement

CO2: Understand the origin of cooperative movement and the history of cooperatives

in the worldCO 3: Describe Indian cooperative movement, its features , structure and

significance

CO 4: Acquaint themselves with the system of cooperative education, training and its impact on the functioning of cooperative organisations

COMPLEMENTARY COURSE II: BUSINESS REGULATORY FRAMEWORK

After studying this course, the students shall be able to,

CO 1: Understand the nature of contracts and the essential elements of a

valid contractCO 2: Explain the difference between a valid contract and a

void contract

CO 3: Understand the breach of contract and remedies available for a breach of contract

CO 4: Understand various kinds of special contracts like indemnity, guarantee, bailment and agencycontract

COMPLEMENTARY COURSE III: BUSINESS ECONOMICS

After studying this course, students shall be able to;

CO 1: Understand the concept of economics and its use in business

CO 2: Understand the concept of demand, elasticity and demand

forecastingCO 3: Understand production function and law of

production

CO 4: Understand the methods of determining price

of a productCO 5: Explain the methods of computing

national income.

CO 6: Conceive the developmental issues of Indian economy and Kerala economy

SEMESTER IV

GENERAL AWARENESS COURSE III : GENERAL INFORMATICS SKILLS

After studying the course, the students shall be able to;

CO 1: Explain the Fundamentals of Computers the use of computers in day to day application

CO 2: Up to date and expand the basic informatics skills necessary in the emerging

knowledge societyCO 3: Effectively utilize the digital knowledge resources for their studies

CO 4: State the areas where IT can be used effectively

CO 5: Perform accounting by using the appropriate accounting packages

GENERAL AWARENESS COURSE IV : ENVIRONMENTAL STUDIES AND DISASTERMANAGEMENT

After studying the course, the students shall be able to;

CO 1: Understand the components of environment and need for the protection of environment

CO 2: Understand the effect of pollution on environment and the ways of protecting the

environmentCO 3: Explain the social issues relating to environmental pollution

CO 4: Clearly understand the various environmental hazards and the ways of managing disaster.

CORE COURSE V : CORPORATE ACCOUNTING

After studying this course, the students shall be able to;

CO 1: Understand the mode of presentation and understanding of financial reporting .

CO 2: Learn the accounting procedure for recording transaction relating to the issue and redemption ofshares and debentures.

CO 3: Imbibe the techniques of recording transactions in respect of amalgamation, reconstruction andliquidation of companies.

CO 4: Understand the concept of IFRS and Ind AS

CORE COURSE VI(Elective) : CO-OPERATION II – MANAGEMENT OF COOPERATIVES

After studying this course, students shall

be able to;CO 1: Understand kinds of

cooperatives in India

CO 2: Understand the management and administration of different types of

cooperatives CO 3: Identify the role and significance of cooperative

organization in Kerala's EconomyCO 4: Describe various kinds of cooperative

institutions

COMPLEMENTARY COURSE IV: CORPORATE LAW AND BUSINESS REGULATIONS

After studying this course, students should be

able to; CO 1: Understand the provisions of

Companies Act 2013

CO2: Describe the procedure for the formation, registration and winding up of

the companyCO 3: Explain various kinds of companies and the authorities of

companies in India

CO 4: Understand the management and administration of Companies

SEMESTER V

CORE COURSE VI1: BUSINESS RESEARCH METHODOLOGY

After studying the course, the students shall be able to;

CO1: Understand the fundamental aspects of research

in businessCO2: Identify and define research problem

CO 3: Formulate research plan

CO 4: Understand various methods of

collecting dataCO 5: Prepare research

report themselves

CORE COURSE VIII : INCOME TAX LAW AND PRACTICE

After studying this course, the students shall be able to;

CO 1 Define the basic concepts in Income tax, explain

its evolutionCO 2 Determine the residence and incidence

of Tax

CO 3 Understand the incomes exempt from tax of an

individualCO 4 Compute income under different

heads of income

CORE COURSE IX: COST ACCOUNTING

After studying this course, students shall be able to:

CO 1: Explain the nature, scope, objectives and limitations of costing

CO 2: Identify the elements of cost and describe the methods of their ascertainment and control

CO 3: Explain the various methods of costing and their suitability for different industriesCO 4: Ascertain the cost of production of products and jobs

CORE COURSE X : BANKING PRINCIPLES AND OPERATIONS

After studying this course, the students shall be able to;

CO 1: Explain banking and describe the different types of banks and the functions of commercial bankCO 2: Narrate the role of RBI in the credit control, promotion and regulation of monitory system

CO 3: Describe the relations ship between banker and customer and the procedure for opening andoperating the account

CO 4 : Understand the modern trends and technology used in banking

CORE COURSE XI(Elective) : CO-OPERATION III – CO-OPERATIVE LAWS

After studying the course, the students shall be able to:

CO 1: Understand the historical perspective of cooperative legislation in India and Kerala.CO2: Understand the provisions of Kerala cooperative Societies Act 1969

CO 3: Describe the procedure for the formation and registration of a cooperative organisationCO 4: Describe the provisions of management and winding up of cooperative societies

GENERIC ELECTIVE COURSE I: BASIC ACCOUNTING

After studying the course, students shall be able to;CO 1: Describe the basic accounting concepts

CO 2: Record the business transactions in the proper books of accountsCO 3: Prepare financial statements of a sole trading concern

SEMESTER VI

CORE COURSE XII : FINANCIAL MARKETS AND SERVICES

After studying the course, the students shall be able to; CO 1: Understand the financial system and its constituents

CO2: Familiarise with the activities taking place in the financial markets

CO 3: Appraise the various financial services available in the

financial marketsCO 4: Acquire knowledge about financial

derivatives and their features

CORE COURSE XIII : MANAGEMENT ACCOUNTING

After studying the course, the students shall be able to;

CO 1. Understand the fundamental concepts of management accounting.

CO 2. Acquire analytical skills associated with the interpretation of accounting reports

CO 3. Apply management accounting concepts in real life situations.

CO 4. Develop judgmental skills associated with the use of accounting information in

decision making.CO 5. Understand the use of marginal costing and budgetary control to plan

and control cost and profit.

CORE COURSE XIV: AUDITING AND CORPORATE GOVERNANCE

After studying the course, the student shall be able to;

CO 1: Understand the term auditing, its concept, principles, procedures and requirements needed forAuditing in accordance with current legal requirements and professional standards.

CO 2: Familiarize with the various aspects of audit consisting of internal check, vouching, verificationand valuation of assets and liabilities

CO 3: Understand the appointment, rights, duties and the liabilities of

an auditor.CO 4: Explain the concept of Corporate Governance and its

aspects

CORE COURSE XV: INCOME TAX AND GST

After studying this course, the students shall be able to;

CO 1: Compute total income and determine the tax liability of an individual and partnership firm,company and cooperative society

CO 2: Describe the income tax authorities, their powers and assessment procedure

CO 3: Explain the procedure regarding deduction of tax at source, advance tax, refund, penalties and prosecution

CO 4: Describe Goods and Service Tax, its levy and collection

CORE COURSE XVI(Elective) : CO-OPERATION IV – CO-OPERATIVE ACCOUNTING ANDLEGISLATIONS

After studying the course, student should be able to;

CO 1: Prepare and present accounting aspects of cooperative

organisationsCO 2: Understand the procedure of cooperative

auditing

CO 3: Understand the provisions regarding the settlement of disputes in

cooperatives CO 4: Acquaint knowledge on the impact of various other

legislations on cooperatives

CORE COURSE XVII: PROJECT

CO 1: Understand the method of carrying

out a projectCO2: USndertake project work

independently

M.Com

PROGRAMME OUTCOMES (PO)

PO 1.Critical Thinking:

1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts, actions and interventions.

1.2. Develop the ability to chart out a progressive direction for actions and interventions by learning to recognize the presence of hegemonic ideology within certain dominant notions.

1.3 Develop self-critical abilities and also the ability to view positions, problems and social issues from plural perspectives.

PO 2.Effective Citizenship:

2.1. Learn to participate in nation building by adhering to the principles of sovereignty of the nation, socialism, secularism, democracy and the values that guide a republic.

2.2. Develop and practice gender sensitive attitudes, environmental awareness, empathetic social awareness about various kinds of marginalisation and the ability to understand and resist various kindsof discriminations.

2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post-colonial society.

PO 3.Effective Communication:

3.1. Developing effective communication skills and ability to work in teams by strengthening group dynamics

3.2. Learn to articulate, analyse, synthesise, and evaluate ideas and situations in a wellinformed manner.

3.3. Generate hypotheses and articulate assent or dissent by employing both reason and creative thinking.

PO 4.Interdisciplinarity:

4.1. Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of the human mind.

4.2. Understand the issues of environmental contexts and sustainable development as a basic interdisciplinary concern of all disciplines.

4.3. Develop aesthetic, social, humanistic and artistic sensibilities for problem solving and evolving a comprehensive perspective.

PROGRAMME SPECIFIC OUTCOME

PSO1- Inculcating managerial skills and theoretical knowledge for managing business units with specialfocus on functional areas of business and management.

PSO2- Imparting advanced accounting knowledge and skills and provide awareness regarding latest developments in the field of accounting.

PSO3- Enabling learners to acquire advanced theoretical knowledge on research methods and techniques and also developing capabilities in the application of research in solving business related problems

PSO4- Acquisition of expertise in specialized fields like finance, taxation, marketing, management and information technology

PSO5- Development of quantitative aptitude and analytical skills of the learner.

PSO6- Facilitating learner to pursue career in professional areas of commerce and management such astaxation, financial services, consultancy etc

COURSE

OUTCOME

SEMESTER I

COM1C01- BUSINESS ENVIRONMENT AND POLICY

CO1. To give the students an exposure to environmental dynamics of contemporary business.

CO2. To develop the skill of decision making by analyzing the business environment and opportunities.CO3. Detailed knowledge about the Significance and constituents of Economic environment

CO4. Understanding aboutCritical elements of Regulatory Environment and Socio CulturalEnviron

CO5. Familiarization with globalization and Global Institutional Framework for Business

COM1C02- QUANTITATIVE TECHNIQUES AND OPERATION RESEARCH

CO1. This course intends to give understanding about the applications of quantitative techniquesCO2. To equip the students to apply operation research techniques for decision making.

CO3. After learning this course, the student should be in a position to identify appropriate parametricand non parametric test for testing the hypotheses

CO4. Ability to develop Linear Programming Models for business problems and solve the same.CO5. Understand and apply network analysis techniques for project implementation

COM1C03- MANAGEMENT INFORMATION SYSTEM

CO1. This course intends to give understanding about the concept of Management Information Systemand its application in managerial decision making

CO2. Add the knowledge base of the leaner regarding the process of development and maintenance of information system in an organization.

CO3. Imparting deep understanding about the Structure of Management Information SystemCO4. To understand the conceptual framework of system and system analysis and Design CO5. Strong understanding about the Data Communication and Networking

COM1C04- ORGANISATIONAL BEHAVIOUR

CO1. To understand the conceptual framework of management and organizational behaviour and their applicability

CO2. A very good understanding about individual behavior, personality and motivation

CO3. Imparting deep understanding about group behavior and leadership related to organizationalbehavior

CO4. Add the knowledge base of the leaner regarding change management and deal with conflict.

CO5. Impart knowledge about the role of organizational culture on organizational behavior

COM1C05- ACCOUNTING FOR BUSINESS DECISIONS

CO1. To acquaint the students with the tools and techniques for business decisions.

CO2. Learn the theoretical foundations of financial management and financial management decisions.CO3. Imparting deep knowledge about the New Trends in Budgeting

CO4. Evaluate the decisions regarding Long Term Investment

CO5. Evaluate the Relationship between risk and returns and capital budgeting

CO6. Understand the concepts Cost of Capital and Methods of computing cost of capital

SEMESTER II

COM2C06- STRATEGIC MANAGEMENT

CO1. Strong understanding about the theoretical foundations of strategic management. CO2. Clear understanding about various models of environmental and internal analysis. CO3. Development of an idea about the strategy formulation process at the corporate level.CO4. Familiarization with various tools strategic planning and evaluation.

CO5. Understanding about the modes of implementation and control of strategies.

CO6. To develop among the students the skill of managing organizations in the new age.

COM2C07- RESEARCH METHODOLOGY & COMPUTER APPLICATION

CO1. To make the students understand the steps in the process of Social Research.

CO2. To equip the students to apply statistical tools for hypothesis test and decision making.CO3. After completing this course, the learner should be able to formulate a research design

CO4. After studying the theoretical aspects of sampling design, the learner should be able to draw asampling design.

CO5. To equip the students to use computer in researchCO6. Understand the technique of research reporting.

COM2C08- COSTING FOR MANAGEMENT DECISIONS

CO1. To understand the concept and importance of cost accounting.

CO2. To understand the application of cost accounting tools for generating information for

managerialDecision making.

CO3. Apply the marginal costing principles and cost volume profit analysis in decision makingsituations of businesses.

CO4. Understand the concepts of Differential Cost Analysis and Applicationsin

business CO5. Understand the concepts of standard costing, and the process of cost

control through it.

CO6. Understand the concepts of Value Analysis and Cost Reduction

COM2C09- ADVANCED BUSINESS ACCOUNTING

CO1. To understand new accounting concepts and accounting standards

CO2. After learning this course, the student should be in a position to Value the Shares

CO3. Basic understanding about the preparation of accounts of some special type of Businesses likeVoyage, Farming and Investment

CO4. Familiarizing the learner with the accounting for Price

level changesCO5. Familiarize with Human Resources

Accounting

CO6. To equip the students with knowledge about Government Accounting

COM2C10- FINANCIAL MANAGEMENT

CO1. Understand the conceptual framework of Financial Management

CO2. To equip the students with knowledge about the Operating and Financial Leverage

CO3. To equip the students with knowledge about the Dividend and Liquidity areas of financial decisionmaking in business organizations.

CO4. Strong understanding about the Capital structure and theories of capital

structure CO5. To equip the students with knowledge about the Management

of Working Capital

SEMESTER III

COM3C11- MARKETING MANAGEMENT

CO1. To acquaint the students with the marketing principles

and practice.CO2. To understand the process of modern

marketing

CO3. The learner should get a clear understanding about the market segmentation process and its applications in marketing strategies

CO4. Develop an idea about consumer behavior and its impact

CO5.The learner should get a clear understanding about the marketing mix such as Product decisions,Pricing decisionsand Promotion and Distribution decisions

CO6. Develop sound ideas regarding rural marketing

COM3C12 - CORPORATE ACCOUNTING

CO1. To familiarize the student knowledge about the Corporate Accounting System

CO2. Develop an awareness on the accounting procedure of Amalgamation, Absorption andReconstruction of Companies

CO3. Familiarizing the learner with the accounting procedures of liquidation of companies andpreparation of various statements required as per the Companies Act

CO4. The learner should be able to prepare Double Account System

CO5. Basic understanding about the preparation of accounts Holding Company and SubsidiariesCO6. The learner should be able to prepare the Final Accounts of Insurance Companies

COM3C13- INCOME TAX LAW AND PRACTICE

CO1. To provide the students an in-depth knowledge of the basic concepts of Income TaxCO2. Able to compute the income from salary and house property

CO3. Determine taxable profit of a business or profession

CO4. Able to compute capital gain and income from other sourcesCO5. Able to calculate Gross Total Income of an individual

CO6. Learner shall be able to determine eligible deductions and compute Taxable Income and taxliability of an individual assesse

COM3C14- DERIVATIVES AND RISK MANAGEMENT

CO1. Knowledge about the derivative market in India, its evolution, types, players, risks involved andbasic quantitative foundations

CO2. Analyze the implications of Risk in the perception of individuals and Institutions andmeasurement of risks

CO3. Understand and explain the concept of forward market and its function ,CO4. Analyze the operation and pricing of various types of futures

CO5. Understand the concepts and methodology of option trading and apply the models of pricing theoption contracts

CO6. Develop an idea of exchanges through swaps

COM3C15- HUMAN RESOURCE MANAGEMENT

CO1. To familiarize the students with the human resource management processes.CO2. Acquaintance with basic concepts of HRM and performance appraisal.

CO3. To sensitize them to the training process and techniques

CO4. To provide them with appropriate knowledge and skills required for selecting, developing andmanaging human resources.

CO5. Understanding about various aspects of Grievance handling

CO6. Understanding about HR outsourcing HR accounting and HR audit

COM4E01- SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

CO1. Able to understand the concepts of investments, different types of investments, views of investment and process of investment and apply the theoretical knowledge in investment information forselecting the securities.

CO2. Understanding the types of risk in security market and applying various tools for the valuation of bonds as well as economic indicators to predict the market.

CO3. Understand the tools of technical analysis, analyse the patterns and trends in the market by usingvarious tools and enable to take investment decisions after understanding market efficiency level also.

CO4. Applying Modern portfolio theories and construct optimum portfolios.

CO5. Revising constructed portfolios as per risk and return association by using different

strategies.CO6. To help the students to equip the trading of securities.

COM4E02- INTERNATIONAL FINANCIAL MANAGEMENT

CO1. To introduce the basic concepts and tools of International Financial Management.

CO2. Familiarization with globalization, internationalization of business and the international business environment.

CO3. Understanding about theories of international trade, trade barriers and

trade blocks.CO4. Imparting idea about various economic institutions related

to international trade.

CO5. Achieve high level knowledge about various aspects of international monetary

system. CO6. To provide them appropriate knowledge about foreign investment and

financing decisions.

COM4E03- FINANCIAL MARKETS AND SERVICES

CO1. To understand the structure, organization and working of financial markets and institution inIndia.

CO2. To understand the various financial services

available.CO3. Knowledge about the derivative

CO4. Knowledge about the Development Banks in India

CO5. Imparting idea about Non-Banking Financial Institutions

CO6. To provide them appropriate knowledge about the concept factoring and factoring services inIndia

COM4E04- CORPORATE TAX MANAGEMENT & GST

CO1. To acquire the students with the method of computing total income and tax liability of Associationof Persons, co operative societies and Charitable trusts

CO2. Carry out assessment of companies and determine their tax liability

CO3. Understanding about the assessment procedures, TDS and advance payment of tax and applicationin various situations

CO4. To understand the concept of tax planning and

managementCO5. To familiarize goods and service tax

DEPARTMENT OF ENGLISH

PROGRAMME : BA ENGLISH

Programme Outcomes (PO)

PO 1.Critical Thinking:
1.1. Acquire the ability to apply the basic tenets of logic and science to thoughts,actions andinterventions.
1.2. Develop the ability to chart out a progressive direction for actions and interventions bylearning to recognize the presence of hegemonic ideology within certain dominant notions.
1.3 Develop self-critical abilities and also the ability to view positions, problems and socialissues from plural perspectives.
PO 2.Effective Citizenship:
2.1. Learn to participate in nation building by adhering to the principles of sovereignty of thenation, socialism, secularism, democracy and the values that guide a republic.
2.2. Develop and practice gender sensitive attitudes, environmental awareness, empathetic social awareness about various kinds of marginalisation and the ability to understand and resist variouskinds of discriminations.
2.3. Internalise certain highlights of the nation's and region's history. Especially of the freedom movement, the renaissance within native societies and the project of modernisation of the post- colonial society.
PO 3.Effective Communication:
3.1. Acquire the ability to speak, write, read and listen clearly in person and through electronicmedia in both English and in one Modern Indian Language
3.2. Learn to articulate, analyse, synthesise, and evaluate ideas and situations in a well-informedmanner.
3.3. Generate hypotheses and articulate assent or dissent by employing both reason and creativethinking.
PO 4.Interdisciplinarity:
4.1. Perceive knowledge as an organic, comprehensive, interrelated and integrated faculty of thehuman mind.
4.2. Understand the issues of environmental contexts and sustainable development as a basicinterdisciplinary concern of all disciplines.
4.3. Develop aesthetic, social, humanistic and artistic sensibilities for problem solving andevolving a comprehensive perspective.

Programme Specific Outcomes for BA inEnglish Language and Literature

PSO 1.Understand the historical contexts behind the origin and development of English literature with a special focus on various movements and the important works belonging to such movements.
PSO 2. Understand the current methodological issues in the study of literature and apply various reading strategies employed to selected literary as well as cultural texts.
PSO 3. Understand and apply the extended meaning of "English Literature" to various post-colonial and other writings in English.
PSO 4. Understand the basics of disciplines like Film Studies, Culture Studies, Fine Arts, Women's Writing, Dalit Writings, Post-colonial writing, Indian writing in English, Malayalam Literature and Literatures
in Translation.
PSO 5. Understand and appreciate the interdisciplinary links that literary studies have with disciplines like Philosophy, History, Political Science,
Sociology, Anthropology and the Sciences

COURSE OUTCOME FOR COMMON COURSES IN ENGLISH

TITLE OF THE COURSE	COURSE CODE	COURSE OUTCOME
1.Communicative English	1A01ENG	CO1. Understand and apply the rubrics of English grammar CO 2. Recognize and apply the basic patterns in English

		vocabulary CO3. Read and elicit data, information, inferences and interpretations based on a given material in English CO4. Develop the ability to speak in English in real life situations CO5. Elicit necessary information after listening to an audio material in English CO6. Compose academic and non-academic writings including letters, paragraphs and essays on a given topic and CV's for specific purposes
1. Readings on Kerala	1A02ENG	CO1. Understand the basic facts and patterns regarding the cultural evolution of Kerala through articles, poems, stories, life writings and historical narratives. CO2. Acquaint with the life and works of the illustrious leaders of Kerala Renaissance and the major events. CO3. Assimilate the notion of Kerala as an emerging society and critically examine the salient features of its evolution. CO 4. Understand the evolution and contemporary state of the concept of "gender" with reference to Kerala CO 5. Understand the form and content of Kerala's struggle against "casteism" and for "secularism" CO 6. Develop an awareness about the ecological problems and issues in Kerala
2.Readings on Life and Nature	2A03ENG	CO 1. Understand the basic themes and issues related to ecology through articles, poems,stories, life writings and historical narratives. CO 2. Assume ecologically friendly attitudes in events related to everyday life. CO 3. Identify the specific ecological problems related to Kerala. CO4. Identify the major ecological movements around the world and within the country. CO 5. Ability to express specific opinions when confronted with ecology/development binary. CO6. Identify the major or minor ecological issues happening around the student's native place.
2.Readings on Gender	2A04ENG	CO1. Understand the basic themes and issues related to gender through articles, poems, stories, life writings and historical narratives. CO2 Understand the basic topics related to gender studies. CO3. Understand gender as a social construct and also as a site of struggle. CO4. Critically engage with certain seminal topics that have become a part of gender studies. CO5. Understand the basic gender issues faced by Kerala. CO 6. Appreciate and use gender sensitive and politically right terms and usages in everyday life.

3.Readings on Democracy and Secularism	3A05ENG	CO1. Understand the relationship between higher education and nation building. CO2.Understand the basic Constitutional values and themes through articles, poems, stories, life writings and historical narratives. CO3. Evolve a deeper understanding and appreciation of the

		meaning of the concepts sovereignty, socialism, secularism and democracy in the Indian context. CO4. Appreciate the relationship between higher education and the Constitutional directives regarding “scientific temper” and “the spirit of enquiry”. CO5. Appreciate the prevalence of “human rights” as a prerequisite for democratic living.
4.Readings on Philosophy of Knowledge	4A06ENG	CO1. Understand the basic issues related to construction and acquisition of knowledge through articles, poems, stories, life writings and historical narratives. CO2. Understand the relationship between higher education and nation building. CO3. Evolve a deeper understanding of disciplines multidisciplinary approaches, interdisciplinary approaches and the various systems of knowledge. CO4. Understand knowledge as a social construct and the dynamics of paradigm shifts. CO5. Understand the epistemological and ontological factors within higher education. CO 6.Understand logical fallacies and apply critical thinking.

COURSE OUTCOME
BA IN ENGLISH LANGUAGE AND LITERATURE

Semester	Course	Course code	Course Outcome

1	Malayalam Literature in English Translation	1B01 ENG	CO 1: Understand the word ‘literature’ and ‘literary’ in a broad and inclusive perspective by reading select literary pieces and by applying critical reading strategies. CO 2: Recognise and describe literary genres and its subclasses. CO 3: Describe with examples select literary terms and concepts. CO 4: Understand the basic issues related to translation and in that process develop a sensibility for native and local literatures. CO 5: Use English to translate and describe everyday activities, regional themes and personal narratives by reading Malayalam literature in translation. CO 5: Learn to read, enjoy, analyse and critically engage with select literary pieces on their own with

			minimum guidance.
2	Academic Writing, Methodology and Research Project	2B02ENG	CO1. Understand and apply the nuances of academic writing. CO2. Understand the various methodological as well as epistemological aspects of literary studies. CO3. Familiarise with the approaches to literature. CO4. Choose a tentative topic for the research project to be submitted in semester six
3	Old English to Medieval English Literature (500-1500)	3B03ENG	CO1. Have an understanding of the contexts which produced Old English literature. 2. Read translation extracts from key texts of the Old English period CO2. Understand the key aspects of Old English language. CO3. Understand the key genres, authors, texts, styles and themes of the Medieval English Period. CO4. Read excerpts from the variety of writings produced during this period. CO5. Understand the key aspects of Medieval English dialects.
3	Renaissance and Restoration Literatures (1485-1780)	3B04ENG	CO1. Define Renaissance literature/ Problems of definition CO2. Trace the relationship between political economy, cultural history and production of arts and literature during the early modern period CO3. Read specimens of major works belonging tothe Renaissance period. CO4. Understand the problematics of "modernisation" of Britain including the development of political parties and parliamentary democracy through the cultural productions of Restoration period CO5. Identify literary narratives that deal with slave trade and colonial aspirations. CO6. Understand the development of literary criticism as a meta-narrative to literature. CO7. Read specimens of major works belonging tothe Restoration period.
4	The Romantic Period (1780-1832)	4B05ENG	CO1. Understand the cultural history of the period and recognise the features of literary romanticism CO2. Trace the relationship between political economy, cultural history and production of arts and literature with reference to the romantic periodCO3. Read specimens of major works belonging to the period.

4	The Victorian Period (1832-1901)	4B06ENG	CO1. Understand a range of Victorian literature in relation to a range of contexts including Victorian anxieties about modernity, madness, sexual transgression and disease. CO2. Analyze the work of a range of Victorian writers, both canonical and less well-known, and with a range of genres including the novel, short story and poetry. CO3. Identify and discuss theoretical discourses concerning class, sexuality, gender and colonialism as these illuminate a range of Victorian texts. CO4. Understand and successfully deploy a range of terms and concepts integral to Victorian literature.

5	The Early Twentieth Century ((1901-1939)	5B07ENG	CO1. Understand the cultural, political, and stylistic protocols of modernism and its various literary movements. CO2. Trace the relationship between political economy, cultural history and production of arts and literature CO3. Read specimens of major works belonging to the period.
5	The Late Twentieth and Twenty-First Centuries(1939-2018)	5B08ENG	CO1. Understand the cultural, political, and stylistic protocols of post-modernism and the various literary movements CO2. Understand and apply the basics of the various reading strategies that emerged during the period CO3. Read specimens of major works belonging to the period.
5	Postcolonial Literatures in English	5B09ENG	CO1. Understand the meaning, scope and issues related to the term postcolonial. CO2. Read specimens of major works belonging tothe genre. CO3. Familiarise with the cardinal concepts ofpostcolonial theory.
5	Linguistics	5B10ENG	CO1. Learn the theories regarding origin, development and history of languages. CO2. Familiarise with the cardinal concepts related to linguistics CO3. Understand the modern directions in linguistic studies.
6	Project	6B11ENG	CO1. Learn and apply specific documentation styles and methodological formalities. CO2. Critically engage with a literary theme or topic.CO3. Understand the basic formalities regarding research in humanities.
6	Critical Theory	B126ENG	CO1. Understand the basics of various theoretical positions in literary and culture studies. CO2. Apply specific theoretical insights into the study of specific works of art as well as culturalarticulations. CO3. Understand the ideological assumptions underlying common-sense notions and canon formation.
6	Women's Writing	6B13ENG	CO1. Understand women's writing as a specific genre. CO2. Appreciate the variety in women's literature and the correlation between such variety and specific socio-political contexts. CO3. Understand the various dialogic positions within women's writing.
6	Indian Writing inEnglish	6B14ENG	CO1. Understand Indian Writing in English as a specific genre based on certain common socio-political contexts. CO2. Understand the various dialogic positions within Indian Writing in English. CO 3. Understand the regional diversities and thematic plurality of IWE.

	Film Studies	6B15ENG	CO1. Learn the basic terminology, technical aspects, and the major movements in the history of cinema. CO2. Watch select movies and analyse them with an eye on technical, thematic and socio-political

			aspects. CO3. Develop basic knowledge and familiarity withthe various trends in Indian cinema.

PROGRAMME OUTCOME& COURSE OUTCOME(2020-21)

ADDITIONALCOMMONCOURSE -HINDI

PROGRAMME OUTCOME (P O)

PO1CriticalThinking:

1.1. Acquiretheabilitytoapplythebasictenetsoflogicands ciencetoth oughts,actionsandinterventions.

1.2. Develop the ability to chart out a progressive direction foractionsandinterventionsbylearningtorecognizet hepresence ofhegemonicideologywithincertaindominantnotio ns.

1.3Develop self-critical abilities and also the ability to viewpositions,problemsandsocialissuesfromplural perspectives.

PO2.EffectiveCitizenship:

2.1.Learntoparticipateinnationbuildingbyadheringtoth eprinciples ofsovereigntyofthenation,socialism,secularism,de mocracya ndthevaluesthatguidearepublic.

2.2. Developandpracticegendersensitiveattitudes,envi ronmental awareness,empatheticsocialawarenessabout various kinds of marginalisation and the ability tounderstandandresist various kinds ofdiscriminations.

2.3. Internalise certain highlights of the nation's and region'shistory.Especiallyofthefreedommovement,t herenai ssancewithinnativesocietiesandtheprojectofmoderni sationofthepost-colonialsociety.

PO3.EffectiveCommunication:

3.1. Internalise certain highlights of the nation's and region'shistory.Especiallyofthefreedommovement,therena issancewithinnativesocietiesandtheprojectofmodernisationofthepost-colonialsociety.

3.2.Learntoarticulate,analyze,synthesize,andevaluateideasandsituations.

	3.3.Generatehypothesesandarticulateassentordissentbyemployin gboth reasonand creativethinking. **P04.Interdisciplinarity:** 4.1. Perceiveknowledgeasanorganic,comprehensive,interrelated andintegratedfacultyofthehumanmind. ▪ Understandtheissuesofenvironmentalcontextsands ustainabledevelopmentasabasic interdisciplinaryconcernofdisciplines 1)Developaesthetic,social,humanisticandartisticsensib ilities forproblem solvingandevolvingacomprehensiveperspective.

Semester	Course Code	Coursetitle	Courseoutcome
I	**1A07HIN**	**HINDIKAVITHA**	**CO.1**.Understandingtheroleplayedby thepoetsofbhakthikalinliteratureandsoci ety.
			CO.2. Understandingthephilosophyoflife aswell aspoemsof chayavad.
			CO.3.Understanding the poems of Modernpoetsincontextwiththeirexperien ceoflife.
			CO.4 Understanding the contemporaryspiritofthepoets.

Semester	Course Code	Coursetitle	Courseoutcome
		KAVITHAAURKA	**CO.1**UnderstandtheHindipoetry.
			CO.2 UnderstandHindi shortstory

I	1A07-1HIN	HANI	**CO3:**Understandthestyleandtrends inhindipoetry and short story right from the ancient topost modernism.

			CO4: Developcreativethinking.

Semester	Course Code	Coursetitle	Courseoutcome
I	1A07-2HIN	NAYASAHITHYA	**CO1.**Understandthestyleofhindiprose.
			CO2. Understandhistoryofhindiprose.
			CO3. Developcriticalthinking
			CO4. Analisehindiproseandhindicriticism.

Semester	Course Code	Coursetitle	Courseoutcome
II	2A08HIN	RACHANATHATHAPRAYOG	**CO1**.UnderstandingFundamentalprinciplesofHindiGrammer.
			CO2. Understanding the correct usage ofhindigrammar.
			CO3. Developing significant increase inwordknowledge.
			CO4. Develop communicative skill inHindi.

Semester	Course Code	Coursetitle	Courseoutcome
II	2A08-1HIN	VYAVAHARIK HINDI	**CO1.**Understandthebasicgrammerofhindilanguage.
			CO2. Understandthetechnicofletterwritingand translationofhindi.
			CO3. Developcommunicativeskillinh**indi.**
			CO4. Developvocabularyinhindi.

Semester	Course Code	Coursetitle	Courseoutcome
II	2A08-2HIN	SAHITYAAURPRAYOG	**CO1.**Understandthestories.
			CO2. Understandtheimportanceofletterwritingandtranslation.
			CO3. Develop communicative skill inhindi.
			CO4. Developcreativewritingskillinhindi.

Semester	Course Code	Coursetitle	Courseoutcome
III	3A09HIN	KATHASAHITYA	**CO1.**Analyzevarietyofshortstoriesinthe culturaland historicalcontext.
			CO2. Analyze novel in the moderncontext.
			CO3. Understandthestorycontentandstr ucturein depth.
			CO4. Understandthestorycontentandstr ucturein depth.

Semester	Course Code	Coursetitle	Courseoutcome
IV	4A10HIN	NATAK AUREKANKI	**CO1.**Understandthesocialandartisticmo vementsthathave shapedtheatre.
			CO2. Analise and interpret texts andperformancesbothinwritingandorally .
			CO3. Developandapplyprocessskillsinreh earsal production and class roomsettings.
			CO4. Demonstrateproblemsolvingskillsin various theatricalcontext.

ARABIC

COURSE OUTCOME

For BA/Bsc Courses

ADDITIONAL COMMON COURSE 1 :Communication Skills in Arabic

CO 1: To enable the undergraduate students to converse in Arabic fluently by doing all the given exercises.

CO 2: To familiarize the target group the common usages and jargons of Arabic language in Arab speaking nations.

CO 3: To train and confirm the target group that the phrases and structures are normally and correctlyused.

CO 4: To understand the power of language by giving comprehensive set of exercises for language proficiency with a special focus on day to day conversational capsules.

ADDITIONAL COMMON COURSEII :LITERATURE IN ARABIC

CO 1: To understand the distinct features of Arabic prose &poetry literature from classical period tomodern period

CO2: To understand the basic characteristics of traditional and modern literature in Arabic

CO3: To realize the beauty of language & the moral values in the Arabic poems and prose literature and maintain the good perspective

CO4: To aware of the literary works of eminent scholars and writers.

ADDITIONAL COMMON COURSE III :Translation and Communication in Arabic

CO 1: To familiarize with the basic principles and goals of Translations

CO2: Understand the skills required to become a Translator

CO3: To translate simple documents from Arabic to English and vice versa

CO4:Tofamiliarize with technical vocabularies and usages.

ARABIC - ADDITIONAL COMMON COURSE IV : Indian Heritage in Arabic

CO 1: Internationalize India's great heritage and culture among the countries

CO2:Identify the harmony and unity among the people is the symbol of India since ancient times

CO3:familiarize the concern of Arabic Language in spreading the culture and heritage of India

CO4:Understand each people has the culture and heritage that distinguishes it from other

Additional Common Course - LITERATURE IN ARABIC ARABIC-Additional Common Courses forBCom/BBA//BBA (RTM)/BBA (TTM) / BBA(AH)/BTTM Programme(CBCSS- 2019)

COURSE OUTCOME:

CO-1 To understand the moral values in the learner through literatureCO-2

To identify the verbs and names in Arabic

CO-3 To make opportunities before the learner to appreciate the literature

CO-4 To develop in the learner the capacity to grasp the ideas conveyed by the literary writers.

ADDITIONAL COMMON COURSE : B.com/BBA/(TTM)(RTM)/(AH) BUSINESS COMMUNICATIONS INARABIC

CO 1: Familiarize with Commercial vocabularies and Usages

CO2: Use Arabic Language as a tool for commercial communications

CO3: Familiarize with day today conversations in the fields of commerce and industryCO4:

Translate different popular documents from Arabic to English and Viceversa.

Arabic –Additional Common Courses for BCA/BSW/B.Sc. L.R.P/ Programmes(CBCSS - 2019)
LITERATURE IN ARABIC

Literature in Arabic 1A07-2 ARB 5 4 3 COURSE OUTCOME

CO-1: To inculcate moral values in the learner through literature. CO-2

make in the learner the ability to grasp the simple Arabic text.

CO-3 To make opportunities before the learner to appreciate the literatureC0-4 To

motivate the learner for extensive reading of Arabic literature.

CO-5 To understand the distinct features of Arabic literature

ADDITIONAL COMMON COURSE II :Communicative skills in Arabic

CO 1: Use simple words and phrases to communicate on everyday situations

CO2: Understand and use key expressions and common phrases in communicationsCO3:

Oral and Writing skills of communications

CO4:Familiarize with basics of interpersonal interactions in Arabic