# GOVERNMENT ARTS AND SCIENCE COLLEGE, KOZHINJAMPARA

## DEPARTMENT OF MICROBIOLOGY

## \_M.Sc. Microbiology:\_Programme Specific Outcome

PSO1	Gain in-depth understanding of various aspects of microbiology pertaining to medical,
	agricultural, environmental and industrial applications.
PSO2	Familiarized with latest and advanced research tools and techniques pertaining to
	biology.
PSO3	Analysis of scientific issues across the spectrum of related disciplines.
DCO 4	Acquire skills specific to microbiology and allied fields for converting information to
PSO4	knowledge through hypothesis, design, execution and analysis.
DCO5	Design experiments to prove scientific processes and to synthesize products/ services
PSO5	for the benefit of the community.
PSO6	Ability to retrieve biological information through data mining and data handling.
DCO7	Ability to present their work through written, oral, and visual presentations, including an
PSO7	original research proposal.
DCOO	Enable the students to improve the quality of human lives in relation to the environment
PSO8	with the knowledge in microbiology.
PSO9	Capacity to work as a member of a team upholding the essence of collaboration,
PSU9	cooperation, ethics and integrity.
DCO10	Ability to upgrade knowledge independently and act upon means of improvement for
PSO10	lifelong learning.

#### **Course Outcomes**

## MBG1C01. General Biochemistry and Microbial Metabolism

CO1	Summarize the fundamental biochemical properties of biomolecules
CO2	Describe the metabolism of Amino acids, Carbohydrates, Lipids and Nucleic acids
CO3	Demonstrate the mechanism of ATP synthesis at various levels by biological process. Interpret the properties, classification and mechanism of action of Enzymes associated with the metabolism of biomolecules
CO4	Interpret the properties, classification and mechanism of action of Enzymes associated with the metabolism of biomolecules

## MBG 1C02: Biophysics and Instrumentation

CO1	Discuss the properties of interactions between atoms and molecules.
CO2	Demonstrate the interactions of DNA-protein, RNA-protein and DNA-drug.
CO3	Analyze the structure of protein through Ramachandran plot and advanced techniques
CO4	Compare different techniques in microscopy Differentiate the working principle, instrumentation and applications of various bio-analytical instruments.

# MBG1C03. Environmental and Sanitation Microbiology

CO1	Discuss the basic concepts of ecological system, pollution and environment
CO2	Compare different types of interaction among microbial communities and their significance
CO3	Explain biogeochemical cycles and their importance in an ecosystem
CO4	Elaborate the role of microbes in soil, water and air
CO5	Summarize the methods of air quantitation, air sanitation, sewage treatment and water purification.
CO6	Discuss the various aspects and the application of microbes in various fields of agriculture and environmental microbiology like bioremediation, biofertilizers and waste treatment methods.

# MBG1C04. Agricultural Microbiology and Plant Pathology

CO1	Describe the microbial interactions between microorganisms, plants and animals
CO2	Explain the various applications of microorganisms in agriculture to improve soil fertility as biofertilizers and bio pesticides.
CO3	Contrast between bio fertilizer and chemical fertilizer.
CO4	Illustrate different plant diseases caused by different microorganisms with emphasis on pathology and epidemiology.
CO5	Discuss the defense mechanisms exerted by the plant in response to an infection

# MBG1L01. Practical I (General Biochemistry and Microbial Metabolism)

	Apply the knowledge in the preparation of solutions and buffers according to the
CO1	neediness using molar, percentage etc.
CO2	Analyze the Qualitative and Quantitative aspects of different bio active components
	Proteins, carbohydrates, citric acids etc.
CO3	Demonstrate Enzyme kinetics and its assay using spectrophotometer
CO4	Perform isolation, Quantification, purification and separation of bioactive components
	using chromatographic techniques.
CO5	Demonstrate various experiments which include basic methods of physical,
	biochemistry, biochemical analysis and separation methods.

# sanitation, microbiology & Agricultural Microbiology and plant pathology)

CO1	Isolate bacteria, fungi, actinomycetes and phages from various sources of concern
CO2	Demonstrate various growth patterns, culturing methods and different quantification
	techniques of microorganisms from air, soil and termite gut
CO3	Demonstrate the Anaerobic cultivation of bacteria
CO4	Evaluate the efficacy of autoclave and bacteria proof filters
CO5	Demonstration of special microorganisms with different unique
	applications in agriculture and environmental research.
CO6	Assess the quality of water by MPN, DO, BOD and COD.
CO7	Compare efficacy of different bio control agents.
CO8	Assessment of the synthesis of extracellular enzymes by microbes
CO9	Illustrate the role of microorganisms in bioremediation.

# MBG2C05. Principles of Genetics

	Recall the basic concepts of Classical genetics, History of Mendel experiments on
CO1	pea plants and the laws and importance of Mendelian genetics.
CO2	Explain the mechanism of sex linkage, crossing over and genetic mapping CO3
	Summarize the importance and significance of Chromosomal aberrations.
CO3	Analyze the importance of Pedigree analysis and its usage in genetic disease analysis.
CO4	Discuss the basic concepts of bacterial genetics and mode of gene transfer mechanism
	in bacteria
CO5	Justify and correlate the importance of the molecular events in gene expression and in
	gene regulation

# MBG2C06. Food and Dairy Microbiology

CO1	Classify the type of Microorganisms present in food able to cause contamination and
	what are the factors influence growths of microbes in foods
CO2	Explain standards for assessing the quality of milk.
CO3	Summarize spoilage of food, factors causing food spoilage and food.
CO4	Elaborate different food borne infections.
CO5	Explain about food hygiene and regulatory practices.
CO6	Discuss the importance of microorganisms in food and factors affecting their growth in
	foods.

# MBG2C07. Industrial Microbiology

	Describe the methods for screening, isolation, strain improvement, upstream processing
CO1	and downstream processing in industrial processes.
CO2	Apply different isolation and development methods for industrially important
	microorganisms
CO3	Explain the mass transfer mechanism in fermentation.
CO4	Compare different types of fermentations
CO5	Explain the effects of different components in fermentation media.
CO6	Discuss various techniques used for the recovery of fermentation products

## MBG2C08. Immunology

	Describe the cells, organs, molecules, mediators, receptors associated with immune
CO1	responses.
CO2	Illustrate the development of different immune responses in a host.
CO3	Classify the immunoglobulins with a detailed understanding of their diversity generation
CO4	Explain the mechanisms of Hybridoma technology, antigen antibody reactions and
	Complement system
CO5	Categorize different immune associated disease conditions like hypersensitivity,
	autoimmunity, graft rejection and tumor development based on mechanism.

# MB2L03. Practical III (Food and Dairy microbiology & Industrial microbiology)

	Enumerate the milk microflora and Apply the methods used in Testing the
CO1	quality of milk.
CO2	Demonstrate preservation of foods
CO3	Enumerate microflora of food spoilage
CO4	Isolation of enzyme producing microorganisms
CO5	Demonstrate the Growth curve of bacteria
CO6	Demonstrate the detection of industrially important microorganisms and its metabolite production
CO7	Demonstrate the production of Mushroom production.

# MBG3C09. Medical Microbiology

CO1	Describe the morphology, pathogenicity, epidemiology, laboratory diagnosis and treatment of important human bacterial pathogens.
CO2	Explain the pathogenesis, laboratory diagnosis and prophylaxis of important viral pathogens.
CO3	Illustrate the characteristics of fungi with focus to superficial, subcutaneous, deep and opportunistic infections.
CO4	Describe the general features and classification of protozoa.
CO5	Demonstrate the morphology, life cycle, pathogenesis and epidemiology of important protozoan diseases.
CO6	Describe the mechanism of action and activity spectrum of antibiotics.
CO7	Discuss the antifungal and antiviral drugs and determination of MIC.

# MBG3C10- Molecular Biology

CO1	Explain the mechanisms behind the information flow from DNA to proteins and the
	multiple levels at which gene expression can be regulated.
CO2	Compare gene expression and regulation in prokaryotes and eukaryotes
CO3	Discuss the molecular mechanisms underlying mutations, DNA damage and repair
CO4	Acquaint knowledge of DNA replication and other mechanisms of gene transfer
	mechanisms
CO5	Discuss the concept of Oncogenes and tumor suppressor genes.

# MBG3E01. Diagnostic microbiology

	Describe a wide range of diagnostic technologies and methodologies relevant to the
CO1	fields of clinical biochemistry, hematology, histopathology, cytopathology, molecular
CO1	biology and microbiology
CO2	Differentiate between various Probe-Based Microbial Detection and Identification
CO3	Compare various molecular diagnostic tools.
CO4	Explain the application of molecular tools in systematics.

# MBG3E02. Cell Biology

CO1	Explain the structure and functions of cell components in eukaryotic cells
CO2	To distinguish the mechanism of protein sorting and transportation to various targets.
CO3	Describe the mechanisms of cell signaling, cell death and cancer development.
CO4	Correlate the cell communication mechanism with the cell cycle and its regulation.
CO5	Conceptualize the theories and molecular mechanism of cancer development

## MBG3E03. Microbial Taxonomy

CO1	Compare the classification systems with contributions of pioneers in taxonomy
CO2	Distinguish different criteria used in characterization and classification
CO3	Analyze the Molecular techniques used in classification
CO4	Discuss the Bergey's Manual of Systematic Bacteriology with emphasis to different
	groups.
	Demonstrate the knowledge of taxonomy of microorganisms and their importance
CO5	in clinical microbiology, public health and to prevent growth and spread of microbes in
	the environment.

# MBG3L04 Practical IV (Immunology and Medical Microbiology)

CO1	Perform the acid fast staining procedure
CO2	Demonstrate skills in isolation and identification of various pathogenic microorganisms
CO3	Discuss the viral inoculation routes in embryonated eggs.
CO4	Perform immunological tests for diagnosis of antigen/antibody
CO5	Determine the MIC of an antimicrobial compound.

## MBG3L05. Practical V (Principles of Genetics & Molecular Biology)

CO1	Demonstrate the stages of mitosis and meiosis
CO2	Isolate, purify and estimate DNA, RNA and plasmid from bacteria
CO3	Demonstrate the visualization of the isolated nucleic acid by electrophoresis
CO4	Demonstrate the concept of hyperchromism
CO5	Evaluate the gene transfer process in bacteria by performing conjugation and transformation
CO6	Assess the gene transfer by induction of beta gal gene in E coli Demonstrate cloning and restriction digestion

## MBG4C11. Biostatistics and Bioinformatics

CO1	Discuss the principles and practices of statistical methods in biological research.
CO2	Explain various biological databases for sequence retrieval, analysis, sequence
	alignments, phylogeny and other applications.
CO3	Discuss the method of molecular docking and their application
CO4	Discuss the concept behind drug designing with the application of bioinformatics tools.

## MBG4E04. Microbial Biotechnology

	Identify the issues related to plant nutrition, quality improvement, environment
CO1	adaptation, transgenic crops and their use in agriculture.
CO2	Discuss the environmental impact of genetic engineering related to GM food crops and
	other agro, diary based products.
CO3	Explain the importance of microbes in oil recovery and degradation, leaching,
	bio-mining and also production of biopolymers, bio-surfactants, antibiotics enzymes etc.
CO4	Describe genetic engineering for recombinant protein expression and production from
	various cell systems which has advanced knowledge about factorial experimental set up.

# MBG4E05. Genetic Engineering

CO1	Discuss the fundamental molecular tools and their applications in DNA modification,
	manipulation and cloning.
CO2	Compare genomic and c DNA Library
CO3	Describe advanced molecular techniques in genetic engineering-PCR Methods,
	sequencing methods, RFLP, RAPD etc.
CO4	Interpret the importance of molecular marker genes in cloning
CO5	Explain the techniques for DNA introduction to the vectors and host cells.

# MBG4E06. Biosafety, Bioethics & IPR

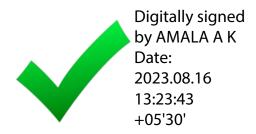
CO1	Discuss the significance of biosafety and bioethics related regulations.
CO2	Appreciate the importance of Intellectual property rights and explain various types of IPR
CO3	Recognize importance of biosafety practices and guidelines in research
CO4	Comprehend benefits of GM technology and related issues.
CO5	Recognize the importance of protection of new knowledge and innovations and its role in business.

# MBG4L06. Practical VI (Biostatistics and Bioinformatics)

	Demonstrate proficiency in bioinformatics methods including accessing the major
CO1	public sequence databases, use of the different computational tools to find sequences,
	analysis of protein and nucleic acid sequences by various software packages
CO2	Retrieve data from Biological Databases
CO3	Explain the features of National Centre for Biotechnology Information (NCBI)
CO4	Preform sequence comparison using various alignment tools
CO5	Create protein structures with modeling tools.
CO6	Prediction of Gene structure, gene function and ORF position.

## MBG4P. Dissertation

CO1	Perform data mining, literature search, systematic review, research gap finding and development of hypothesis
CO2	Design and execute experiment/ sampling methods
CO3	Compilation and analysis of data and interpretation of results
CO4	Analyze the results and validate the hypothesis to reach proper conclusions.
CO5	Develop scientific writing skills
CO6	Demonstrate skills in various advanced laboratory techniques



# GOVERNMENT ARTS AND SCIENCE COLLEGE KOZHINJAMPARA DEPARTMENT OF COMMERCE

**B.Com Finance: PROGRAM OUTCOME (POs)** 

PO1	Critical Thinking: Ability to take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives
PO2	Effective Communication: Ability to speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology
PO3	Effective Citizenship: Ability to demonstrate empathetic social concern and equity-cantered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering
PO4	Environment and Sustainability: Ability to understand the issues of environmental contexts and sustainable development
PO5	Ethical Living: Ability to recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them
PO6	Social Interaction: Ability to elicit views of others, mediate disagreements and help reach conclusions in group settings
PO7	Problem Solving and Analytical Skills: Ability to think rationally, analyse situations and solve problems adequately

## PROGRAM SPECIFIC OUTCOMES

PSO1	Develop thorough systematic and subject skills within various discipline of commerce, business, accounting, economics, finance, auditing and marketing
PSO2	Understand the relevant financial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.
PSO3	Recognize features and roles of businessmen, entrepreneurs, managers, consultants, which will help learners to possess knowledge and other skills and to react aptly when confronted with critical decision making.
PSO4	Ability to pursue professional courses like CA, CS, ICWA and the like.
PSO5	Acquire the skills like effective communication, decision making problem solving in day-to-day business affairs
PSO6	Accomplish higher education and advance research in the field of commerce and finance.
PSO7	Able to play roles of businessmen, entrepreneur, managers, consultant, that will help learners to possess knowledge and other soft skills and to react aptly when confronted with challenging situations.

# **COURSE OUTCOMES (COs)**

# **BCM1 B01-Business Management**

CO1	Understand dynamics of business organisations and management practices with respect to stakeholders.
CO2	Describe the concepts of motivation and leadership for efficient functioning of organizations.
CO3	Understand the theories of business ethics and analyse factors influencing business ethics.
CO4	Describe Corporate Social Responsibility and analyse steps in the implementation of CSR activities.
CO5	Illustrate CSR initiatives in India
CO6	Understand the emerging concepts in management and its application level in different sectors of management.

# **BCM2 B02- Financial Accounting**

CO1	Recall the relevance of accounting and its procedures.
CO2	Evaluate single entry system of accounting.
CO3	Explain the purpose and importance of Double Entry Book Keeping System and prepare ledger accounts using double entry book keeping.
CO4	Understand the theories and technical terminologies of company accounts regarding issue of shares.
CO5	Prepare journal entries and ledger accounts regarding issue, forfeiture and surrendering of shares.
CO6	Define debentures, explain types of debentures and prepare journal entries and ledger accounts
CO7	Understanding the definition of elements of financial statements and comparing and contrast IFRS and Ind AS.
CO8	Prepare final accounts under the Ind AS /IFRS prescribed formats of SOPL, SOCI and SOFP.

## **BCM3 B03- Business Regulations**

CO1	Understand statutes concerning and affecting business organizations in their operations
CO2	Understand the concept and provisions of the Indian Contract Act 1872.
CO3	Understand the relevance and fundamental legal principles behind specific contracts
CO4	Create an awareness regarding the rights and duties of consumers under Consumer Protection Act 1986.
CO5	Understand statutory provisions related to Limited Liability Partnership Act
CO6	Apply problem solving techniques and to be able to present coherent, concise legal

# **BCM3 B04- Corporate Accounting**

CO1	Able to write accounting entries and accounting treatment in respect of redemption of debentures and redemption of preference shares
CO2	Problem solving ability on the accounting treatment of Bonus Shares, Right Shares, and Buyback of Shares.
CO3	Able to prepare final accounts of Banking Companies as per the prescribed format and the corresponding schedules and notes
CO4	Problem solving ability on the preparation of final accounts of Life Insurance Companies as per the IRDA stipulations and formats
CO5	Understand the basic concepts and terminologies related to Consolidated Financial Statements and apply such knowledge in the preparation of consolidated balance sheet
CO6	Understanding the basic concepts and terminologies related to various disclosure-based accounting standards and able to ascertain the basic and diluted EPS

# **BCM4 BO5- Cost Accounting**

CO1	Understand the basic concepts and processes used to determine product costs.
CO2	Demonstrate how materials, labour and overhead costs are added to a product at each stage of the production cycle.
CO3	Compute cost sheet by distinguishing direct and indirect cost.
CO4	Understand the idea and meaning of material control with pricing methods
CO5	Develop an understanding in calculation of remuneration, incentives and various overhead cost
CO6	Understanding various costing methods adopted in different industries
CO7	Preparation of flexible, cash, Sales and Production budgets.
CO8	Analyse and evaluate information for cost ascertainment, planning, control and decision making.

# **BCM4 BO6- Corporate Regulations**

CO1	Understand corporate law and create awareness regarding the importance of corporate governance in the management of organizations.
CO2	Recognize the legal aspects of the memorandum of association and article of association in a company.
CO3	Understand the concept and provisions of the Indian Company Act.
CO4	Understand statutory provisions related to Securities and Exchange Board of India Act 1992.
CO5	State the legal aspects relating to the winding up of the company.
CO6	Apply problem solving techniques and to be able to present coherent, concise legal arguments.

# **BCM5 B07- Accounting for Management**

CO1	Understand the relationship between cost accounting – financial accounting and managerial accounting.
CO2	Understand the use of management accounting for planning, control and decision making
CO3	Understand and apply the basic techniques of financial statement analysis
CO4	Analyse financial statement using ratios
CO5	Prepare cash flow and fund flow statements
CO6	Assess how cost volume profits are related and use CVP analysis as a planning, control and decision-making aid.

## **BCM5 B08- Business Research Methods**

CO1	Understand meaning, scope and types of Business Research
CO2	Understand the role of theory in research
СОЗ	Identify research design and recognise various scaling techniques
CO4	Determine sources of data collection.
CO5	Apply the basic techniques of data processing and analysis.
CO6	Understand the format of research reporting and creation of a report

## **BCM5 B09- Income Tax Law and Accounts**

CO1	Understand the evolution and definitions in income tax in India
CO2	Understand and determine the residential status and incidence of tax.
CO3	Understand and determine the agricultural income
CO4	Determine the income from salaries
CO5	Computation of income from house property
CO6	Computation of profits and gains of business or profession
CO7	Determine capital gains and income from other sources

## **BCM6 B12- Income Tax and GST**

CO1	Computation of tax liability of individuals.
CO2	Understand the powers and functions of income tax authorities and procedures of assessment of income tax.
CO3	Understand basic concepts of GST and its implication on individuals and
	business with regard to taxation.
CO4	Analyse the rate of GST, payment and refund of tax.
CO5	Understand GST return filing system
CO6	Apply the provisions of GST laws for supply of goods intrastate and interstate

# **BCM6 B13- Auditing and Corporate Governance**

CO1	Recognise the basic concepts of auditing.
CO2	Understand the procedures and techniques of auditing.
CO3	Analyse various financial statements and evaluate them to recognize the contradictions in them.
CO4	Understanding the concept of corporate governance.
CO5	Understand the theories, models and benefits of corporate governance.
CO6	Appraise the corporate governance problems in the global and Indian context

#### **BCM5 B10- Financial Markets and Services**

CO1	Understand the concepts and basics of the various financial services which are in a nascent and developing stage in our country.
CO2	Understand the features, objectives, operations and participants of the money market.
CO3	Understand the meaning, functions, and new issues in the capital market.
CO4	Evaluate the functions, listing and methods of trading in stock exchanges.
CO5	Understand the function and objectives of financial institutions, mutual funds and lease financing
CO6	Examine the role of regulatory institutions SEBI and RBI.

# **BCM5 B11- Financial Management**

CO1	Understand the concepts, tools, processes, decision areas and practices of financial management.
CO2	Understand the capital budgeting process and applies the learned knowledge in making investment decision by using various capital budgeting methods
CO3	Comprehend the concepts and terminologies related to financing decisions and be able to compute specific and composite cost of capital.
CO4	Able to calculate various types of leverages and analyse the effect of leverage in the EPS of companies
CO5	Formulate understanding on the relevance and irrelevance theories of Dividend Policy and its effect in the value of firm or equity
CO6	Able to conceptualise the theory and practice of working capital management including techniques of managing Cash, Inventory and Receivables.
CO7	Ascertain the required amount of working capital under the Current Assets forecasting approach and Operating Cycle approach

## **BCM6B14- Fundamentals of Investments**

CO1	Understand the concepts and terminologies related to investments, process of investment and the investment environment
CO2	Applies the learned methods in calculating the Risk and Return in respect of invested securities
CO3	Able to calculate value of Debt and Equity securities and analyse the intrinsic value for taking investment decision
CO4	Understand and lists-out various factors in the EIC analysis and develops skills in drawing and interpreting stock charts and price patterns
CO5	Analyse portfolios by calculating portfolio risk and return
CO6	Understand the investor protection measures of SEBI and develops application abilities for the actual practice

## **BCM6 B15- Financial Derivatives**

CO1	Define derivatives
CO2	Differentiate the various derivatives
CO3	Describe the history of derivative market
CO4	Understand the different types of futures
CO5	Understand swaps
CO6	Understand the various derivatives in India

# **BCM1 C01- Managerial Economics**

CO1	Understand the Fundamentals of Microeconomics and Macroeconomics.
CO2	Understand the concepts of Demand, Supply Analysis and Theory of Consumer Behaviour.
CO3	Compare and illustrate Price, Output and Profit Determination under different market structures.
CO4	Apply economic theories in decision-making.
CO5	Analyse the profile of Indian and Kerala economy.
CO6	Evaluate the performance of India and Kerala in global scenario

## **BCM2 C02- Marketing management**

CO1	Understand the basic concepts, principles, tools, strategies and techniques of marketing management.
CO2	Identify the consumer behaviour and its relationship with marketing concepts.
CO3	Compare marketing strategies adopted by different business firms.
CO4	Analyse strategic decisions related to product, pricing, distribution & promotions.
CO5	Analyse recent trends in marketing.
CO6	Prepare marketing plans for products or services.

## **BCM3 C03- Human Resource Management**

CO1	Understand basic concept of HRM
CO2	Understand the principles and practices related to Human Resource Planning
CO3	Understand the training methods and evaluation of employee
CO4	Develop and assess one's own competencies towards a career in HRM
CO5	Identify the wage system.
CO6	Understand and handle different job environment
CO7	Understand the practical applications of Human resource terminology

# **BCM4 C04- Quantitative Techniques for Business**

CO1	Understand the meaning and discipline of QT in business
CO2	Apply time series analysis to forecast the future trends.
CO3	Understand and apply the methods of constructing index numbers.
CO4	Apply statistical tools- correlation and regression to establish degree of relationship between two variables
CO5	Understand the concept of probability and approaches to the theorems of probability.
CO6	Apply set theory and calculations using Venn Diagrams in various statistical analysis.
CO7	Explain the theoretical distributions and its fittings.

## **BCM5 D02- Basics of Entrepreneurship and Management**

CO1	Define and explain the concept of entrepreneurship
CO2	Identify the qualities of an entrepreneur
CO3	Understand various forms of business organisationsSole trader, Partnership and Joint Stock
CO4	Understand the concept and Importance of Management
CO5	Explain various functions of Management

## **BCM3 A11- Basic Numerical Methods**

CO1	Create Problem Solving Skills.
CO2	Understand numerical equations and apply the methods for solving equations.
CO3	Understand matrices and its operations
CO4	Understand the concepts of sequence, series and progressions.
CO5	Explain mathematics of finance and compute interest and time value of money.
CO6	Describe the measures of central tendency and dispersion.

#### **BCM3 A12- Professional Business Skills**

CO1	Recognise the professional and soft skills for business
CO2	Explain the effectiveness of e- learning, knowledge resources on a global perspective
CO3	Create e- contents (Using informatics skills)
CO4	Understand the Basic concepts of Business Data Analysis and Social Networking Analysis
CO5	State the role of Artificial Intelligence and other intelligent agents in e- business
CO6	Describe the ethical and legal considerations in business analytics
CO7	Monitor and critically evaluate the socio- cyber informatics space. (Cyber ethics, e-wastage, Green Computing, E. governance in India)
CO8	Compare and Contrast the Digital Marketing space with the traditional business

# **BCM4 A13- Entrepreneurship Development**

CO1	Define and explain the concept of Entrepreneurship
CO2	Compare and contrast the institutional support and incentives to entrepreneurs in India
CO3	Recognize and describe the role of Micro Small and Medium Enterprises on the Development of Entrepreneurship in India.
CO4	Understand the benefits, assistance and support services in establishing a SSI
CO5	Create awareness on setting up an industrial unit through generation of ideas, market demand analysis and feasibility studies.
CO6	Prepare and design the project report for the establishment of an enterprise.

# **BCM4 A14- Banking and Insurance**

CO1	Describe the origin and development of banking, types and structure of banking
CO2	Explain the various negotiable instruments
CO3	Apply the modern E-banking services
CO4	Apply the procedure for the application and activation of M-banking and tele-banking
CO5	Describe the concept of insurance as a social security tool for economic development
CO6	Understand the general principles of life insurance contract and the role and functions of IRDA



# GOVERNMENT ARTS AND SCIENCE COLLEGE KOZHINJAMPARA DEPARTMENT OF ENGLISH

#### B. A. Functional English: Programme Specific Outcomes (PSOs)

PSO1	To help learners gain better listening, speaking, reading and writing skills so that they can express themselves fluently in personal and professional contexts.
PSO2	To develop critical thinking ability and sensibility towards social, economic and societal situations by reading the texts from various genres of literatures.
PSO3	To get an awareness of the basic concepts and theoretical frameworks of Creative Writing, Translation Studies, Film Studies, Theatre for Communication, Advertising, Business English, Linguistics, English and Communication Technology and to develop research aptitude by learning literary and cultural theories
PSO4	To help learners to improve their proficiency in applying various skills in their personal and professional lives thereby enhancing their employability prospects.

**Common Courses: Course Outcomes** 

#### **A01 Litmosphere: The world of Literature**

#### A02 Functional Grammar and Communication in English

СО	Learners get a general awareness of pronunciation, vocabulary and grammar of English Language and acquire essential LSRW skills needed for academic transactions, discussions
	presentation and debating.

#### A03 Readings from the Fringes

СО	This course aims to make the student understand the gender inequality, marginalization, disability studies, racism and casteism in our society.  Though this engagement has been part of literary academic analysis, it has just begun making its foray into the syllabus of English departments of Indian universities.  This paper hopes to introduce undergraduate students to perspectives within literatures that acquaint them with both experiences of marginalization, as well as the examination of modes of literary stylistics that offer a variation from conventional practice.
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#### **A04 Readings on Kerala**

	To give an overview of Malayalam literature and provide a detailed understanding of the
CO	cultural and historical tradition of the society and the development of literary sensibility. The course also provides a detailed analysis of the evolution of Malayalam literature through
	various genres.

CO	To familiarize the students with the emerging trends and growth of regional literatures in India.
CO	This course offers a choice selection of significant modern Indian literary works, produced in regional languages.

#### A06 Songs and Stories Of Our World

	To provide students an overview of literary works from around the world. Through a selection
CO	of literary texts from different parts of the world and from different eras, the course offers an
	insight into the varied ways of self-expression of different peoples of the world.

#### Core, Complementary and Open Courses: Course Outcomes

#### FEN1B01 Core Course-I: Communication Skills in English

CO	Learners improve their ability to express themselves in English in formal and informal
	situations.

#### FEN1(2)C O1 Complementary Course- I Literatures in English: From Chaucer to the Present

	Learners become familiar with the various movements and ages in English literature, get
CO	acquainted with the great classics in English literature and get enlightened by the experience
	of reading great works of literature.

#### FEN2B02 Core Course-II Advanced English Grammar

CO	Learners get exposed to the advanced level of grammatical patterns and usages in English
	and improve their skills to speak and write English accurately.

## FEN1(2)C O2 Complementary Course- II Cultural Studies: Perspectives in Culture

their learning within exuse interdisciplinary comeanings of cultural of	explorations of the disciplinary and historical context of the field and to critical perspectives to examine the diverse and sometimes contested objects and processes, establishing a basic knowledge of the theoretical Studies
	objects and processes, establishing a basic knowledge of the theoretical

#### FEN3B03 Core Course- III Language and Technology

CO	Learners get skills in using the internet as a potential tool for language learning and acquire
	skills to use smart phones for better communicative mastery in English.

#### **FEN3B04** Core Course IV Applied Phonetics

	CO	Learners are able to identify distinctive English sounds, its production and the varied
	CO	phonetic symbols and to handle the target language effectively in an Internationally
L		acceptable manner.

#### FEN4(3)C O1 Complementary Course III- Literatures in English: American and Postcolonial

СО	Learners get acquainted with some of the landmark texts of American Literature through the ages and a general understanding of the variety of postcolonial writings and the diverse
	voices that constitute postcolonial identity.

#### FEN4B05 Core Course V Fundamentals of Linguistics

CO	Learners understand the relationship between linguistics and related disciplines, to use
CO	linguistics as a tool in understanding and processing written or spoken text and acquire better
	communication and analytical abilities in English.

#### FEN4B06 Core Course VI Business English

	CO	Learners get a comprehensive idea about business correspondence, develop ability to prepare
		business letters, business reports, technical proposal and the like which in turn, develop their
		employability skills.

#### FEN4(3)C O2 Complementary Course- IV Cultural Studies: Cultural Spaces

CO	Learners are able to connect cultural knowledge to everyday life and practices, gaining a
	preliminary understanding of the relationship of methodology (paradigms for study) to
	inquiry in Cultural Studies.

#### **FEN5B07** Core Course VII Translation Studies

СО	Learners have an overall view of basic theories of translation and acquire the
	skill in translating various kinds of texts.

#### FEN5B08 Core Course VIII Print Media

	Learners get knowledge of the history of the media, acquire functional knowledge of the
CO	fundamentals of media writing and develop the skill by practice of writing editorials,
	features, reviews and the like.

#### FEN5B09 Core Course IX Theatre For Communication

l		Learners become familiar with the theories related to drama and theatre, both eastern and
l	CO	western from Bharata and Aristotle to modern theatre and able
l		to understand and analyse plays.

#### FEN5B10 Core Course X Contemporary Literary Theory

CO	Learners gain a basic understanding of the 20th century Literary Theories and Critical
	Approaches which in turn enhance the taste of research in them.

#### FEN5D02 Open Course: Language For Advertising: Theory & Practice

CO	Learners get an understanding of the techniques and procedures involved in advertisement
	production and to analyse advertisements in terms of creativity and execution.

#### FEN6B11 Core Course-XI English Language Teaching

СО	Learners are able to teach basic English language components in an effective way, to
	understand and achieve the rudimentary skills for being a successful English teacher, to
	realize the roles of a teacher/learner in making the process of teaching interactive and
	outcome-based and to acquire better presentation and communication abilities in English.

#### FEN6B12 Core Course XII Electronic Media

CO	Learners get familiarized with the fundamentals of electronic media and a basic knowledge
CO	of the fundamentals of writing for the electronic media.

## FEN6B13 Core Course-XIII Creative Writing

CO	Learners learn how to identify and appreciate various writing styles, to develop abilities to
CO	critically reflect on other's writings from different angles and acquire skills to prune their
	writing skills and analytical skills.

#### **FEN6B14** Core Course XIV Film Studies

co	Learners develop skills to appreciate film as an art form and its aesthetics, get an understanding of visual aesthetics, forms and technological innovation and develop
	skills to connect films with history politics, technology, psychology and performance.

#### FEN6B16 Elective-II Women Studies

СО	CO	To introduce students to experiences unique to women and to the fundamental percepts of
	CO	the feminist movement

#### FEN6B17 Project Work

CO	Learners get a space to express their talents and skills in creating their own artifact/product
	based on the knowledge and art they have acquired through their project works.



# GOVERNMENT ARTS AND SCIENCE COLLEGE KOZHINJAMPARA DEPARTMENT OF MICROBIOLOGY

## **B.Sc MICROBIOLOGY: PROGRAMME OUTCOMES (POS)**

PO1	Acquire knowledge about the fundamental principles and scientific theories related to various scientific phenomena in day-to-day life.
PO2	To develop communication skills and get expertise in scientific writing.
PO3	Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments.  Equip them with the skills to think creatively and draw logical inferences from the scientific experiments to draw the objective conclusions or provide new solutions to the problems.  To make them Capable of working effectively in diverse teams in both classroom, laboratory and in industry and field-based situations.
PO4	To get an awareness of the impact of science on the environment and society.

## PROGRAMME SPECIFIC OUTCOMES (PSOS)

	Gain integrated knowledge on different aspects of microbiology, biochemistry, biostatistics
PO1	and computer applications bioinformatics and emerging worldwide microbiological
	technologies, issues, and perspectives.
PO2	Acquire skills specific to microbiology and allied fields for converting information to
102	knowledge through hypothesis, design, execution and analysis.
PO3	Analysis of scientific issues across the spectrum of related disciplines.
PO4	Enable the students to improve the quality of human lives in relation to the environment
104	with the knowledge in microbiology.
PSO5	Capacity to develop, employ and integrate technical and professional skills as a member of
1303	a team upholding the essence of collaboration, cooperation, ethics and integrity.

## **COURSE OUTCOMES**

## MBG1B01. General Microbiology

CO1	Sketch the historical events in the developments of Microbiology as a discipline emphasizing the contributions of the scientists.
CO2	Compare the difference between the basic cell types viz, Eukaryote, Prokaryote, Virus, Actinomycetes and Archaebacteria
СОЗ	Describe the ultra structure of a bacterial cell helping to study the further biochemical and physiological reactions inside the cell.
CO4	Discuss various microscopes and compare the different types of light and electron Microscope.
CO5	Explain the various staining techniques and to distinguish their application in Microbiology.
CO6	Discuss the sterilization procedures and to implement it to maintain a hygienic environment

# MBG2B02. Microbial Physiology and Taxonomy

CO1	Discuss the environmental and nutritional factors affecting the microbial growth and
001	classify them according to these.
CO2	Describe the mechanism of nutrient transportation across the bacterial membranes.
CO3	Explain the preparation of various cultural media and to distinguish them for microbial
003	cultivation
CO4	Differentiate various cultural methods and preservation techniques
CO5	Illustrate the reproduction systems and the growth phases of bacteria and bacteriophages
CO6	Examine various methods for estimation of microbial cells.
CO7	Analyze the taxonomy of microorganisms through the comparative study of various criteria
007	used and classify them into corresponding groups.

# MBG3B03. Environmental and Sanitation Microbiology

CO1	Describe the organisms in air with their sources and distribution
CO2	Explain the methods of waste water treatment, air sampling , solid waste management, bioremediation and bioleaching
CO3	Discuss the microbial distribution in aquatic environment with special emphasis on factors affecting them
CO4	Compare the water purification procedures and the tests for the microbiological examination of water
CO5	Explain air borne and water borne diseases with their mode of transmission
CO6	The concept of xenobiotics and related environmental problems.

# MBG4B04. Soil and Agricultural Microbiology

CO1	Recall different types of soils and soil properties
CO2	Distinguish the different groups of microorganisms present in soil and the factors affecting their growth
CO3	Describe the concept of ecosystem and its components and concept of biogeochemical cycles and N, S and P cycles.
CO4	Differentiate different types of biological interactions such as microbe-microbe, plant-microbe and animal-microbe
CO5	Explain the symptoms, disease cycle and control measures of different bacterial, viral and fungal diseases of plants
CO6	Discuss the potential of different microorganisms in agriculture as biofertilizers and biopesticides

## MBG4B05(P). Microbiology Practical I

CO1	Familiarize with parts of a microscope and apply light Microscopy in microbiological studies
CO2	Apply the skill of the staining for microscopic visualization
CO3	Acquaint with common methods of sterilization and to apply the sterilization procedures in a microbiology laboratory and similar places where hygiene has to be maintained
CO4	Prepare different types of media for the cultivation of microorganisms in a microbiological lab.
CO5	Determine the effect of various factors influencing the growth of microorganisms
CO6	Demonstrate techniques for isolation and enumeration of microbes from various samples.

## MBG5B06. Industrial Microbiology

CO1	Describe basic concepts of a fermentation process with various types
CO2	Discuss the media formulations and their significance in fermentation process.
	Explain different methods for screening, isolation, improvement of strain,
CO3	upstream processing and downstream processing of industrially important
	microorganisms and products.
CO4	Compare various techniques used for the recovery of fermentation products.
CO5	Demonstrate industrial production of microbial metabolites.
CO6	Discuss different intellectual property rights related to microbial products.

# MBG5B07. Food and Dairy Microbiology

CO1	Memorize the types and importance of microbes that exist in different food items and understand different parameters affecting their growth in food.
CO2	Explain major methods to detect microbes in food, with special importance to contaminants.
CO3	Illustrate the physical and chemical properties of milk and types of microorganisms present in milk.
CO4	Differentiate different methods used for the microbiological examination of milk.
CO5	Acquire in-depth knowledge about microbial production of fermented dairy and non-dairy food products and understand the health benefits of SCP, probiotics and prebiotics
CO6	Gain an insight to the microbial spoilage of different kinds of foods.
CO7	Discuss major food borne diseases caused by different groups of microorganisms
CO8	Explain preservation of food by various physical and chemical methods
CO9	Discuss the concept of quality control in food, regulatory practices and policies

# MBG5B08. Immunology

CO1	Explain the biological functions of various immune cells and organs
CO2	Recognize the cellular coordination in the generation of immune responses
CO3	Illustrate the types, structure and basic features of antigen and antibody.
CO4	Demonstrate the significance of MHC, C system and immunological tolerance.
CO5	Classify antigen-antibody reactions involved in diagnosis of infections.
CO6	Describe the types and mechanisms of hypersensitivity, autoimmunity and graft rejection reactions.
CO7	Discuss the causes, molecular mechanisms, immunological responses and treatment options of tumor development.

# MBG5B09. Medical Microbiology I

CO1	Explain the concept of infection, its types, sources and the mode of transmission of various diseases.
CO2	Discuss the methods for collection and transportation of clinical samples.
CO3	Compare the morphology, cultural and biochemical characteristics, pathogenesis, laboratory diagnosis, treatment and prophylaxis of various bacterial diseases.

## MBG6B10. Genetics and Genetic Engineering

CO1	Summarize the mendelian and non mendelian concepts inheritance
CO2	Explain the concepts of linkage, crossing over and recombination
CO3	Illustrate the cell cycle events and its regulation mechanisms in eukaryotes
CO4	Demonstrate the recombination frequency as a tool of gene mapping in eukaryotes and gene transfer techniques as a tool in prokaryotes.
CO5	Describe the pathways of cell cycle and their regulation strategies adopted by eukaryotic cells.
CO6	Discuss the molecular mechanisms behind the programmed cell death and the inter-relation
	of death pathway with the cell cycle and immune response.
CO7	Explain the principle behind rDNA technology, DNA sequencing, PCR and their applications in biological sciences.
CO8	Discuss the development of GMOs and its potential risks and benefits on the environment
CO9	Critical & ethical analysis of application r DNA technology in our society

# MBG6B11. Medical Microbiology II

CO1	Discuss the important viral diseases including emerging viral diseases, with special emphasis on symptoms, pathogenesis, transmission and prophylaxis.
CO2	Analyze symptoms, pathogenesis, transmission, prophylaxis and control of important
	fungal diseases of humans including emerging fungal diseases
CO3	Explain important protozoan diseases of humans such as malaria, amoebiasis and helminth
	infections and infections caused by flagellates
CO4	Compare different types of vaccines and their routes of administration
CO5	Distinguish antibiotics classes, their mode of action and mechanism of antibiotic
	resistance.

# MBG6B12 (P). Microbiology Practical II

CO1	Apply the biochemical, microscopic and physiological properties of bacteria for the identification of unknown bacteria or clinically relevant bacteria in a patient sample.
CO2	Report variations observed in the blood cell count majorly for clinical or diagnostic purpose
СОЗ	Perform various serological techniques routinely executed in clinical laboratories.

# MBG6B13 (P). Microbiology Practical III

CO1	Perform isolation and screening of industrially important microorganisms from soil
CO2	Demonstrate the different fermentation processes-citric acid production, alcohol
	production and wine production
CO3	Identify sterilization problems with suspended solids in media
CO4	Compare various cell disruption techniques
CO5	Perform cell disruption and salting out
CO6	Perform enrichment of coir pith degraders, pellicle formation, and penicillin assay
CO7	Analyze the aerobic mesophilic count of milk and microbial flora of fermented milk
CO8	Evaluate the microbiological quality of milk by Methylene Blue Reductase test

## MBG6B15 (E1). Cell and Tissue Culture

CO1	Describe how a plant & animal cell culture lab should be designed and maintained.
CO2	Demonstrate the concept of tissue culture technique for plant regeneration and its
	application in developing plantlets of specific characteristics.
CO3	Describe methods to determine cell cytotoxicity which in turn can be used to validate drugs
	and cosmetics for their side effects (toxicity).
CO4	Discuss the basics of stem cells, their characterization and applications.

## MBG6B15 (E2). Molecular Biology

CO1	Demonstrate the structure, function and other basic features of DNA and RNA
CO2	Analyze the organization of genetic material by means of proteins and topological properties
CO3	Conceptualize the theme of central dogma of molecular biology by discussing the events, enzymes and mechanisms of replication, transcription and translation.
CO4	Illustrate the gene expression regulation mechanisms in prokaryotes by means of lac and trp operons.

# MBG6B15 (E3). Bioinstrumentation

CO1	Describe the principles and applications of various techniques in life sciences such as Spectrophotometer, pH Meter, Electrophoresis, NMR, Biosensors, Centrifugation,
	Chromatography and Radio Isotope techniques used in the isolation, purification and
	analysis of biomolecules
CO2	Describe various Spectroscopic and Chromatographic techniques
CO3	Characterize the given sample using bioanalytical techniques
CO4	Apply the concepts of modern analytical and instrumental techniques relevant to
	quantitative measurements in life sciences



# GOVERNMENT ARTS AND SCIENCE COLLEGE, KOZHINJAMPARA Department of Tamil

# B.A. Tamil with History and Economics Programme: Programme Specific Outcomes (PSO)

	Increase Knowledge in Ancient, Medieval, Later Medieval and Modern Literature
PSO 1	in Tamil Language .Enhance skills and attitudes for becoming a better learner,
	thinker, and a human being by learning Literature in Tamil.
PSO2	Develop skill in Grammar Through the study of Nannool Ezhuthu & Chol and
	apply its grammatical rules to Contemporary Tamil language.
	Articulate and exemplify basic knowledge of literary theories and its inevitability
PSO3	to interpret a literary text. Ability to apply the literary theories to the modern
	literary texts and interpret accordingly.
PSO4	Apply the Modern Linguistic theories in Tamil language
PSU4	And differentiate Phonology, Morphology, Syntax and Semantic structures
PSO5	Acquire knowledge on fundamentals and sub divisions of Agattinai, Purattinai,
1303	Thinai, Thurai and Agam Puram Relations.
	Acquire the knowledge to Compare the Literature of Tamil with the Literature of
PSO6	other languages, Arts and Culture. Acquire knowledge on different kinds of
1300	criticism like Historical, Comparative, Modernistic, Marxist, Post modernistic,
	Feministic, Environmental Criticism etc
PSO7	Acquire Skill in various techniques of writing Poetry and Critical essays
PSO8	Enhance skills and attitudes for becoming a better learner, thinker, and a human
1300	being by understanding the ancient and modern ethical Tamil Literature.
PSO9	Ability to Speak, write and Translate from Tamil to Malayalam and English and
1309	also understand the history of Tamil Literature.
PSO10	Acquire Skill in Folk Literature and understand the different kinds of performing
13010	folk arts and Tamil Ethnography
PSO11	Acquire Knowledge on Journalism, Electronic media, Types of news reporting,
13011	Types broadcasting and Social media.
PSO12	Ability to Speak, write, Translate from Tamil to Malayalam and English and also
1 5012	understand the history of Tamil Literature.

## **Course Outcomes (COs)**

## TML 1B01 Naveena Tamil-Urainada

	Identify different literary genres in modern Tamil Prose literature ie, Novel, Short
CO1	Story, Biography and Critical Essays
CO2	Enhance the Knowledge of Critical Thinking on modern literature CO 3 Develop the
	knowledge in contemporary issues in to the literature
CO3	Ability to write reviews and criticism on contemporary literature for journals and
	magazines
CO4	Knowing many contemporary literary Personalities

#### TML 2B02 Naveena Tamil-Kavithai

CO1	Identify different trends in modern Tamil poetical literature.
CO2	Enhance the Knowledge of Critical Thinking on modern literature
CO3	Develop the knowledge in contemporary issues of the modern Tamil literature
CO 4	Introducing Modern Tamil Poetical Personalities
CO5	Ability to write reviews and criticism on contemporary literature for journals and
	magazines
CO6	Understand the style of Modern Poetry Writing CO7 Analyze Various factors of
	modern potry

# TML3B03 Idaikkala Ilakkiyam

CO1	Understand the nature of Tamil Bakthi / Spiritual literature of Saivaite and
	Vaishnavite poetics
CO2	Acquire the knowledge in Tamil Epic Literature
CO3	Acquire the knowledge in Tamil Minor Literature
CO4	Understand the genres and Character of Later Tamil Poetries
CO 5	Aware the contributions of Christian and Islamic Poets to Tamil language and
	Literature

## TML4B05 Pandaiya Ilakkiyam

CO1	Learn about ancient literature and its literary peculiarities
CO2	Understanding of Tamil Akam Puram Literary traditions
CO3	Acquire Knowledge in Tamil Didactic Literature and its impact in human behaviours
CO4	Identify and Categorize Ancient Tamil Literary generes by content, form and other
	many ways
CO5	Analyze Socio Cultural imprints in Ancint Literature.

## TML5B07 Naattar Vazhakkaatriyal

CO1	Aware of Oral / Folkloric Heritage and its importance as cultural document.
CO2	Understand various theories and glossaries used in folklore
CO3	Learn about Tamil Folklore, its factors, types, kinds, content and forms.
CO4	Interpret folklore as Source of history, culture, and expressin of individual and social
CO 5	Evaluate the social and cultural life styles of a mankind by folklore

## TML5B09 Mozhi Iyal

CO1	Understand the evolution and development of the language through various stages
	and Periods.
CO2	Identify the phonetic scripts and International phonetic Chart
CO3	Learn various linguistic Theories and its application
CO4	Applying Nida and Chomsky's definition of languages
CO 5	Differentiate Phonology, Morphology and Syntax, Semantic structures of language

# TML5B10 Puthumurai Ilakkiyaviyal

CO1	Understand new literary trends and literary perspecives
CO2	Learn new literary crical theories and approach
CO3	Aware of Post modern literary conditions, its content and forms and narrative
	strategies
CO4	Analyze Feminism Dalitism and subaltern Subjectives in literature

## TML6 B11 Dravida Mozhikalin Oppilakkanam

CO1	Aware of Dravidian language and its families
CO2	Understand the evolution and development of the Dravidian language through
	various stages and Periods
CO3	Compare Historical and Comparative Linguistics
CO4	Differentiate Phonology, Morphology and Syntax, Semantic structures of Dravidian
	languages
CO 5	Understand Cauldwell's contribution to Dravidian languages
<b>CO</b> 6	Identify changes occurred in Tamil and Dravidian Languages

# TML6 B12 Ilakkanam-Yappum Aniyum

CO1	Understand Tamil Prosody and Figure of Speech and its evolution
CO2	Learn Yapparunkalak Karikai and Dandi Alankaram Texts
CO3	Applying rules of Prosody and Figure of Speech in literature study
CO4	Familiarize with various Figure of Speeches with contemporary Tamil poetics CO 5
	Creating poems according to Tamil prosodic rules

# TML6B13 Ilakkiyath Thiranaayvu

CO1	Aware of basic knowledge of literary theories and its inevitability to interpret a
	literary text.
CO2	Acquire knowledge on Various Literary genre
CO3	Ability to identify the 'Structure of various literary genre
CO4	Understand the Tamil Tradition of Criticism and Commentary
CO5	Acquire knowledge to identify a literary theory by its central Concept

## TML6B14 Oppilakkiyam

CO1	Compare one literature with another
CO2	Understand the various types of literatures of the world
CO3	Learn the theories, practices and uses of comparative literature in general
CO4	Understand and analyze the principles, style and narrative techniques of the Tamil
CO 5	Evaluate features of National and International Literature
<b>CO 6</b>	Learn to evaluate the writings of Tamil poets in contrast with authors of other
	languages.

## TML6B15 Alaiviyal

CO1	Familiarise with Tamil Diaspora Literaure and its Writers
CO2	Identify Various themes and writing styles of Diaspora Literature
CO3	Learn Various kinds of Diaspora Literaure ie., poems stories novels and biographies
CO4	Evaluating span of Tamil literature through Tamil Diaspora Literature
CO5	Aware of the historical background of Tamil Diaspora
	literature.

## **TML6B16** Course Outcomes

CO1	Acquiring knowledge about history of Tamil Dramaturgy
CO2	Identify Various types of Tamil Drama and Theteres
CO3	Critical study of Tamil Drmatic texts
CO4	Aware of various factors of a Drama
CO5	Applying drama as a learning strategy in education

# TML6B17 Bharathi Iyam

CO1	Understanding Importance of Bharathi's Writings with historical perspective
CO2	Familiarize with Bharathi's Life, Creative Works, and his multi personalities
CO3	Evaluate contributions of Bharathi in the formation of Tamil Modernity
CO4	Criticize and analyse Bharathi and his Idealogies and writings
CO 5	Compare Bharathi's poetical works with national and international Poetry.

# TML6B18 Project Work

CO1	Aware the fields of Tamil Research
CO2	Understand about doing a project
CO3	Knowing the Structure and form of a project Work
CO4	Applying the gathered experience to complete the project perfectly in all steps
CO 5	Familiarize with best pioneer studies in the subject

