



ST. DOMINIC'S COLLEGE, KANJIRAPALLY

AFFILIATED TO MAHATMA GANDHI UNIVERSITY KOTTAYAM

RE-ACCREDITED WITH A GRADE BY NAAC

ABSORB & RADIATE



Programme, Programme Specific and Course Outcomes (PO, PSO & CO)



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Postgraduate Department of Mathematics

M.Sc. Mathematics

Programme Outcomes

PO1	To help the students to learn Mathematics as per modern requirement.
PO2	To improve the logical, reasoning, analytical and problem solving skills of students.
PO3	To give an orientation towards the applications of Mathematics.
PO4	To build interest and confidence in learning the subject in the students.
PO5	To create a research aptitude and culture in young minds.
PO6	To encourage students to pursue higher studies in mathematics.
PO7	To ensure that the learning of mathematics becomes more alive, vibrant, relevant and meaningful and understand the world around them through Mathematics.
PO8	To motivate students to uphold scientific integrity and objectivity in professional endeavors.

Programme Specific Outcomes

PSO1	Enable to acquire real insight to Modern Mathematics.
PSO2	Build up a strong foundation in classical areas like Analysis, Abstract Algebra and Measure theory.
PSO3	Build interest and confidence in the subject to pursue higher studies in Mathematics.
PSO4	Inculcate a research mind among students through project work.
PSO5	Improve the level of understanding in areas of Applied Mathematics.
PSO6	Develop the skill of modeling real world problems into Mathematics problems and find solutions in a logical way.

Course Outcomes

SEMESTER 1				
1	ME010101	Abstract Algebra	CO1	Familiarize Direct products, finitely generated Abelian groups, factor groups.
			CO2	Understand inner automorphism, group action on sets, isotropy subgroups Apply G-sets to counting
			CO3	Understand and apply Isomorphism theorems and Sylow theorems
			CO4	Conceive more on the field of quotients of an integral domain and factor rings
			CO5	Factorise polynomials over a field, understand polynomial rings and associated properties, derive Eisenstein criterion for irreducibility of polynomials
			CO6	Understand the ideal theory in polynomial rings
2	ME010102	Linear Algebra	CO1	Conceive more on the theory of Vector spaces
			CO2	Understand the algebra of linear transformation and linear functional.
			CO3	Represent transformations by matrices and find transpose of a linear transformation
			CO4	Familiarize general properties of determinant and applications
			CO5	Understand elementary canonical forms, characteristic values, annihilatory polynomials, invariant subspaces, Direct sum Decompositions
3	ME010103	Basic Topology	CO1	Familiarize topological spaces, Bases and Sub bases, Subspaces
			CO2	Understanding the concepts of Closures, Neighbourhoods, Interior and Accumulation points.
			CO3	Familiarize the concepts of continuous functions and Quotient spaces

			CO4	Identify spaces with special properties like Compactness and Lindeloffness, Second countability , First countability and their properties
			CO5	Understand Connectedness, Local connectedness and Path connectedness of spaces
			CO6	Acquire basic concepts of Separation axioms and understand hierarchy of separation axioms
4	ME010104	Real Analysis	CO1	Understanding and familiarize, functions of bounded variation, total variation, additive property of total variation and their properties.
			CO2	Familiarizing rectifiable path and arc length, additive and continuity properties of arc length, equivalence of paths and change of parameter.
			CO3	Understanding and use the basic concepts and properties of the Riemann - Stieltjes Integral and integration vector valued functions
			CO4	Attainment of a deeper and wider knowledge of Sequence and Series of Functions and uniform convergence.
			CO5	A deeper Knowledge on Weierstrass Approximation Theory and algebraic completeness of complex field
5	ME010105	Graph Theory	CO1	Familiarize basic concepts of graphs, automorphism of a simple graph, line graphs, operations on graphs , graph products, directed graph and tournaments.
			CO2	Learn more on connectivity ,blocks and cyclical edge connectivity
			CO3	Understand theorems and concepts related to Trees and apply these in everyday life problems.
			CO4	Understand more about Eulerian and Hamiltonian Graphs
			CO5	Acquire knowledge on Graph Colorings and its applications

			CO6	Familiarize Planar graphs, Plane graphs , properties of plane graphs including Euler Formula and its Consequences and Dual of a Plane Graph
			CO7	Understand Spectral Properties of Graphs
SEMESTER 2				
6	ME010201	Advanced Abstract Algebra	CO1	Familiarize extension fields, algebraic extensions
			CO2	Understand geometric constructions finite fields
			CO3	Acquire knowledge about Gaussian integers and multiplicative norms
			CO4	Find automorphism of fields
			CO5	Understand isomorphism extension theorem and find splitting fields
			CO6	Understand Galois Theory and its applications
7	ME010202	Advanced Topology	CO1	Understand and apply the Urysohn Characterization of normality and Tietze Characterization of normality
			CO2	Familiarize the product space and product topology
			CO3	Identify productive properties
			CO4	Understand and apply embedding lemma, Tychonoff Embedding and The Urysohn Metrization Theorem
			CO5	Understanding the concept of Net and its convergence
			CO6	Familiarize the idea of Homotopy of paths.
8	ME010203	Numerical Analysis with Python	CO1	Identify Symbols and Symbolic Operations in Python
			CO2	Solve Equations and Plot Using SymPy
			CO3	Apply the techniques of differentiation and integration to solve problems
			CO4	Program problems to verify the continuity of a function at a point, area between two curves and finding the length of a curve
			CO5	Familiarize Interpolation and Curve Fitting
			CO6	Find roots of equations using iterative methods
			CO7	Apply Gauss Elimination Method, Doolittle's

				Decomposition Method to solve problems
			CO8	Understand Numerical Integration methods
			CO9	Develop program to solve problems applying numerical differentiation and integration
9	ME010204	Complex Analysis	CO1	Familiarize Riemann Sphere and Stereographic projection
			CO2	Understand and apply theorems on convergence of the power series
			CO3	Solve problems related to analytic functions in regions, conformal mappings and linear transformations
			CO4	Learn the theory and techniques of complex integration
			CO5	Find higher order derivatives of complex functions
			CO6	Understand Morera's Theorem, Liouville's Theorem, Fundamental Theorem and their applications in solving problems
			CO7	To learn the way of Integrating complex valued functions using residue theorem.
			CO8	Familiarize with different types of definite integrals
10	ME010205	Measure Theory and Integration	CO1	A deep understanding into basics and applications of Lebesgue outer measure and measurability of sets
			CO2	Conceivment of the idea of Lebesgue Measurable Functions and Lebesgue Integration
			CO3	Understanding and applications Lebesgue integral and comparisons with Riemann Integral
			CO4	Familiarizing General Measure Space and Measurable Functions and Integration over General Measure Space
			CO5	Introduction to product measure and applications of the theorems of Fubini and Tonelli

SEMESTER 3

11	ME010301	Advanced Complex Analysis	CO1	Familiarize Harmonic Functions and its basic properties,
			CO2	Understand and apply the Mean-Value Property, Poisson's Formula, Schwarz's theorem and the Reflection Principle
			CO3	Understand the theory and applications of the power series expansions.
			CO4	Solve problems using Jensen's Formula and Hadamard's Theorem. problems
			CO5	Familiarize the Riemann Zeta Function and its properties.
			CO6	Understand and apply the Riemann Mapping Theorem, Boundary behaviour and the Reflection Principle
			CO7	Familiarize the idea of the Weierstrass' ρ -function and the functions ζ and σ .
12	ME010302	Partial Differential Equations	CO1	Familiarize the orthogonal trajectory of the system of curves on a given surface
			CO2	Solve differential equation of the form $dx/P = dy/Q = dz/R$
			CO3	Identify Pfaffian differential forms and solve of Pfaffian differential equations in three variables
			CO4	Find integral surfaces passing through a given curve and surfaces orthogonal to a given system of surfaces
			CO5	Understand nonlinear partial differential equation of the first order and methods of solutions
			CO6	Find solutions of Linear partial differential equations with constant coefficients
			CO7	Solve non linear equations of the second order
			CO8	Familiarize families of equipotential surfaces

13	ME010303	Multivariate Calculus and Integral Transforms	CO1	Familiarize different forms of Fourier series and applications
			CO2	Understanding the Fourier integral theorem, the exponential form of the Fourier integral theorem and the convolution theorem for Fourier transforms
			CO3	Conceivment of the theory of directional derivatives, the total derivative and Jacobian matrix of a linear function.
			CO4	Understanding on the Chain rule, mean value theorem for differentiable functions, inverse function theorem and the implicit function theorem
			CO5	Familiarize integration in higher dimensions and Differential Forms
14	ME010304	Functional Analysis	CO1	Familiarize with Normed Spaces and their properties.
			CO2	Understand compactness of normed spaces
			CO3	Familiarize Linear Operators, Bounded and Continuous Linear Operators and Linear Functionals
			CO4	Understand Normed spaces of operators, Dual space
			CO5	Familiarise Inner Product Space, Hilbert space and further properties.
			CO6	Understand orthonormal sets and sequences
			CO7	Derive representation of functional on Hilbert Spaces
			CO8	Conceive more on the theory of operators- Hilbert-Adjoint Operator, Self-Adjoint, Unitary and Normal Operators, Adjoint Operators
			CO9	Understand Zorn's lemma, Hahn-Banach theorem, Hahn-Banach theorem for Complex Vector Spaces and Normed Spaces

15	ME010305	Optimization Techniques	CO1	To acquaint with simplex method, simplex multipliers , revised simplex method and dual simplex method and develop the ability to solve linear programming problems
			CO2	Familiarise cutting plane method, branch and bound method and develop the ability to solve General I.L.P. and M.I.L.P problems.
			CO3	Conceive the concepts of Goal programming problem and the method to solve it.
			CO4	Familiarize the concept of Networks and develop the ability to solve minimum path problems, spanning tree of minimum length, maximum flow problem and Schedule sequential activities.
			CO5	Understand non-linear programming
SEMESTER 4				
16	ME010401	Spectral Theory	CO1	Understand category theorem and Uniform Boundedness theorem
			CO2	Familiarise Convergence of Sequences of Operators and Functionals
			CO3	Understand Open Mapping Theorem and Closed Graph Theorem
			CO4	Familiarise Spectral Properties of Bounded Linear Operators
			CO5	Apply Complex Analysis in Spectral Theory
			CO6	Familiarize Banach Algebras and Properties
			CO7	Learn compact Linear Operators on Normed spaces and their spectral properties
			CO8	Understand Spectral Properties of Bounded Self adjoint linear operators
			CO9	Understand Projection Operators and their properties.

17	ME010402	Analytic Number Theory	CO1	Familiarize the theory of Arithmetic Functions
			CO2	Understand The Möbius function $\mu(n)$, The Euler totient function $\phi(n)$, and the relation connecting μ and ϕ
			CO3	Find product of arithmetical functions, Dirichlet inverses and the Möbius inversion formula
			CO4	Familiarize Multiplicative functions and Dirichlet Multiplication,
			CO5	Understand The Liouville's function, the divisor function and Generalized convolutions
			CO6	Conceive more on the theory Arithmetical functions and its applications
			CO7	Understand some Elementary Theorems on the Distribution of Prime Numbers
			CO8	Acquire deep knowledge on the theory of congruence
			CO9	Understand more about Quadratic Residues and further properties of Quadratic Residues
			CO10	Familiarize Primitive roots and reduced residue systems

Elective Courses

SEMESTER 4				
1	ME800401	Differential Geometry	CO1	Explain the concepts of differential geometry and its role in modern mathematics
			CO2	To obtain sound knowledge in understanding the basic concepts in geometry of curves and surfaces in Euclidean space, especially
			CO3	To study geodesics and parallel transport
			CO4	To introduce parametrized surface and study its basic properties
			CO5	To gain sufficient knowledge for generalizing these concepts to higher dimensions

2	ME800402	Algorithmic Graph Theory	CO1	Acquire knowledge on Algorithms and its complexity and develop a feel for the concept of an efficient algorithm.
			CO2	Learn the basic properties of trees and their usefulness in algorithmic techniques.
			CO3	Familiarize with concepts of Networks and understand how the max-flow min-cut algorithm can be used to find the connectivity and edge connectivity of a graph.
			CO4	Study matchings and factorizations of graphs.
3	ME800403	Combinatorics	CO1	To use algebraic concepts to solve basic problems in real life using permutations and combinations
			CO2	To introduce Ramsey type problems and Ramsey numbers
			CO3	To get an idea about generating functions and recurrence relations.

Postgraduate Department of Chemistry

M.Sc. Chemistry

Programme Outcomes

PO1	Provides a fundamental insight into the changes taking place in and around our fascinating nature.
PO2	Understand the issues of environmental contexts and sustainable development
PO3	Through lectures, laboratory work, exercises, project work, and its independent master's thesis, students will gain knowledge about relevant working methods for research, industry, administration, and education.
PO4	Lays the foundation for doctoral programs in Chemistry.
PO5	Acquire the ability to engage in independent and lifelong learning in the broadest context

Programme Specific Outcomes

PSO1	Acquires ability to synthesise , separate and characterise compounds using laboratory and instrumentation techniques
PSO2	Develops analytical skills and problem solving skills requiring application of chemical principles
PSO3	Know and predict the structure and bonding in molecules/ions
PSO4	Understand theoretical concepts of instruments that are commonly used in most chemistry fields as well as interpret and use data generated in instrumental chemical analysis
PSO5	Develop an understanding of eco-friendly chemical processes and impact of chemistry on health and environment.

Course Outcomes

SEMESTER I

CH500101: ORGANOMETALLICS AND NUCLEAR CHEMISTRY

CO1 To understand the structure, bonding and reactivity of organometallic compounds

CO2 To apply and analyze the methods of synthesis and mechanism of organometallic compounds

CO3 To familiarize about the functions of metal ions in biological systems.

CO4 To learn about applications of radioactive isotopes in various fields

CH500101 : STRUCTURAL AND MOLECULAR ORGANIC CHEMISTRY

CO1 To recollect and familiarize the basic concepts in organic chemistry

CO2 To develop a deep knowledge about the physical organic chemistry

CO3 To have a well defined idea on organic photochemistry

CO4 To have an authenticated idea of stereochemistry of organic compounds

CO5 To know and understand the conformational analysis of organic compounds

CH500103: QUANTUM CHEMISTRY AND GROUP THEORY

CO1 Students will be able to revise and update the fundamental ideas, mathematical concepts and application of group theory to molecular systems

CO2 Expertise in categorising common molecules into various point groups and applying GOT to derive the character tables of various point groups

CO3 Understand and solve particle in a box model, harmonic oscillator model, particle on a ring and gain a deep understanding in the application of tunnelling effect

CH500104: THERMODYNAMICS, KINETIC THEORY AND STATISTICAL THERMODYNAMICS

CO 1 To apply the principles and laws of equilibrium thermodynamics to multi component systems.

CO 2 To calculate thermodynamic properties of ideal gases and real gases using principles and techniques of statistical thermodynamics.

CO 3 To familiarize with the properties and theories of gases.

SEMESTER II

CH500201: COORDINATION CHEMISTRY

CO 1 To acquire deep knowledge in coordination compounds

CO 2 To understand the kinetics and mechanism of reactions of metal complexes

CO 3 To know about the stereochemistry of coordination compounds

CO 4 To familiarize about the coordination chemistry of Lanthanoids and Actinoids

CH 500202: ORGANIC REACTION MECHANISM

CO 1 To have a review of organic reaction mechanisms

CO 2 To learn and understand the involvement of carbanions in organic reactions, their structure and reactivity through various organic reactions

CO 3 To learn and understand the involvement of carbocations in organic reactions, their structure and reactivity through various organic reactions

CO 4 To learn and understand the involvement of carbenes, carbenoids, nitrenes and arynes in organic reactions, their structure and reactivity through various organic reactions

CO 5 To learn and understand the involvement of free radicals in organic reactions, their structure and reactivity through various organic reactions

CO 6 To know and understand the reactions of carbonyl compounds and the mechanisms involved.

CO 7 To have a detailed idea on the concerted reactions

CH500203: CHEMICAL BONDING AND COMPUTATIONAL CHEMISTRY

CO 1 Students will be able to apply, analyze and evaluate group theoretical concepts in spectroscopy

CO 2 Expertise in extending the ideas of quantum mechanics to many electron systems

CO 3 Critically evaluate valence bond theory and molecular orbital theory

CO 4 Understand and develop basic foundation on using various tools in computational chemistry

CO 5 Create knowledge on format of GAMESS / Firefly

CH500204: MOLECULAR SPECTROSCOPY

CO 1 To understand the basic principles and theory of microwave, NMR, IR, Raman, UVVis spectroscopy.

CO2 Apply the theory to simple problems

CH500205: INORGANIC CHEMISTRY PRACTICAL-1

CO 1 To apply the principles of qualitative and quantitative analytical techniques in inorganic chemistry for identification of ions.

CO 2 To familiarize the preparation of inorganic complexes.

CO 3 To understand the characterization of inorganic complexes.

CH 500206: ORGANIC CHEMISTRY PRACTICAL-1

CO 1 Apply class room learning in separation and purification of organic compounds and binary mixtures

CO 2 Use the computational tools to draw the reaction schemes and spectral data to various organic reactions .

CH500207:PHYSICAL CHEMISTRY PRACTICAL-1

- CO 1 Students will be able to apply the theory behind adsorption, distribution law and surface tension
- CO 2 Expertise in constructing and studying phase diagrams of three component and eutectic systems
- CO 3 Using computational tools to compute Single point energy, Geometry optimization as well as doing conformational analysis

SEMESTER III

CH 500301: STRUCTURAL INORGANIC CHEMISTRY

- CO 1 To acquire knowledge about solids and its electrical, magnetic and optical Properties
- CO 2 To familiarize about inorganic chains, rings, cages and metal clusters.
- CO 3 To Learn about glasses, ceramics, refractories etc

CH 500302: ORGANIC SYNTHESSES

- CO 1 Understand the application of various oxidising and reducing agents used in organic synthesis
- CO 2 Identify the importance of organic reagents like NBS, DDQ, DCC and Gilman reagent in organic sythesis
- CO 3 Gain an understanding of the different ways of synthesising carboxylic rings
- CO 4 Illustrate the necessity of protection and deprotection in organic synthesis
- CO 5 Knowledge of retrosynthetic approach to planning organic synthesis

CH500303: CHEMICAL KINETICS, SURFACE CHEMISTRY AND CRYSTALLOGRAPHY

- CO 1 Learn the fundamental theories of reaction rates and mechanism of chain reactions.
- CO 2 Study the different types of surfaces and application of various isotherms in surface catalyzed reactions.
- CO 3 Familiarize the symmetries of different point groups and types of liquid crystals.

CH 500304 SPECTROSCOPIC METHODS IN CHEMISTRY

CO 1 The learners should be able to apply the different spectroscopic methods to solve problems

CO 2 Using spectral data for explaining important organic reactions and functional transformations.

SEMESTER IV

CH 800401 : ADVANCED INORGANIC CHEMISTRY

CO 1 To apply group theory in inorganic chemistry

CO 2 To understand about inorganic spectroscopic methods and other analytical methods

CO 3 To know about inorganic photochemistry and nanomaterials CO 4 To familiarize about acids and bases and non-aqueous solvents

CH 800402 ADVANCED ORGANIC CHEMISTRY

CO 1 Gain knowledge about the role of molecular receptors in medicine

CO 2 Develop skill to characterise nanomaterials with SEM, TEM, XRD

CO 3 To engage in deep understanding of the advances in polymer chemistry

CO 4 Instill scientific thinking with knowledge in scientific thinking

CH800403: ADVANCED PHYSICAL CHEMISTRY

CO 1 Understand the excited states involved in a photochemical reaction

CO 2 Analyze and apply diffraction methods and atomic spectroscopic techniques.

CO 3 Apply the theories in electrochemistry for analyzing kinetics of electrode reactions.

CH 01 04 05: INORGANIC CHEMISTRY PRACTICAL-2

CO 1 To estimate simple binary mixtures of metallic ions in solution by volumetric and gravimetric methods

CO 2 To analyze alloys and ores

CH 010406: ORGANIC CHEMISTRY PRACTICAL-2

CO1 Students will have a firm foundation in the fundamentals and application of green chemistry

CO2 Students will be able to design and carry out multi step synthesis and to purify the products obtained by relevant methods

CO 3 Carry out experiments using microwave assisted organic synthesis

CO 4 Using UV-Visible spectrophotometric techniques for estimating organic compounds

CH010407: PHYSICAL CHEMISTRY PRACTICAL-2

CO 1 Analyse and apply the theoretical principles of chemical kinetics

CO 2 Acquire practical skill to undertake experiments with polarimeter and refractometer

CO 3 Evaluation of unknown concentration of solutions using techniques like conductometry, potentiometry and viscosity measurements.

Postgraduate Department of Botany

M.Sc. Botany

Programme Outcomes

PO1	To built a clear, comprehensive and advanced mastery in the field of Botany.
PO2	To provide basic principles of biological sciences with special reference to Botany and its applied branches.
PO3	Enabling the students to explore the intricacies of life forms at cellular, molecular and Nano level.
PO4	PO4. To sustain students' motivation and enthusiasm and to help them not only to appreciate the beauty of different life forms but also to inspire them in the dissemination of the concept of biodiversity conservation.
PO5	To develop problem solving skills in students and encourage them to carry out innovative research projects thereby enkindling in them the spirit of knowledge creation.
PO6	To maintain a high level of scientific excellence in botanical research with added emphasis on the role of plants in the structure and functioning of terrestrial and aquatic communities and ecosystem
PO7	To equip students to perform functions that demand higher competence in National/International fields.

Course Outcomes

BY010101: MICROBIOLOGY AND PHYCOLOGY

Course Outcomes

- Understand the structure and types of bacteria and viruses.
- Familiarize different methods of isolation of microbes
- To create a holistic awareness about microbes

BY010102: MYCOLOGY AND CROP PATHOLOGY

Course Outcomes

- To familiarize the student with the structure and reproduction in fungi.
- To learn the economic importance of fungi
- To study the interactions between the diseases causing agents and host plant.

BY010103: BRYOLOGY AND PTERIDOLOGY

Course Outcomes

- Understand the general and unique features of bryophytes and Pteridophytes and familiarize it.
- To study the morphology, anatomy and reproduction of different groups of Bryophytes and Pteridophytes.
- Realize the application of Bryophytes and Pteridophytes in different fields.

BY010104: GYMNOSPERMS, PALEOBOTANY AND EVOLUTION

Course outcomes

- Understand the structure of both living and fossil gymnosperms
- To equip the students to identify gymnosperms in India
- Familiarize students about fossilization and techniques in paleontology.

BY010201: PLANT ANATOMY, DEVELOPMENTAL BIOLOGY AND HORTICULTURE

Course outcomes

- Create an insight about anatomy of plant
- Make students aware about basic concepts of developmental biology.
- Develop skill in gardening technique among students

BY010202: CELL BIOLOGY, GENETICS AND PLANT BREEDING

Course outcomes

- Equip students to identify different stages of mitosis and meiosis
- Create an awareness about cancer
- To familiarize the students with the methods of crop improvement.
- To study the importance of different breeding techniques in the welfare of nations.

BY010203: PLANT PHYSIOLOGY AND BIOCHEMISTRY

Course Outcomes

- To understand important physiological activities in plants
- To familiarize activities of plant growth regulators
- To demonstrate experiments that clearly explains the physiological activities in plants
- To enable the students to learn the biomolecules and its functions in biological processes.

BY010204: MOLECULAR BIOLOGY

Course Outcomes

- To understand the mechanisms of DNA replication, RNA synthesizing and processing, protein synthesis.
- To create an insight about protein sorting and translocation.
- To create awareness about gene expression control in prokaryotes and eukaryotes.

BY010301: RESEARCH METHODOLOGY, MICROTECHNIQUE, BIOSTATISTICS AND BIOPHYSICAL INSTRUMENTATION

Course Outcomes

- To equip students to prepare project proposals and dissertations.
- To make students aware about journals and its impact factor.

- To equip the students to conduct independent research and prepare research reports.
- To understand about different techniques in microtechnique.
- Create an insight about electrophoresis and spectroscopy.

BY010302: BIOTECHNOLOGY, BOINFORMATICS AND BIONANOTECHNOLOGY

Course Outcomes

- Understand and familiarize the technological advancement in the field of biotechnology, bioinformatics and bio nanotechnology.
- Equip the students to access the consortium of biological databases.
- Familiarize various software tools for data analysis and construction of phylogenetic tree.

BY010303: ANGIOSPERM TAXONOMY, ECONOMIC BOTANY AND ETHNOBOTANY

Course Outcomes

- Identify the common plant species in Kerala
- Familiarize the standard field and herbarium techniques
- Understand the economic importance of plants
- Familiarize the medicinal and economically useful plants

BY010304: ENVIRONMENTAL SCIENCE

Course Outcomes

- To make students aware about the environmental problems, their consequences and solutions
- Acquaint students about the significance of environmental science
- To understand structure and function of ecosystem.
- Create an insight about the extent of biodiversity and the importance of their conservation.

PROGRAMME ELECTIVE – BIOTECHNOLOGY

BY0800401: PLANT TISSUE CULTURE AND MICROBIAL BIOTECHNOLOGY

Course Outcomes

- Equip the students to carry out plant tissue cultures.
- To understand about bioremediation and its significance.
- Create an insight about stem cell technology.

BY800402: GENETIC ENGINEERING, GENOME EDITING AND IMMUNOLOGY

Course Outcomes

- To understand the application of genome editing in gene manipulation and gene therapy.
- Familiarize the application of protein engineering in different fields.
- To realize the achievements in genetic engineering in different fields.

BY800403: GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND BIOINFORMATICS

Course Outcomes

- To create an insight into the modern techniques in genome analysis
- To understand different methods in functional genomics.
- To understand the bioinformatics tools for sequence alignment
- Equip to access and analyze the data available in the data bases.

Postgraduate Department of Economics

MASTER OF ARTS IN ECONOMICS

Programme Outcomes

PO1	Gaining Access to Existing Knowledge
PO2	Displaying Command of Existing Knowledge
PO3	Displaying Ability to Draw Out Existing Knowledge
PO4	Utilizing Existing Knowledge to Explore Issues
PO5	Creating New Knowledge

NAME OF THE PROGRAMME : MA ECONOMICS			
Course Code	Course Title	Course Outcomes	
SEMESTER I			
	Micro Economics I	CO1	It enables the student in taking rational buying decisions and also helps a firm to design suitable marketing strategies
	Macro Economics II	CO1	Integrating theoretical knowledge to evaluate policy measures and analyze the trade off in the deployment of resources to alternative ends
	Indian Economy - I	CO1	It provides the students with a critical thinking of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy
	Development Economics	CO1	It aims to develop conceptual clarity on the issues on the dimensions of development and to identify the strategic factors in the development of the less developed countries.
		CO2	The students get the chances to know more about international and domestic growth models and developments agendas.
		CO3	It also equips the students with the knowledge of growth and development practices and also generates some interest in them about being a development economist.

SEMESTER II			
	Microeconomics II	CO1	It helps the students to develop skill in formulating business strategy in the context of market imperfections.
		CO2	The student develops the understanding of the economic level of information search possible under different situations and the concept of bounded rationality. The students can understand the basic theory of distribution and the source of income generation
	Macroeconomics II	CO1	It also makes the students to understand Indian economic issues which are macroeconomic in nature
	Public Economics	CO1	The course covers major topics in public finance including externalities, public goods, benefit/cost analysis, fiscal federalism, taxation, and others. The course deals with the nature of government intervention and its implications for allocation, distribution, and stabilization. The thought content encompasses a host of topics including public goods, market failures, and externalities.
		CO2	The objective of this course is to familiarize students about the rationale for and role of government intervention in economic activities and how the government makes economic decisions. The course will also examine the recent developments in both theoretical and empirical literature in the area.
	Indian Economy II	CO1	It helps the students to understand more about Indian economy in relation with policy implementation, planning, and social programmes.
		CO2	It enriches the students with the complete information regarding Indian economic issues like population, poverty, unemployment, financial matters and trade etc.
SEMESTER III			
	International Economics	CO1	It provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term –at the global level.
		CO2	The theoretical knowledge of international trade and policy imparted in

			the course would help the students to solve real-world problems
		CO3	. It will prepare them to become trade policy-makers and key strategists on trade issues.
	Econometrics—1	CO1	This course helps the students to learn how to estimate a general class of parametric models or semiparametric models, how to conduct testing and inference, given the data.
		CO2	Empirical applications include estimation and inference of some popular economic models in microeconomics and macroeconomics.
		CO3	The true objective of this course is to acquaint students with econometric techniques that are widely used in empirical work in Economics and other related disciplines.
	Heterodox Economics	CO1	A better understanding of heterodox principles will lead to a more informed understanding of mainstream economics
		CO2	To revisit a set of economic concepts that are being extensively used in the economics curriculum--but with a critical stance that concentrates on philosophical and methodological considerations.
		CO3	It will survey contemporary heterodox approaches to economic research, both from a microeconomic and a macroeconomic perspective.
	Environmental Economics	CO1	It provides the theoretical foundations of environmental economics.
		CO2	It makes the students to understand the theory and practice of sustainable development
		CO3	Students become familiar with the impacts of environment on health and promote environmental education
		CO4	. It facilitates the optimum use of natural resources in production and consumption
		CO5	The course provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term at the global level.
	Kerala Economy	CO1	The basic objective of the course is to introduce students to the current and critical issues, challenges and problems

			of the Kerala economy and thereby enhance their analytical ability to understand the dynamics of a regional economy.
		CO2	To teach the students about Kerala's development experiences in historical perspective.
		CO3	To understand the current economic scenario and their routes in historical and global perspective.
SEMESTER IV			
	International Finance	CO1	This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in a historic cum emerging geopolitical context.
		CO2	It will prepare students to become policy-makers and key strategists on issues related to international finance and related institutions.
		CO3	Equip students with both fundamental knowledge in international finance, financial institutions and their application in real life.
	Econometrics II	CO1	The aim of the course is to provide the theoretical background that is useful for research in applied economics.
		CO2	Applications of economic theory need a reasonable understanding of economic relationships and relevant statistical methods.
		CO3	This course provides an introduction to time series methods in econometrics covering aspects of the trend behavior, detrending mechanisms, and their properties, unit root theory, cointegrated system approaches, realized volatility and, model selection.
	Agricultural Economics	CO1	This course intends to provide the students a detailed idea regarding the role and importance of agriculture. It also provides the role of Agriculture in economic development, the land reforms in India, a comparison of the Green revolution in India and Mexico, and the importance of farm budgeting.
	Industrial Economics	CO1	This course offers a rich and diverse platform to explore the core of the economic theory, using real-world examples and encouraging unique and

			innovative problem-solving techniques.
		CO2	Understand basic models of the behavior of firms and industrial organization and how they can be applied to policy issues;
		CO3	It is able to manipulate these models and be able to solve analytically problems relating to industrial economics;
	Labour Economics	CO1	Labor economics study the economic forces that determine wages and employment.
		CO2	Impart knowledge about the dynamics of labour market.
			It emphasizes the power of microeconomic reasoning to answer important economic questions.

Research and PG Department of Commerce

St. Dominic's College Kanjirapally

Programme Offered and Expected Outcome

Master of Commerce- Finance and Taxation (M.Com-F&T)

Programme Outcome

PO1	Enhancing the horizon of knowledge so as to enable the learners to carry out qualitative research and pursue academic or professional careers
PO2	Developing problem analysis skills and knowledge and applying the same in real life situation
PO3	Using research knowledge and aptitude acquired in the course of study for solving socially relevant problems
PO4	Understanding the role and applicability of knowledge acquired in the context of society, environment and sustainable development sticking on to the ethics and values
PO5	Developing effective communication skills and ability to work in teams by strengthening group dynamics
PO6	Fostering ability to engage in lifelong learning, demonstrating empathetic social concern, contributing to the development of nation, by making sure of awareness gained on various issues

Programme Specific Outcome

POS1	Inculcating managerial skills and theoretical knowledge for managing business units with special focus on functional areas of business and management
POS2	Imparting advanced accounting knowledge and skills and provide awareness regarding latest developments in the field of accounting
POS3	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
POS4	Acquisition of expertise in specialized fields like finance, taxation, marketing, management and information technology
POS5	Development of quantitative aptitude and analytical skills of the learner
POS6	Facilitating learner to pursue career in professional areas of commerce and management such as taxation, financial services, consultancy etc

Course Code	Course Title	Course Outcomes	
Semester:- I			
CM010101	Specialised Accounting	CO1	Providing an in depth understanding about theoretical and practical aspects of major Accounting Standards to apply the same in different practical situations.
		CO2	Ascertain the value of goodwill and value of companies based on the value of shares and compare the real value of shares and with the market prices and identify the mispricing.
		CO3	In depth understanding about the determination of purchase consideration in the event of amalgamation and to prepare post amalgamation financial statements
		CO4	Acquaint with the theoretical aspects of emerging areas in accounting
		CO5	Develop a clear understanding about different types of NBFCs, their provisioning norms and to understand the concept of NAV of mutual funds through its computation.
CM010102	Organisational Behaviour	CO1	Basic understanding about the concepts of organisation behaviour
		CO2	A very good understanding about individual behaviour, personality and motivation.
		CO3	Imparting deep understanding about group behaviour and leadership related to organisational behaviour
		CO4	Add the knowledge base of the learner regarding change management and deal with stress.
		CO5	Impart knowledge about the role of organisational culture and conflict on organizational behavior.

CM010103	Marketing Management	CO1	The learner should have a basic understanding about concepts like customer centricity, CRM, value chain and customer delight.
		CO2	The learner should get a clear understanding about the market segmentation process and its applications in marketing strategies.
		CO3	Develop an idea about consumer behaviour and its impact.
		CO4	Good understanding about product line, product mix, brand equity, brand identity, brand personality and brand image.
		CO5	Develop sound ideas regarding services marketing and service quality.
CM010104	Management Optimization Techniques	CO1	Develop theoretical understanding about various business optimization models.
		CO2	Ability to develop Linear Programming Models for business problems and Solve the same
		CO3	Application of Linear Programming in the areas of transportation and assignment.
		CO4	Develop decision making skills under uncertainty, risk and replacement of assets.
		CO5	Understand and apply network analysis techniques for project implementation.
CM010105	Methodology for Social Science Research	CO1	Develop a thorough understanding about the basic concepts of social science research.
		CO2	After completing this module, the learner should be able to formulate a research design.
		CO3	After studying the theoretical aspects of sampling design, the learner should be able to draw a sampling design.

		CO4	Detailed knowledge about the instrument development, its validation and different forms of scaling.
		CO5	Understand the technique of research reporting.
Semester :- II			
CM010201	Advanced Corporate Accounting	CO1	Understand the proceedings of the preparation of consolidated financial statements.
		CO2	Preparation of the financial statements of public utility companies and deal with the disposal of surplus.
		CO3	Familiarising the learner with the accounting procedures of liquidation of companies and preparation of various statements required as per the Companies Act.
		CO4	Basic understanding about the preparation of accounts of some special lines of businesses like shipping, hospitals and hotels
		CO5	Develop and awareness on the procedure of bankruptcy under the recent Bankruptcy Procedure Code
CM010202	Human Resource Management	CO1	Acquaintance with basic concepts of HRM and performance appraisal
		CO2	Understanding about human resource development, stress management and work life management.
		CO3	High level knowledge about various aspects of training.
		CO4	Understanding about various aspects of industrial relations so as to evaluate the real cases of industrial relations
		CO5	Understanding about HR outsourcing HR accounting and HR audit.
CM010203	International Business and Finance	CO1	Familiarisation with globalization, internationalization of business and the international business environment.

		CO2	Understanding about theories of international trade, trade barriers and trade blocks.
		CO3	Imparting idea about various economic institutions related to international trade.
		CO4	Achieve high level knowledge about various aspects of international monetary system.
		CO5	Develop an understanding about the international investment environment.
CM010204	Quantitative Techniques	CO1	Provide students an understanding about the applications of quantitative techniques.
		CO2	Familiarize students with various applications of quantitative techniques
		CO3	Equip student to identify appropriate parametric test for testing the hypotheses
		CO4	Students will be acquainted with the skills to identify the most suitable non parametric test for testing a hypothesis.
		CO5	Learner will be equipped with the skills to apply the principles of SQC
CM010205	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.

Semester :- III

CM010301	Strategic financial management	CO1	Learn the theoretical foundations of financial management and financial management decisions.
		CO2	Evaluate the feasibility of different options regarding discount, credit period, storage cost etc related to current assets and current liabilities and estimate working capital requirements.
		CO3	Evaluate long term proposals and evaluate the risk associated with long term investment.
		CO4	Evaluate the decisions regarding leasing of capital assets.
		CO5	Evaluate and Compare the performance of business entities.
CM010302	Income Tax- law and practice	CO1	Acquire knowledge regarding the basic concepts of Income Tax
		CO2	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 sources
		CO5	Able to calculate Gross Total Income of an individual
		CO6	Learner shall be able to determine eligible deductions and compute taxable income and tax liability of an individual
CM010303	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 for selecting 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 using various 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.
CM800301	Indirect Tax Laws	CO1	To get a basic understanding on the concepts of Goods and Services Tax
		CO2	Acquaint an idea about the levy and collection of tax (time of supply, place of supply and values of supply) and input tax credit (ITC).
		CO3	Familiarize the provisions regarding registration , maintenance of books of accounts and filing of returns under the Act.
		CO4	Understand the powers of different GST authorities and the provisions of inspection, search and seizure
		CO5	Develop basic understanding about the Customs Law in India.
Semester :- IV			
CM010401	Advanced Cost and Management Accounting	CO1	Apply activity based absorption methods instead of conventional absorption method.
		CO2	Apply the marginal costing principles in decision making situations of businesses.
		CO3	Dealing with practical cases of pricing decisions in different situations.
		CO4	Understand the concepts of standard costing, and the

			process of cost control through it.
		CO5	Deal with the practical issues related to transfer pricing.
CM010402	Income Tax- Assessment and Procedures	CO1	Compute the total income and tax liability of firms and Association of Persons
		CO2	Carry out assessment of companies and determine their tax liability
		CO3	Make the assessment of co-operative societies and trusts
		CO4	Understanding about the assessment procedures , TDS and advance payment of tax and application in various situations
		CO5	Learn tax planning concepts and apply the same
CM800401	Derivatives and Risk Management	CO1	Knowledge about the derivative market in India, its evolution, types, players, risks involved and basic quantitative foundations
		CO2	Analyze the implications of Risk in the perception of individuals and Institutions and measurement of risks
		CO3	Understand and explain the concept of forward market and its function
		CO4	Analyse the operation and pricing of various types of futures
		CO5	Understand the concepts and methodology of option trading and apply the models of pricing the option contracts
CM800402	Personal Investment and Behavioural Finance	CO1	To get an understand of the meaning and significance of Financial literacy, Financial Discipline & Financial Competency, the role of family and parents in financial socialisation
		CO2	Understand and Evaluate the Significance of savings

			on financial destiny and its relationship with Consumerism and to understand the different elements/steps in Personal Financial Planning to attain Financial Well Being and Evaluate the different retail investment avenues.
		CO3	Understand the meaning of Behavioural Finance, its evolution and related theories
		CO4	To understand different Heuristics, Biases and other Irrational Investment Behaviours
		CO5	Understand the relationship between biases and to adopt techniques to lower the impact of biases

Postgraduate Department of English(S. F.)

MASTER OF ARTS IN ENGLISH

Programme Outcomes

The Programme aims at enabling the students

PO1	To acquire a thorough knowledge base in English Language and Literature and approach Literature as a systematic discipline.
PO2	To acquire skills in imparting knowledge related to the discipline.
PO3	To communicate ideas smoothly and coherently both orally and in writing.
PO4	To think creatively and contribute to the development of the language
PO5	To carry out successful research in various areas related to the discipline.

Programme Specific Outcomes

The students, on the successful completion of the Programme, are expected to acquire:

PSO1	A complete mastery over the myriad schools of literature, literary movements and theories
PSO2	A thorough acquaintance with the major literary and cultural developments in the world.
PSO3	Comprehension of various literary styles and their distinctive features.
PSO4	A thorough awareness of the language and how it is distinguished from the other world languages.
PSO5	The enhancement of linguistic and literary skills through a systematic and creative approach.
PSO6	Critical ability to evaluate literary and linguistic discourses

COURSE OUTCOMES			
Course Code	Course Title	Course Outcomes	
SEMESTER I			
EN010101	Up Until Chaucer: Early Literatures in English	CO1	To make sense of the major themes in Ancient and Medieval Eng. Literature as an expression of the Anglo-Saxon culture and society.
		CO2	To be aware of the gradual and phased development of the British consciousness.
		CO3	To have a thorough acquaintance with the ancient and the medieval English Literature
		CO4	To be able to compare and contrast with the experiences of a people and society different from ours.
EN010102	Literature of the English Renaissance	CO1	Familiarizes them with the literature, thought and culture of the Renaissance period in England.
		CO2	Aware about the recent theoretical interventions like New Historicism and Cultural Materialism
		CO3	Students are instilled with the capacity to appreciate Renaissance writings which marked radical changes in the outlook and ways of life.
EN010103	Literature of the English Revolution/ Enlightenment	CO1	Makes the students acquainted with the English literary texts which reflect the Puritan ideals of the late 17th century.
		CO2	Familiarizes the learner with the neo-classical vigour of the 18th century.
		CO3	Familiarizes them with the philosophy of the Enlightenment
EN010104	Nineteenth Century English Literature	CO1	Familiarizes students with the fundamental premises of the Romantic Movement and the Victorian Literature.
		CO2	Presents before the students the selected texts marking both the Romantic and the Victorian sensibilities.
		CO3	Introduces to the students some of the best novels, prose pieces and plays of the Victorian period
EN010105	Literary Criticism	CO1	Familiarizes the students with the key concepts and texts of literary criticism from its very beginning.
		CO2	Enables the students to develop a critical approach towards literary texts and discourses.
		CO3	Enables them to prepare projects / seminar

			papers on the basis of various critical theories.
SEMESTER II			
EN010201	Modernity and Modernism	CO1	To understand the literary concepts of modernity and modernisms.
		CO2	To identify and appreciate the literary works that represent modernity and its literary sensibilities.
EN010202	Postmodernism and Beyond	CO1	To be familiarized with the representative works of Postmodernism
		CO2	To identify and understand the multiple dimensions of post modern thoughts as reflected in the literary works of the times.
EN010203	American Literature	CO1	Appreciate the literary works in American Literature, a prominent branch of the non-British English tradition.
		CO2	To understand the the historical developments that went into the evolution of American Literature as a separate branch of English Literature.
EN010204	English Language History and Contemporary Linguistics	CO1	Get some basic awareness about the fundamentals of Linguistics.
		CO2	Be aware of the historical evolution of the English Language
EN010205	Thinking Theory	CO1	Acquaint themselves with the critical tools for analysing literature
		CO2	Analyse various literary works applying these tools
SEMESTER III			
EN010301	Reading India	CO1	Enables the students to obtain an insight into the historical, cultural and literary heritage of India.
		CO2	Acquaints the students with the major movements and figures of Indian Literature in English.
		CO3	Acquainted with the questions of language, nation and aesthetics.
EN010302	Postcolonial Fiction	CO1	To introduce the students to the discursive nature of colonialism
		CO2	Introduces the counter -discursive impulses of postcolonial theory, narratives and texts.
EN010303	Body, Text and Performance	CO1	Facilitates an understanding of the basic structural, thematic and theoretical patterns which govern the poetic process.

		CO2	Acquaints the students with the patterns of the performative and theatrical arts.
EN010304	Literature and Gender	CO1	Acquainted with the various literary genres that deal with gender issues.
		CO2	Gender issues are viewed as connected to the fundamental political, religious and social issues rather than as mere hetero- normative male- female concept
EN010305	Ethics in/as Literature	CO1	Familiarizes students with certain ethics that narrative fiction has adopted across centuries.
		CO2	They are also introduced to the various ethical, formal choices that schools, influences and narrative devices have upheld so as to shape narrative fiction into its present expressive plurality.
SEMESTER IV			
EN010401	Cultural Studies	CO1	Introduces the theoretical bases of Cultural Studies as a discipline
		CO2	Introduces the inter-disciplinary approaches to explore how cultural processes and artefacts are produced, shaped, distributed, consumed and responded to in diverse ways.
EN010402	Postcolonial Poetry	CO1	Introduces the students to the diverse types of literature that come from the erstwhile colonies
		CO2	They are acquainted with the issues of sovereignty, language, race, gender, identity and space .
Elective Courses			
EN820401	Modern European Fiction	CO1	To familiarize the students with the evolution of European fiction all through the 19th and 20th Centuries.
		CO2	To acquaint them with some of the major movements that shaped the growth of the European novel.
EN820402	Modern European Drama	CO1	Familiarizes the students with the social and cultural contexts that inform modern European Drama.
		CO2	Introduces the representative plays of the different theatrical forms.
EN820403	Indian Poetics: Theories and Texts	CO1	Aims at introducing the major Indian poetic theories and the representative texts

		CO2	Analyse critically these works applying the theories of the Rasa and the Dwany Schools
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Postgraduate Department of Mathematics

B.Sc. Mathematics

Programme Outcomes

PO1	Provides a more complete and logic framework in almost all areas of basic Mathematics and creates an aptitude in higher Mathematics.
PO2	The students attain a foundation in basic Mathematics and other relevant subjects to complement the core for their higher studies.
PO3	Introduces powerful tools for tackling a wide range of topics in Calculus, Theory of Equations and Geometry.
PO4	Familiarize with additional relevant mathematical techniques and other applied branches of the subject to complement the core.
PO5	A wide range of topics in almost all areas of Mathematics will be covered by the three years of graduation.

Programme Specific Outcomes

PSO1	Digest the basic concepts and techniques of logic, set theory, calculus in other areas of Mathematics and increase aptitude in higher studies and research.
PSO2	Familiarize the applications of the subject in real life situations and solve the problems logically.
PSO3	Familiarize with abstract structures and analysis which are relevant in other disciplines of Mathematics, Theory of Equations, Geometry, Number Theory and Logic.
PSO4	Develop analytic brain, logical thinking and problem solving skill.
PSO5	Understand Mathematics of nature and create a positive attitude about the environment. Awareness of the basic ideas of Human Rights.

Course Outcomes

Core Courses for B.Sc. Mathematics

Sl. No	Course Code	Course Title	Course Outcomes	
SEMESTER 1				
1	MM1CRT01	Foundations of Mathematics	CO1	Familiarize sets and functions;
			CO2	Familiarize basic concepts of logic
			CO3	Analyze truth values of statements, mathematically.
			CO4	Construct simple proofs for statements.
			CO5	Familiarize mathematical Symbols and standard methods of proofs.
SEMESTER 2				
2	MM2CRT01	Analytic Geometry, Trigonometry and Differential Calculus	CO1	Find the equation to tangent, normal at a point on a conic
			CO2	Understand polar equation of a line, circle, tangent and normal to conics
			CO3	Familiarize real and imaginary parts of a circular and hyperbolic functions of a complex variable
			CO4	Finding the higher order derivative of the product of two functions
			CO5	Familiarize with limits of indeterminate forms
SEMESTER 3				
3	MM3CRT01	Calculus	CO1	A deeper knowledge of Taylor's and Maclaurin's series, points of Inflexion and Curvature.
			CO2	Conceivment of the concept of asymptotes and envelopes
			CO3	Deeper knowledge on partial derivatives and its applications.

			CO4	Application skills on finding the area and volume of solids of revolution and arc length of curves using integration.
			CO5	Attainment of techniques for finding area and volume by double and triple integration .
SEMESTER 4				
	MM4CRT01	Vector Calculus, Theory of Numbers and Laplace Transform	CO1	A basic knowledge in differentiation of vector valued functions and techniques to find arc length and unit tangent vector, curvature and the unit normal vector, tangential and normal components of acceleration.
			CO2	Understanding of directional derivatives, gradient vectors, tangent planes and normal lines
			CO3	A deep knowledge on line integrals and surface integrals and applications of Green's theorem, Stokes' theorem and Divergence theorem.
			CO4	Familiarize with congruence and its properties
			CO5	Familiarize with congruence ,properties of congruence and Phi-function
			CO6	Conceive the concept of Laplace transform and its properties and apply Laplace transforms for solving differential equations
SEMESTER 5				
5	MM5CRT01	Mathematical Analysis	CO1	Familiarize with the algebraic and order properties of \mathbb{R} , the absolute value of a real number and the Completeness Property of \mathbb{R}
			CO2	Familiarize with sequences and their Limits
			CO3	Understand series and familiarize tests for convergence and absolute convergence
			CO4	Find limits of functions, both finite and infinite.

6	MM5CRT02	Differential Equations	CO1	Obtain an integrating factor which may reduce a given differential equation into an exact one and eventually provide its solution.
			CO2	Identify and obtain the solution of Clairaut's equation.
			CO3	Find the complementary function and particular integrals of linear differential equations.
			CO4	Familiarize the orthogonal trajectory of the system of curves.
			CO5	Methods of Solutions of Differential Equations $dx/P = dy/Q = dz/R$
			CO6	Describe the origin of the partial differential equation and distinguish the integrals of first order linear partial differential equation into complete, general and singular integrals.
			CO7	Use Lagrange's method for solving the first order linear
7	MM5CRT03	Abstract Algebra	CO1	Familiarize with binary operations, Isomorphic binary structures, group and subgroups, elementary properties of groups, permutations and properties of permutations.
			CO2	Know how to construct group tables and subgroup diagrams.
			CO3	Identify different types of groups- normal subgroup, simple group, cyclic group, alternating group
			CO4	Study Cayley's Theorem, Theorem of Lagrange, Fundamental homomorphism Theorem.
			CO5	Understand the concepts of Homomorphism and Isomorphism.
			CO6	Conceive the concepts of Rings, Fields, Integral Domains, Ideals and Factor Rings and their basic properties.

8	MM5CRT04	Human Rights and Mathematics for Environmental Studies	CO1	Encourage students to research, investigate how and why things happen, and make their own decisions on complex environmental issues. By developing and enhancing critical & creative thinking skills, it helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.
			CO2	Understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future, encourage character building, and develop positive attitudes and values.
			CO3	Develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment for protecting nature and natural resources.
			CO4	Acquire the basic knowledge about environment and to inform the students about the social norms that provide unity with environmental characteristics and create positive attitude about the environment

SEMESTER 6

9	MM6CRT01	Real Analysis	CO1	Familiarize with Continuous Functions and Uniform continuity of functions
			CO2	Learn to apply Mean Value Theorem, L' Hospital Rule and Taylor's Theorem
			CO3	Understand the Riemann Integral and Riemann Integrable Functions
			CO4	Get a preliminary idea of sequence and series of functions
			CO5	Familiarize Point wise and Uniform Convergence, Interchange of Limits.

10	MM6CRT02	Graph Theory and Metric Spaces	CO1	Understand the basic concepts of graph theory and able to represent graphs in matrix form
			CO2	Conceive the ideas of trees and Connectivity
			CO3	Familiarize with Euler graphs and Hamiltonian graphs and application of graph theory in real life problems
			CO4	Conceive the concepts of Metric Spaces, Open sets and Closed Sets
			CO5	Extend the concepts like limit, convergence and continuity of analysis to Metric Spaces
11	MM6CRT03	Complex Analysis	CO1	Conceivment of the concept of analytic and harmonic functions.
			CO2	Familiarize with the elementary complex functions and their properties
			CO3	A deep understanding on the theory and techniques of complex integration.
			CO4	Familiar with the theory and application of the power series expansion of analytic functions.
			CO5	A deep knowledge of the theory and applications of residues in complex integration and calculation of indefinite integrals.
12	MM6CRT04	Linear Algebra	CO1	Solve systems of linear equations using matrices
			CO2	Understand the theory and concepts of matrices in a broader sense
			CO3	Familiarize with vector spaces, subspaces, linear combination of vectors, spanning set, linear independence and basis.
			CO4	Conceive the concepts of Linear transformations and Linear isomorphism.
			CO5	Understand the application of matrices in vector spaces
			CO6	Familiarise with Eigen values, Eigenvectors and Eigen space.

Choice Based Core Course (Semester 6)

1	MM6CBT01	Operations Research	CO1	Define a Euclidean space, a vector space and its basis.
			CO2	Write a given LPP in standard form and in a canonical form
			CO3	Identify a feasible solution, a basic feasible solution, and an optimal solution using simplex method.
			CO4	Identify the Transportation Problem and formulate it as an LPP and hence solve the problem
			CO5	Determine that an Assignment problem is a special case of LPP and hence solve by Hungarian method.
			CO6	Familiarise with Concepts of Game theory.

Open Course (Semester 5)

1	MM5GET02	Applicable Mathematics	CO1	Prepare students of all streams, particularly from arts and commerce background for their higher studies.
			CO2	Solve logical problems for competitive examinations
			CO3	Solve problems related to interest computing, time and work, work and wages, time and distance.
			CO4	Understand the basic concepts of trigonometry, exponential and logarithmic series
			CO5	Solve problems on elementary mensuration and elementary algebra
			CO6	Understand the basic concepts of differential calculus, and find derivatives using basic formulas, product rule, quotient rule and function of function rule

Complementary Courses (to B.Sc. Physics/Chemistry)

SEMESTER 1				
1	MM1CMT01	Partial Differentiation Matrices, Trigonometry and Numerical Methods	CO1	Familiarise functions of several variables and find domain and range of functions
			CO2	Apply chain rule to find partial derivatives
			CO3	Conceive the basic concepts of matrices such as rank of a matrix, Characteristic equation, Characteristic roots, and characteristic vectors of a square matrix
			CO4	Solve system of Linear equations using Matrices
			CO5	Determine expansion of Trigonometric functions, summation of infinite series and identify real and imaginary parts
			CO6	Use numerical methods to solve higher order algebraic equations and transcendental equations
SEMESTER 2				
2	MM2CMT01	Integral Calculus and Differential Equations	CO1	Use the tools of integration to find volume of solid of revolution , arc length and area of surface of revolution
			CO2	Ability to find the area of a bounded region and volume of a closed bounded region by applying the techniques of double and triple integrals
			CO3	Recognize and solve the Ordinary Differential Equations like variable separable, Exact , Homogenous, Linear and Bernoulli equations.
			CO4	Method of Solutions of Differential Equations $dx/P = dy/Q = dz/R$
			CO5	Generate first order Partial Differential Equations and develop the ability to use Lagrange's method for solving the first order linear partial differential equation

SEMESTER 3				
3	MM3CMT01	Vector Calculus, Analytic Geometry and Abstract Algebra	CO1	Differentiate vector valued functions
			CO2	Find arc length and unit tangent vector, curvature and the unit normal vector, tangential and normal components of acceleration
			CO3	Find directional derivatives, gradient vectors, tangent planes and normal lines
			CO4	Familiarize line integrals and surface integrals
			CO5	Find work, circulation and flux, conservative fields and potential functions
			CO6	Apply Green's theorem, Stokes' theorem and Divergence theorem
			CO7	Understand the concept of Conic sections and solve problems
			CO8	Familiarize basic concepts of Abstract Algebra like Groups, Subgroups, Cyclic groups and Homomorphism
SEMESTER 4				
4	MM4CMT01	Fourier Series, Laplace Transform and Complex Analysis	CO1	Understand and apply Fourier series of functions
			CO2	Solve problems involving Fourier Series and Legendre polynomials
			CO3	Apply Power series method to solve differential equations
			CO4	Familiarize Laplace transform and its properties
			CO5	Apply Laplace transforms to solve differential equations
			CO6	Conceivment of the concept of analytic and harmonic functions.
			CO7	Familiarizing with the theory and techniques of complex integration

Complementary Courses in Statistics (to B.Sc. Mathematics)

SEMESTER 1				
1	ST1CMT01	Descriptive Statistics	CO1	Introducing Different aspects of data, and its collection.
			CO2	Concepts of a statistical population and sample.
			CO3	Different methods of sampling - simple random sample, systematic, stratified and cluster.
			CO4	Central tendency, Dispersion, skewness and kurtosis.
			CO5	Data graphics - Ogives and Box plot.
			CO6	Index Numbers - Laspeyer's, Paasche's and Fisher's Index Numbers.
			CO7	Time-Reversal and Factor-Reversal tests for index numbers.
			CO8	Cost of living index numbers.
SEMESTER 2				
2	ST2CMT01	Probability Theory	CO1	Probability theory which includes basic concepts and important properties.
			CO2	Random Variables - discrete and continuous and its properties.
			CO3	Bivariate Random Variables - discrete and continuous and its properties.
			CO4	Correlation - scatter diagram, Karl Pearson's and Spearman's rank correlation coefficients.
			CO5	Regression - fitting of polynomial equations of degree one and two.
			CO6	Identification of regression equations
SEMESTER 3				
3	ST3CMT01	Probability Distributions	CO1	Mathematical Expectation and its important properties.
			CO2	Probability Distributions (discrete/continuous) such as Uniform, Bernoulli, binomial, Poisson, geometric,

				hyper-geometric, exponential, gamma- one and two parameter(s), beta(type I and type II), Normal and its properties.
			CO3	Law of Large Numbers and Central Limit Theorem.
			CO4	Sampling Distributions including t, F, Chi-square.
SEMESTER 4				
4	ST4CMT01	Statistical Inference	CO1	Concepts of Estimation, Estimators, and Estimates.
			CO2	Point and interval estimation.
			CO3	Properties of good estimators.
			CO4	Methods of Estimation.
			CO5	Cramer-Rao inequality.
			CO6	Testing of Hypotheses – basic concepts, Statistical hypotheses, null and alternate hypotheses, simple and composite hypotheses, type-I and type-II errors, size, and power of a test, p-value, Neyman-Pearson approach.
			CO7	Large Sample Tests using Neyman-Pearson approach.
			CO8	Small Sample Tests.

Department of Physics

BSC PHYSICS

The department offers B.Sc. Physics model 1 programme for students under choice based credit system which was revised latest in 2017 by M.G. University. The programme comprised a total of 41 courses which include 12 core courses, 10 common courses, 8 complementary courses, 6 core practical, 2 complimentary practical and 1 course of project, 1 open course and a choice based course with a total of 120 credits. The syllabus of each course is framed so as the programme is able to raise the scientific temper of the scholar and provide a firm foundation in every aspect of Physics and to explain a broad spectrum of modern trends in physics and to develop experimental, computational and mathematics skills.

Programme Outcomes

By the successful completion of the undergraduate programme, the student will be competent in

- Logical and critical thinking
- Achieving a desire for higher education and self learning
- Academic as well as extracurricular activities that will enable them to become skilled professionals.
- Developing a sensible and unbiased conclusion by gathering information from various reliable sources.
- Developing communication and coordination skills for employment and entrepreneurship.
- Growing into an accountable social reformer by igniting own scientific temper
- Acquiring awareness of environmental issues and ethics and take responsibilities that promote sustainable and green habitat.
- Attaining harmony and compassionate with different socio-cultural traditions

Programme Specific Outcomes

Through the B.Sc. Physics programme, the students will be able to

- Understand the contributions of the scientific community and to develop research aptitude and scientific temper
- Develop various communication skills such as reading, listening, speaking, etc., which will help in expressing ideas and views clearly and effectively.
- Get strong foundations in physics and develop basic experimental skills
- Acquire fundamental concepts of mathematics and chemistry
- Understand the theories behind various physical phenomena.
- Acquire skills to solve both theoretical and experimental scientific problems
- Interpret the inferences from verbal, mathematical and graphical data.
- Perform various task using their creativity, intellectual capacity, innovative thoughts and enthusiasm with precision and responsibility
- Ascertain their area of interest in academic and R&D and get prepared for competitive exams.

Course Outcomes

Outcome	
Semester 1	
PH1CRT01-Methodology and Perspectives of Physics	
CO1	Acquire an overview on the development of physics giving emphasis on the scientific contributions of the great scientists.
CO2	Introduction of different number systems and their applications in the digital era.
CO3	Introduce the vector analysis and coordinate systems with applications in different

	fields of physics
CO4	Study various measuring instruments in physics, generation and propagation of errors in an experiment.
Semester II	
PH2CRT02- Mechanics and Properties of Matter	
CO1	Provide foundations in the theory of wave motions and oscillations
CO2	Build theoretical basis of rotational mechanics and some mechanical properties of materials
CO3	Introduction of hydrodynamics and its real life applications
PH2CRP01 – Mechanics and Properties of Matter	
CO1	Acquire engineering skills in setting up of the experiment, systematic analysis of the experimental data and to estimate errors in measurement.
CO2	Provide a practical training with experiments in areas of rotational mechanics, hydrodynamics and properties of matter
Semester III	
PH3CRT03: Optics, Laser and Fiber Optics	
CO1	Provide necessary foundations in wave optics.
CO2	Understand the theoretical treatment of interference in different conditions and familiarize the principles of interferometers.
CO3	Study the successful theoretical explanations of diffraction and polarization in different conditions.
CO4	Understand the basic working principle of Laser and different types of lasers. Familiarize applications of lasers in different fields.
Semester-IV	
PH4CRT04: Semiconductor Physics	
CO1	The course is intended to give necessary fundamentals to design electronic circuits.
CO2	Introduces the principles of semiconductor components such as diodes, transistors, OPAMP, JFET etc.
CO3	Study the working of amplifiers and oscillators and different types of modulation in communication fields
PH2CRP02 – Optics and Semiconductor Physics	

CO1	Students got an experimental realization of what they learned in optics and semiconductor physics.
CO2	Students are expertise in constructing electronic circuits and familiarize themselves with the use of Cathode Ray Oscilloscope.
Semester-V	
PH5CRT05: Electricity And Electrodynamics	
CO1	Lay a sound theoretical foundation in electricity and electrodynamics
CO2	Comprehend various phenomena and applications around them related to electric and magnetic field.
CO3	Acquire practical knowledge to handle electronic gadgets and explain its working principle
PH5CRT06: Classical And Quantum Mechanics	
CO1	Understand the basic concepts of constraints and the formulation of Lagrangian and Hamiltonian.
CO2	Appreciate the historical development and origin of quantum mechanics. Understand the basic mathematical formulation of quantum mechanics.
CO3	Apply the Schrodinger equation for solving the problem of a particle in a box
PH5CRT07: Digital Electronics And Programming	
CO1	Introduction of the fundamental concepts and techniques used in digital electronics.
CO2	Design various logic gates and simplify Boolean equations.
CO3	Studying the Boolean algebra and simplification of Boolean expression using different methods.
CO4	Design basic combinational and sequential logic circuits.
CO5	Outline the basic concepts of OOPs
PH5CRT08: Environmental Physics And Human Rights	
CO1	Understand their basic rights as well as ways and means to prevent the violation of rights.
CO2	Identify different means of harnessing solar energy and its advantages
CO3	Introduction to the major environmental problems its causes and potential solutions
CO4	Introduction to various types of natural resources(renewable and non renewable), impact of humans on these resources, and general resource management practices

CO5	Provide introductory knowledge about the fundamentals and applications of remote sensing
PH5OPT01: Our Universe	
CO1	Help students to comprehend the cosmos and its origin and to develop scientific attitude and aptitude
CO2	Give introductory ideas of origin of universe, stellar evolution and solar system
CO3	Understand the different coordinate systems so as one to locate and report the position of a celestial object.
Semester-VI	
PH6CRT09: Thermal And Statistical Physics	
CO1	Define the concept of entropy and explain its physical significance.
CO2	Explain Lees Disc experiment and can calculate the thermal conductivity by experimentally.
CO3	Explain fundamental concepts of statistical mechanics
CO4	Derive Maxwell-Boltzmann, Bose - Einstein and Fermi Dirac distribution laws and compare the laws.
PH6CRT10: Relativity And Spectroscopy	
CO1	Explain special theory of relativity.
CO2	Derive Lorentz transformation equations.
CO3	Explain relativistic time dilation and length contraction. Derive Einstein's mass energy relation
PH6CRT11: Nuclear, Particle Physics and Astrophysics	
CO1	Introduction of the various properties of nucleus and the nuclear forces
CO2	Introduction of the concept of radioactivity and the theory of α , β and γ -decay in radioactivity
CO3	A brief introduction to nuclear radiation detectors and particle accelerators
CO4	Introduction to Particle Physics and Astrophysics
PH6CRT12: Solid State Physics	
CO1	Realize the importance of crystallography in solid state physics
CO2	Classify materials as metals, semiconductors and insulators based on band theory.

	Distinguish various chemical bonding in common crystal structures.
CO3	Enables one to understand basic electric and magnetic properties of solids and the theoretical framework of the same
PH6CBT02: Material Science (Choice based Course)	
CO1	Provide the basic fundamentals of material science
CO2	Students will get an insight in the relationship between structure and properties of the materials in an engineering point of view.
CO3	Apart from the conventional materials the course introduces advanced engineering materials such as LCD, metallic glasses and nanomaterials to the students
CO4	Students will empowered on the different material characterization techniques
PH6CRP03-Electricity, Magnetism and Laser	
CO1	This course offers experiments in electricity, magnetism and Laser
CO2	Students would gain practical knowledge on the working and applicability of potentiometer, galvanometer and magnetometers in different areas.
CO3	Students will be enabled to use Lasers and optics for measuring experimental parameters.
PH6CRP04-Digital Electronics	
CO1	Course expected to provide sound foundation and practical knowledge in basic digital electronics devices
PH6CRP05- Thermal Physics, spectroscopy and C++programming	
CO1	Students are trained to set up experiments using spectrometers and able to systematically acquire and analyze the data.
CO2	Students are made capable of doing programming in C++.
PH6CRP06-Acoustics,Photonics, and Advanced semiconductor physics	
CO1	Students will be capable of doing experiments with acoustics and photonics devices.
CO2	Students will design and construct electronic circuits and devices and communication systems.
Complementary Physics for Mathematics	
Semester I	
PH1CMT01-Properties of Matter and Error Analysis	

CO1	Introduction to the basic ideas of Elasticity- modulus of elasticity, beams, bending moment.
CO2	Study various measuring instruments in physics, generation and propagation of errors in an experiment.
CO3	To learn basic theories of hydrodynamics and its real life applications
Semester II	
H2CMT01-Mechanics And Astrophysics	
CO1	Introduction of gravity and experimental arrangements for measuring acceleration due to gravity at a place.
CO2	Students will understand the theories of oscillations- simple harmonic motion, damped oscillations, forced oscillations and progressive waves
CO3	Students will learn rotational dynamics -Angular momentum, torque, moment of inertia and mechanism of flywheel.
CO4	Students will become familiar with Astrophysics
Semester III	
PH3CMT01-Modern Physics and Electronics	
CO1	Students will be able to explain the history of atom models from plum pudding model to vector atom model
CO2	Students will gain basic ideas of properties of nucleus, binding energy and radioactivity
CO3	Students will get a general idea about the Physics of semiconductors and the working of diodes, rectifiers and transistors
CO4	Introduction of different types of number systems and binary arithmetic
CO5	Explain the inadequacies of classical physics and experimental evidences for quantum theory.
CO6	Obtain the Schrodinger equation and use it for solving the problem of a particle in a box
Semester IV	
PH4CMT01-Optics and Electricity	
CO1	By providing basic foundations in wave optics,students will understand phenomena like

	interference, diffraction and polarization
CO2	Introduction to varying currents - analysis of LCR Circuits
CO3	Students will gain deeper understanding in ideas of dielectrics
CO4	Understand the basic working principle of Laser and its applications.
CO5	Develop a knowledge on the theory of light propagation through fibres.
Complementary Physics for Chemistry	
Semester I	
PH1CMT02-Properties of Matter and Thermodynamics	
CO1	Students are expected to gain basic ideas of Elasticity- modulus of elasticity, beams, bending moment.
CO2	Student will learn about basic thermodynamics laws and theorems
CO3	The course gives an introduction of hydrodynamics and its real life applications
Semester II	
PH2CMT02-Mechanics and Superconductivity	
CO1	Students will acquire knowledge about waves and oscillations- simple harmonic motion, damped oscillations, forced oscillations.
CO2	The course provide understanding in rotational dynamics -Angular momentum, torque, moment of inertia, flywheel
Semester III	
PH3CMT02-Modern Physics and Magnetism	
CO1	Students will be able to explain the history of atom models from plum pudding model to vector atom model
CO2	Students will gain basic ideas of properties of nucleus, binding energy and radioactivity
CO3	Students will get a general idea about the Physics of semiconductors and the working of diodes, rectifiers and transistors
CO4	Explain the inadequacies of classical physics and experimental evidences for quantum theory. Obtain the Schrodinger equation and use it for solving the problem of a particle

	in a box.
Semester IV	
PH4CMT02-Optics and Solid State Physics	
CO1	By providing basic foundations in wave optics, students will understand phenomena like interference, diffraction and polarization
CO2	Students will get basic ideas and importance of solid state Physics
CO3	Understand the basic working principle of Laser and its applications.
CO4	Develop a knowledge on the theory of light propagation through fibres.

Postgraduate Department of Chemistry

B.Sc. Chemistry

Programme Outcomes

PO1	Read, understand and interpret chemical information – verbal, mathematical and graphical.
PO2	Impart skills required to gather information from resources and use them.
PO3	To give need based education in chemistry of the highest quality at the undergraduate level.
PO4	Perform experiments and interpret the results of observation.
PO5	Provide an intellectually stimulating environment to develop skills and enthusiasm of students to the best of their potential.
PO6	Use Information Communication Technology to gather knowledge at will.
PO7	To bridge the gap between plus two and post graduate levels of Chemistry by providing a more complete and logical framework in almost all areas of basic Chemistry.

Program Specific Outcomes

PSO1	Learn Chemistry through lectures, laboratory sessions, tutorials and interaction with eminent academicians.
PSO2	Develop laboratory skills for qualitative and quantitative analysis, organic synthesis, distillation, filtration, crystallization and chromatography.
PSO3	Safe working procedures, chemical toxicology, environmental concerns, handling of chemicals, glassware and range of instruments available at graduation level.
PSO4	Kindle the urge for higher studies, entrepreneurship and lifelong learning.

Course Outcomes

SEMESTER I

CH1CRT01 – GENERAL AND ANALYTICAL CHEMISTRY

CO-1 To understand the methodology of chemistry

CO-2 To familiarise the periodic properties and periodic table

CO-3 To get concrete knowledge on analytical chemistry

CO-4 To get acquaintance with chromatographic techniques

CO-5 To evaluate analytical data

SEMESTER II

CH2CRT02 – THEORETICAL AND INORGANIC CHEMISTRY

CO-1 Develop a deep knowledge on atomic structure

CO-2 To understand various theories of chemical bonding

CO-3 Get concrete knowledge on s-block, p-block, d-block and f-block elements

CH2CRP01 - VOLUMETRIC ANALYSIS

CO-1 Get practice with acidimetry, alkalimetry, complexometry and redox titrations

CO-2 Able to apply the volumetric knowledge in commercial samples.

SEMESTER III

CH3CRT03- ORGANIC CHEMISTRY I

CO-1 Understanding the fundamentals of organic chemistry and organic reactions CO-

2 Identifying the rules related to IUPAC nomenclature

CO-3 Appreciating the beauty of stereochemistry of organic molecules in terms of various conformations and their stability

CO-4 Understanding the various reactions involved in the synthesis of aliphatic and aromatic hydrocarbons

CO-5 Familiarising the basics of pericyclic reactions with examples

SEMESTER IV

CH4CRT04- ORGANIC CHEMISTRY II

CO-1 Understand the various functional organic compounds and their synthesis

CO-2 Familiarise the fundamental difference in chemical and physical properties of different functional groups

CO-3 Able to distinguish between organic compounds using various organic reactions

CO-4 Learn rearrangement reactions with their detailed mechanisms

CH4CRP02 - QUALITATIVE ORGANIC ANALYSIS

CO-1 Systematically analyse organic compound and preparation of solid derivative

CO-2 To determine the physical constants of solids and liquids – melting and boiling points

CO-3 To understand the reactions of various functional groups

SEMESTER V

CH5CRT05-ENVIRONMENT, ECOLOGY AND HUMAN RIGHTS

CO-1 To understand the fragility and sensitivity of our environment and the importance of its protection.

CO-2 To promote environmental awareness

CO-3 To foster a sense of responsibility and proactive citizenship

CH5CRT06- ORGANIC CHEMISTRY –III

CO -1 To give concrete idea about nitrogen containing compounds and their synthesis.

CO- 2 To familiarize with the vast world of heterocyclic compounds

CO- 3 To provide a brief idea about active methylene compounds and drugs.

CO -4 To get acquainted with carbohydrates, polymers and dyes.

CH5CRT07 – PHYSICAL CHEMISTRY - I

CO-1 Behaviour of ideal gases and the real gases. A deeper look on the distribution of velocities and energies among the molecules, an overview on the collision properties.

CO-2 To develop a qualitative idea about the intermolecular forces in liquid, to know in detail about viscosity and surface tension and its determination

CO-3 A review on the nature of solid state, different crystal systems, analysis of cubic crystals, to have a deep idea on the different types of ionic compounds and to know in detail about the liquid crystals.

CO-4 Describes the interfacial phenomenon of adsorption, explains different types of adsorption and its significance, enumerate the nature of colloidal state, its preparation and properties.

CH5CRT08- PHYSICAL CHEMISTRY-II

CO-1 Gaining a strong foundation in Quantum chemistry

CO- 2 Developing a scientific aptitude to link experiment with theory

CO -3 Familiarisation with fundamentals of various spectroscopic techniques

CO- 4 To equip the learner with basic skills in analysing and interpreting spectrum

CO -5 Understand the basic principles of NMR and ESR spectroscopy

OPEN COURSE: CH5OPT01- CHEMISTRY IN EVERYDAY LIFE

CO-1 To understand the basic concepts of Food Additives, Soaps, Detergents and Cosmetics.

CO-2 To familiarize about Plastics, Paper, Dyes and Drugs.

CO-3 To Learn about Nanomaterials and the interdependence between Chemistry and Agriculture

SEMESTER VI

CH6CRT09-INORGANIC CHEMISTRY

CO-1 To learn in detail about the concepts and applications of coordination Chemistry.

CO-2 To understand the basic concepts of Organometallic Chemistry.

CO-3 To familiarize about Bioinorganic Chemistry.

CO-4 To get brief idea of Boron compounds, Interhalogen and Noble gas Compounds

CH6CRT10- ORGANIC CHEMISTRY – IV

CO -1 To introduce students to the world of natural products, lipids, vitamins, steroids and hormones.

CO -2 To familiarize the concepts of amino acids, peptides, proteins, enzymes and nucleic acids

CO -3 To provide an elementary idea about supramolecular chemistry.

CO -4 To get acquainted with organic photochemistry.

CO- 5 To equip the students to interpret spectra of organic molecules using various spectroscopic tools like UV, IR, NMR and Mass.

CH6CRT11-PHYSICAL CHEMISTRY –III

CO-1 To learn in detail about the concepts and applications of thermodynamics.

CO-2 To understand the basic concepts of Chemical, Ionic and Phase Equilibria

CO-3 To get brief idea of Chemical Kinetics

CH6CRT12- PHYSICAL CHEMISTRY -IV

CO- 1 Develop a critical knowledge of various binary solutions and their distillation behaviour.

CO -2 To get acquainted with Nernst distribution law and it's applications

CO -3 To impart a foundation on the concept of chemical potential

CO- 4 Developing scientific temper by gaining an understanding of electrical conductance and electrochemical cells

CO -5 To get introduced to the laws of photochemistry

CO -6 Classifying various molecules into point groups based on grouptheory

CH6CBT02- NANOCHEMISTRY AND NANOTECHNOLOGY

- CO1- Introduction to the world of Nano chemistry. The fundamental concepts and historical evolution of nanotechnology will make the students more creative and enthusiastic.
- CO2- The various microscopic techniques for the characterization of nanomaterials will fascinate the students and motivate them to go to the deep of Nano world.
- CO3- Electrical and optical properties of nanomaterials are also incorporated which will develop curiosity and increase the scientific temper.
- CO4- The students will be highly motivated when they study the different applications of nanotechnology.

CH6CRP03- QUALITATIVE INORGANIC ANALYSIS

- CO- 1 To introduce the systematic way of analyzing inorganic mixtures using semi micro method.
- CO- 2 To study the reactions of various radicals with a view to identify and confirm them, from a mixture of two acid and two basic radicals.

CH6CRP04-ORGANIC PREPARATIONS AND LABORATORY TECHNIQUES

- CO-1 To master basic laboratory techniques like crystallization, distillation, solvent extraction...
- CO-2 To perform different types of Organic Preparations
- CO-3 To separate a component from a mixture of compounds using TLC and column Chromatography

CH6CRP05- PHYSICAL CHEMISTRY PRACTICALS

- CO -1 Gain an ability to determine the viscosity of a solution.
- CO -2 To know about the concept of heat of neutralisation
- CO- 3 To apply knowledge on colligative properties
- CO- 4 To find out the concentration of a solution using conductometric and potentiometric titrations
- CO- 5 To get well acquainted with using spreadsheet program

CH6CRP06- GRAVIMETRIC ANALYSIS

- CO -1 To provide a fundamental idea regarding the application of gravimetry as a tool for quantitative estimation.

COMPLEMENTARY COURSE

SEMESTER I

CH1CMT01 - BASIC THEORETICAL AND ANALYTICAL CHEMISTRY

CO-1 To have a basic knowledge about the atomic structure and chemical bonding

CO-2 To study the fundamental concepts of chemistry including periodic properties and chemical and ionic equilibrium

CO-3 To develop a deep knowledge about the analytical techniques involved in the laboratory.

CO-4 To understand different types of chromatographic techniques and the principle behind chromatography

SEMESTER II

CH2CMT02 - BASIC ORGANIC CHEMISTRY

CO-1 To study the fundamental concepts of organic chemistry

CO-2 To have deep knowledge about the organic reaction mechanisms

CO-3 To understand about the stereoisomerism and stereochemistry of organic compounds

CO-4 To know in detail about the natural and synthetic polymers, environmental hazards of polymer revolution and recycling of plastics

CH2CMPO1- VOLUMETRIC ANALYSIS

CO1- Enabling students to manage neutralization titrations- acidimetry and alkalimetry.

CO2-. Enabling students to manage oxidation reduction (Redox) titrations like permanganometry, dichrometry, iodimetry and iodometry.

SEMESTER III

CH3CMT03- PHYSICAL CHEMISTRY – I

CO-1 To enable the students to get a clear idea about the molecular structure

CO-2 To make students capable of understanding and studying electrical and nuclear properties of molecules

SEMESTER IV

CH4CMT05- PHYSICAL CHEMISTRY – II

CO- 1 To promote understanding of the basic facts and concepts in spectroscopy and to develop interest in students to study the structure and properties of matter.

CO-2 To help the students to get a basic idea about spectroscopy

CO-3 To enable the students to study the rules governing chemical reactions and factors influencing them.

CH4CMP02- PHYSICAL CHEMISTRY PRACTICALS

CO-1 To determine viscosity, CST, Transition temperature etc

CO-2 To find the heat of neutralization, kinetics of a reaction

CO-3 To estimate the mass of ion or compound using conductometric and potentiometric titrations

Postgraduate Department of Botany

B.Sc. Botany

Programme Outcomes

PO1	To know and understand the range of plant diversity in terms of structure, function and environmental relationships. 2. The evaluation of plant diversity. 3. Plant classification. 4. The role of plants in the functioning of the global ecosystem.
PO2	Students learn to carry out practical work, in the field and in the laboratory, in the following areas plant morphology and anatomy, plant taxonomy, plant ecology, plant physiology.
PO3	To demonstrate procedural knowledge that creates different types of professionals in the field of Botany i.e. research, teaching, horticulture. Further application of knowledge can enhance productivity of several economically important product/botanicals
PO4	Develop skills and ability to use knowledge efficiently in areas related to specializations and current updates in the subject
PO5	Apply the knowledge and understanding of Botany to new/unfamiliar situations and to identify problems and solutions in daily life.

Course Outcomes

Core Course 1: METHODOLOGY OF SCIENCE AND AN INTRODUCTION TO BOTANY

Course outcomes

- Understand the universal nature of science
- To follow the scientific method to solve problems
- To lay a strong foundation to the study in Botany
- Develop basic skills to study Botany in detail.

Core Course 2: MICROBIOLOGY, MYCOLOGY AND PLANT PATHOLOGY

Course outcomes

- Understand the world of microbes, fungi and lichens
- Appreciate the adaptive strategies of the microbes, fungi and lichens
- To study the economic and pathological importance of microorganisms

Core Course 3: PHYCOLOGY AND BRYOLOGY

Course outcomes

- To study the evolutionary importance of Algae as progenitors of land plants
- Understand the unique and general features Algae and Bryophytes and familiarize it
- To study the external morphology, internal structure and reproduction of different types of Algae and Bryophytes
- Realize the application of Phycology in different fields

Core Course 4: PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

Course outcomes

- Understand the diversity in habits, habitats and organization of various groups of plants.
- Understand the evolutionary trends in Pteridophytes and Gymnosperms.
- Study the anatomical variations in vascular plants.
- Understand the significance of Paleobotany and its applications.

Core Course 5: ANATOMY, REPRODUCTIVE BOTANY AND MICROTECHNIQUE

Course outcomes

- Imparting an insight into the internal structure and reproduction of the most evolved group of plants, the Angiosperm.
- Understand the individual cells and also tissues simultaneously
- Understand the structural adaptations in plants growing in different environment.
- Understand the techniques used to preserve and study plant materials.

Core Course 6: RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS

Course outcomes

- To equip the students to conduct independent research and prepare research reports.
- To make the students acquaint with different tools and techniques used in research work.
- To equip the students with basic computer skills necessary for conducting research.
- To enable the students to have enough numerical skills necessary to carry out research.

Core Course 7: PLANT PHYSIOLOGY AND BIOCHEMISTRY

Course outcomes

- Acquire basic knowledge needed for proper understanding of plant functioning.
- Familiarize with the basic skills and techniques related to plant physiology.
- Understand the role, structure and importance of the bio molecules associated with plant life.

Core Course 8: ENVIRONMENTAL SCIENCE AND HUMAN RIGHTS

Course outcomes

- Acquaint the student with the significance of Environmental Science.
- Make the students aware about the extent of the total biodiversity and the importance of their conservation.
- Enable the students to understand the structure and function of the ecosystems.
- Enable the students to understand various kinds of pollution in the environment, their impacts on the ecosystem and their control measures
- Make the students aware about various environmental laws in India and the role of various movements in the protection of nature and natural resources.

Open course - AGRI-BASED MICROENTERPRISES

Course outcomes

- Provide basic information about the business opportunities in plant sciences.
- Inform the student about sustainable agriculture and organic farming.
- Inculcate an enthusiasm and awareness about ornamental gardening, nursery management and mushroom cultivation.

Core Course 9: GENETICS, PLANT BREEDING AND HORTICULTURE

Course outcomes

- Imparting an insight into the principles of heredity
- Understand the patterns of inheritance in different organisms
- Understand the inheritance pattern of nuclear and extra nuclear genes
- Understand the methods of crop improvement
- Understand the importance of horticulture in human welfare
- Develop skill in gardening technique among students

Core Course 10: CELL AND MOLECULAR BIOLOGY

Course outcomes

- Understand the ultra-structure and functioning of cell in the sub-microscopic and molecular level.
- Get an idea of origin, concept of continuity and complexity of life activities.
- Familiarization of life processes.
- Understand the basic and scientific aspect of diversity.
- Understand the cytological aspects of growth and development.
- Understand DNA as the basis of heredity and variation.

Core Course 11: ANGIOSPERM MORPHOLOGY, TAXONOMY AND ECONOMIC BOTANY

Course outcomes

- Acquaint with the aims, objectives and significance of taxonomy.

- Identify the common species of plants growing in Kerala and their systematic position.
- Acquaint with the basic technique in the preparation of herbarium.
- Familiarizing with the plants having immense economic importance.

Core Course 12: BIOTECHNOLOGY AND BIOINFORMATICS

Course outcomes

- Understand the current developments in the field of Biotechnology and Bioinformatics.
- Introduce the vast repositories of biological data knowledge.
- Equip to access and analyse the data available in the databases.

Elective course: AGRIBUSINESS

Course outcomes

- Inculcate and impart an idea about the business opportunities in the field of plant sciences.
- Develop an entrepreneurial mind-set and also to stick on to the core subject among the Botany students.
- Give an idea about the need of sustainable development and organic farming.
- Harness the opportunities and potentials in the field of ecotourism, processing technology and food sciences.

Vocational course 1 - FUNDAMENTALS OF HORTICULTURE

Course Outcomes

- Understand the importance of horticulture
- To familiarize different irrigation systems
- Provide basic information about garden tools and implements
- Acquire basic knowledge on soil formation.

Vocational Course 2 - PLANT PROPAGATION

Course Outcomes

- To understand the need of plant propagation.
- Appreciate the different plant propagation methods(natural and Artificial)
- To develop practical skills in artificial propagation methods.
- To familiarize preparation of potting mixture.

Vocational Course 3 – ORNAMENTAL HORTICULTURE AND LANDSCAPING

Course Outcomes

- To understand the scope and importance of ornamental horticulture.
- To familiarize cultivation methods of different groups of ornamental plants
- To create an interest in gardening and landscaping
- Create an awareness about the scope of commercial landscaping
- Foster skills in ornamental gardening technique among students

Vocational Course 4 - PLANT PROTECTION AND NURSERY MANAGEMENT

Course Outcomes

- To study the common diseases of horticultural crops.
- To help the students to familiarize with the different plant protective measures.
- To study the agricultural chemicals used in crop protection.
- To know how a plant nursery could be established.
- To understand the different aspects of transplanting.

Vocational Course 5 – FLORICULTURE

Course Outcomes

- To help the student to understand the importance of commercial floriculture.
- To familiarize the cultivation methods involved in flowering plants.
- To study the different aspects of landscape gardening.

Vocational Course 6 – OLERICULTURE

Course Outcomes

- To familiarize cultivation methods of vegetables and mushrooms
- To develop practical skills in cultivation of vegetables
- Equip the students to carry out commercial level of cultivation.
- To create awareness on sustainable agriculture and healthy foods
- Develop interest in sustainable cultivation of mushrooms and vegetables

Vocational Course 7 - POMOLOGY, FOOD TECHNOLOGY AND POST-HARVEST MANAGEMENT OF HORTICULTURAL CROPS

Course Outcomes

- To understand the economic and health benefits of fruit.
- Give an idea about the cultivation of fruit trees and the major insect-pests and diseases of fruits and their integrated control measures.
- Understand the importance of packaging of fruits Know the different methods of food preservation.
- Know about the processed products which can be prepared from fruits.
- Impart an insight into the post-harvest management of fruit crops.

Vocational Course 8 – CULTIVATION OF MEDICINAL AND AROMATIC PLANTS, SPICES AND PLANTATION CROPS

Course Outcomes

- Equip the students to identify different medicinal plants.
- Familiarize the cultivation methods and processing practices of different spices
- Understand the scope and importance of plantation crops.
- Create an insight about the traditional uses of medicinal and aromatic plants in Kerala.

Complementary course - Zoology: ZY1CMT01 - NON CHORDATE DIVERSITY

Course Outcomes

- To study the scientific classification of invertebrate fauna.
- To learn the physiological and anatomical peculiarities of some invertebrate phyla through type study.
- To learn the unity of life with rich diversity of organism and evolutionary significance of certain invertebrate fauna.
- To stimulate the curiosity of students in the biota living around them.

Complementary course - Zoology: ZY2CMT02 -CHORDATE DIVERSITY

Course Outcomes

- To make the student observe the diversity in chordates and their systemic position.
- To make the student aware of the economic importance of some chordates.
- To learn the physiological and anatomical peculiarities of some vertebrate species through type study.
- To stimulate the students' curiosity in vertebrates living associated with them.

Complementary course - Zoology: ZY3CMT03 - PHYSIOLOGY AND IMMUNOLOGY

Course Outcomes

- To appreciate the correction between structure and function of organisms.
- To make the student aware of the health related problems, their origin and treatment.
- To understand how efficiently our immune system work in our body .
- To acquire knowledge about preventing common diseases rather than curing.

Complementary course - Zoology: ZY4CMT04 - APPLIED ZOOLOGY

Course Outcomes

- To acquire basic knowledge and skills in applied branches of zoology.
- To understand the technology for utilising eco-friendly organisms around them for beneficial purpose.
- To equip the students for self employment opportunities with scientific knowledge to perform profitably and confidently.

Department of English

BA English Language and Literature (Model II-Teaching)

PROGRAMME OUTCOMES

On successful completion of the BA programme the students should be able to:

PO1	analyze a variety of critical and theoretical approaches and texts.
PO2	gain a critical insight.
PO3	articulate the relation between culture and texts.
PO4	foster writing skill and communication skill.
PO5	develop personal and professional skills to enhance employability.

PROGRAMME SPECIFIC OUTCOMES

On successful completion of the BA English Language and Literature (Model II-Teaching)

Programme, the students should be able to acquire:

PSO1	teaching skill.
PSO2	presentation skill
PSO3	the skill to apply a range of critical, theoretical and interdisciplinary theories to texts.
PSO4	better writing and reading skills.
PSO5	communication skills.

COURSE OUTCOMES

SEMESTER - I

Common Course 1- EN1CCT01- Fine-tune Your English

On successful completion of the course the students should be able to:

CO 1: be equipped with grammar, usage and effective communication.

CO2: gain better writing skills.

CO3: confidently use English in both written and spoken forms.

CO4: use English for formal communication effectively.

CO5: write a perfect resume and draft formal letters.

Common Course 2- EN1CCT02 - Pearls from the Deep

On successful completion of the course the students should be able to:

CO1: appreciate and enjoy works of literature.

CO2: appreciate the aesthetic and structural elements of literature.

CO3: learn human values and live it.

Core Course- EN1CRT01 - Methodology of Literary Studies

On successful completion of the course the students should be able to:

CO1: get an overview of the major signposts in the historical evolution of literary studies from its inception to the current postcolonial realm.

CO2: learn the emergence of literature as a specific discipline within humanities.

CO3: be aware of the shift towards contextual-political critiques of literary studies.

Complementary Course 1-EN1CM01 - Education in India

On successful completion of the course the students should be able to:

- CO1: get a good idea about the educational systems in India to date.
- CO2: acquire information on the cultural and national views in the formulation of a curriculum.
- CO3: learn on the recent trends in the field of education.
- CO4: analyse and develop a teaching style of his/her own.

Vocational Course 1-EN1VO01 - School Organization

On successful completion of the course the students should be able to:

- CO1: have a clear idea about the administrative network of education in Kerala.
- CO2: acquire an insight to the relation between school and society.
- CO3: learn the assessment patterns employed and follow an organized system.

SEMESTER - II

Common Course 3 – EN2CCT03- Issues That Matter

On completion of this course, the student should be able to discern the following:

- CO1: Identify major issues of contemporary significance.
- CO2: Respond rationally and positively to the issues raised.
- CO3: Internalize the values imparted through the excerpts.
- CO4: Re-orient himself/ herself as conscious, cautious, concerned, conscientious and concerned human being.
- CO5. Articulate these values in error free English.

Common Course 2- EN2CCT04- Savoring the Classics

On completion of this course, the student should be able to discern the following:

CO1: Become familiar with the classics from various lands.

CO2: Understand the features that go into the making of a classic.

Core Course 2-- EN1CRT02- Introducing Language and Literature

On completion of this course, the student should be able to discern the following:

CO 1: The evolution and the differential traits of the language till the present times.

CO2: The evolution of literature from antiquity to the Postmodern times.

CO 3: The diversity of genres, techniques of representation and narration.

CO4: The links between literature and film as narrative expressions.

CO5: The emergence of British and American Literature through diverse periods.

Complementary Course 2- EN2CM02- Educational Psychology

On completion of this course, the student should be able to discern the following:

CO1: A growing conviction in the usefulness of the science of educational psychology.

CO2: To assist in defining and setting up educational objectives and standards in terms of desirable behaviour.

CO3. To develop in those who teach, a sympathetic attitude towards children.

CO4. To provide a body of facts and principles which can be used in solving the problems of teaching.

CO5. To aid in providing the teacher with a better perspective for judging both the results of his own teaching and the educational practice of others.

CO6. To assist the teacher in analysing child's behaviour to facilitate adjustment and growth of personality.

Vocational Course 2- EN2VO02- Conversational English

On completion of this course, the student should be able to:

CO1: Communicate effectively in different social contexts and real life situations.

CO2: Ask and answer different questions and be able to discuss and express their opinions about different topics.

CO3: Gain background knowledge and learn a wide range of vocabulary about different topics and be able to use them in relevant contexts.

CO4: Learn a wide range of lexical chunks and grammatical expressions necessary for effective communication such as phrasal verbs, collocations, idiomatic expressions, etc. and use them in real situations.

CO5: Get acquainted with various aspects of English culture necessary for learning the language.

SEMESTER III

Common Course 5 - EN3CC05 - Literature and/as Identity

On completion of the course, the student should be aware of the following:

CO1: The subtle negotiations of Indigenous and Diasporic identities within Literature.

CO2: The fissures, the tensions and the interstices present in South Asian regional identities.

CO3: The emergence of Life Writing and alternate/alternative/marginal identities.

Core Course 3- EN3CR03 – Harmony of Prose

On completion of the course, the student shall be:

CO1: familiar with different prose writings.

CO2: aware of eloquent expressions, brevity and aptness of voicing ideas in vivid language.

Core Course 4 - EN3CR04 – Symphony of Verse

On completion of the course the students shall have:

- CO1: an understanding of the poetic representations in various periods of the English tradition.
- CO2: an awareness of the emerging cultural and aesthetic expressions and nuances in poetry.

Complementary Course 3 –EN3CMT03 - Evolution of Literary Movements: The Shapers of Destiny

On the completion of the course the students will have:

- CO1: knowledge about the British history which markedly influenced the English literary trends during various periods.
- CO2: deeper understanding of life, as history and literature are both repositories of knowledge and experience.

SEMESTER - IV

Core Course 5- EN4CR05 – Modes of Fiction

On completion of the course:

- CO1: the student should comprehend the categories of British and non- British short fiction.
- CO2: the student will have experienced the novel as a form of literary expression.
- CO3: the student will have formulated a knowledge on the stylistic strategies employed by different writers.
- CO4: the student will have acquired the ability to comprehend literal and figurative use of language.

Core Course 6 - EN4CR06– Language and Linguistics

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

- CO1: identify various organs and processes involved in the production of speech sounds.
- CO2: describe and explain morphological processes and phenomena.
- CO3: understand the various processes involved in the generation of meaning.
- CO4: transcribe using IPA symbols.
- CO5: understand the key concepts of linguistics and develop awareness of the latest trends in language study.
- CO6: acquire better and intelligible pronunciation and improve the general standard of pronunciation in everyday conversation.

Common Course 6 - EN4CC06 – Illuminations

At the end of the course:

- CO1: the students will be able to maintain a positive attitude to life.
- CO2: the students will be able to evaluate and overcome setbacks based on the insights that these texts provide.
- CO3: the student will be able to locate different works they have come across under specific categories of writing.

Complementary Course 4 - EN4CMT04 - Evolution of Literary Movements: the Cross Currents of Change

At the end of the course :

- CO1: Students will be competent to understand literature against the backdrop of history.
- CO2: Students will be inspired to contribute dynamically to historical and literary processes.
- CO3: Students will be enabled to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature.

SEMESTER - V

Core Course 7 - EN5CR07 – Acts on the Stage

On completion of the course, the student shall be:

- CO1: able to enhance their critical and analytical skills.
- CO2: informed about the broad genre-based nuances in the realm of drama.
- CO3: familiar with the works of the playwrights from different parts of the world included in the course.

Core Course 8 - EN5CR08 – Literary Criticism and Theory

On completion of the course, the student:

- CO1: will have awareness about the major developments in literary criticism from the ancient times to the twentieth century.
- CO2: will be familiar with the significant critical approaches and terms.
- CO3: will be able to develop sensibility and competence in them for practical applications of critical approach to literary texts.
- CO4: will have awareness about the chief strains of Indian literary criticism.
- CO5: will be able to interpret literary works and to develop aptitude for critical analysis.

Core Course 9 - EN5CR09 – Indian Writing in English

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

- CO1: identify the unique features of Indian Writing in English.
- CO2: discuss the major class/caste issues in the context of Indian Literature.
- CO3: identify the artistic and innovative use of language employed by the Indian writers.

Core Course - EN5CREN01 – Environmental Science and Human Rights

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

- CO1: conduct research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills.
- CO2: understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues.
- CO3: develop a plan to counteract the overall impact of a specific issue, whether local or global, sketching out an effective environment management plan.
- CO4: gain basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about the environment.
- CO5: develop empathy and respect for human rights and their application in Indian context.

Open Course - EN5CROP03 – English for Careers

On completion of the course, the student should be able to discern the following:

- CO1: communicative skills, which will enable them to prepare for a career and function effectively in it.
- CO2: equip themselves in oral and written communication to enhance their academic and professional use of language.
- CO3: train themselves in making effective presentations.

SEMESTER - VI

Core Course 10- EN6CRT10 - Postcolonial Literatures

On completion of the course, the students will:

- CO 1: be aware of the social political and cultural aspects of postcolonial societies.
- CO 2: realize the impact of colonialism and imperialism on native cultural identities.
- CO 3: get an insight into the links between language history and culture.

CO 4: be acquainted with the resistance of the colonized against the colonizer through literature.

Core Course 11-EN6CRT 11 - Women Writing

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

CO 1: critically respond literature from a feminist perspective.

CO 2: realize how the patriarchal notions pervade in the social and cultural scenario and how feminism exposes these notions.

CO 3: identify how stereotypical representations of women were constructed and how these are subverted by the feminist writing.

CO 4: explore the plurality of female experiences.

Core Course 12- EN6CRT12 – American Literature

On completion of the course, the students shall:

CO 1: get an insight into American literature and its cultural themes.

CO 2: be familiar with the evolution of various literary movements in American literature.

CO 3: be acquainted with the major authors in American literary history and their artistic features.

CO 4: be able to identify and discuss the roles which gender, race, class, ethnicity and geography have played in creating American literature.

Core Course 13- EN6CRT13 – Modern World Literature

On completion of the course, the students shall discern the following:

CO 1: that literatures the world over engage in very deep ways with the vicissitude of life.

CO 2: world literatures often defy genres/ regionalities and canonical assumptions to emerge as a platform where poetics and politics fuse.

CO 3: the notion of major and minor, central and peripheral literatures is a myth.

Choice Based Course- EN6CBT03 – Regional Literatures in Translation

Upon successful completion of the course, the students will:

- CO 1: be familiar with the celebrated writers or literary pieces in the vernaculars.
- CO 2: get an insight into the modern trends in regional literatures.
- CO 3: be able to transcend cultural barriers in understanding, foregrounding and contesting the 'transcultural' India

Postgraduate Department of Economics

B.A. ECONOMICS

Programme Outcomes

PO1	To provide students a well-founded education in Economics
PO2	To provide structured curricula which support the academic development of students
PO3	To provide and adapt curricula that prepare our graduates for employment and further study as economists
PO4	To provide the students with the opportunity to pursue courses that emphasize quantitative and theoretical aspects of Economics
PO5	To provide students with the opportunity to focus on applied and policy issues in Economics
PO6	To provide programmes that allow the students to choose from a wide range of economic specialization
PO7	To provide a well-resourced learning environment for Economics.

Course Outcomes

Course Code	Course Title	Course Outcomes	
SEMESTER I			
	Perspectives and Methodology of Economics	CO1	It identifies the main concerns of social science disciplines
		CO2	It articulates the basic terminology and theories prevalent across various disciplines.
		CO3	It helps to understand qualitative and quantitative models within the social sciences, especially Economics
SEMESTER II			
	Micro Economic Analysis I	CO1	It gives the foundation for economic analysis and problem solving.
		CO2	It introduces a framework for learning about consumer behaviour and analyzing consumer decisions.
		CO3	The course also attends to firms and their decisions about optimal production.
		CO4	This course provides an introduction to supply and demand and the basic

			forces that determine equilibrium in a market economy.
SEMESTER III			
	Micro Economic Analysis- II	CO1	This course is designed to provide basic understanding of micro economic concepts.
		CO2	Students are provided with the working and performance of firms in the market
		CO3	It deals with behavior of economic agents – consumer, producer, factor owner – price fluctuations in the market.
	Economics of Growth & Development	CO1	This course enables the students to understand the theories and strategies of growth and development.
		CO2	It imparts knowledge about the issues relating to sustainable development, environmental protection and pollution control measures
		CO3	It makes the students more insightful about modern approaches to development
SEMESTER IV			
	Macro Economics 1	CO1	This paper provides the students the information regarding the theory of cost, market performance and welfare economics.
		CO2	This course also makes a picture regarding the cost analysis which seems to be integral to their life.
		CO3	It also aids the students to know more about the theoretical background of market structure
	Public Economics	CO1	The purpose of this course is to give an understanding of the role of state in fostering the economic activities via budget and fiscal policies.
		CO2	Students get a chance to know about the financial position of the country.
		CO3	This course enables the students to understand the various issues between Central and State Governments.
SEMESTER V			
	Quantitative Techniques	CO1	The objective of this course is to equip the students with primary statistical and mathematical tools for

			analyzing economic problems.
		CO2	Mathematical skills have become an essential tool for higher education.
		CO3	The outcome of this course is to introduce the body of mathematics to enable the study of economic theory including micro economic theory, macro economic theory, statistics and econometrics at the undergraduate level.
	Macro Economics II	CO1	This course is designed to make the students aware of the theoretical aspects of Macro economics.
		CO2	It helps the students to think issues which are a nature of economy as a whole.
		CO3	It presents macro economic trends of various variables and the theory behind it.
	Environmental Economics	CO1	This course imparts an awareness regarding the issues like environment conservation and climate change
		CO2	It also emphasizes the need of environmental protection and its role in economic development
		CO3	It gives an account on the role of human beings in preserving nature and nurture human values
	Introductory Econometrics	CO1	It introduces various concepts and application of econometrics.
		CO2	It helps the students to know the interrelationship between econometric variables
		CO3	It also provides an access to mathematical and econometric methods which are employed for economic measurement.
SEMESTER VI			
	Quantitative Methods	CO1	Students of Economics need a variety of statistical skills to collect, analyse and interpret empirical data.
		CO2	This course intends to provide an introduction to statistical methods and tools that are essential for the study of economics at the undergraduate level.
		CO3	Students are expected to be able to apply and use the basic concepts

			related to sampling techniques, and to determine sample size and also understand appropriate sampling method and determine optimum sample sizes
	International Economics	CO1	The objective of this course is to arrive at an understanding of theories of international trade
		CO2	It examines the impact of the trade policies on the world economy.
		CO3	It helps the students to know about the recent trade relations of the country.
	Money & Financial markets	CO1	The present course is designed to acquaint the students with the changing role of the financial sector of the economy.
		CO2	It introduces the students the functioning of stock markets in India
		CO3	The stake-holders are to familiarize with the basic concepts, the financial institutions and markets.
	Indian Economy	CO1	The objective of the course is to equip the students with the theoretical, empirical
		CO2	This course discusses the policy issues relating to the society, polity and economy of India.
		CO3	It also highlights the recent economic problems which are crucial for the growth of economy.
CHOICE BASED COURSES			
	Mathematical Economics	CO1	Students will have skills related to the basic concepts of Mathematics such as straight line, differentiation, Partial derivatives and Integral calculus.
		CO2	At the end of the Course, the Student will be able to Understand the derivative of a function.
		CO3	It also learn various applications of integration.
OPEN COURSES (Offered During Semester 5)			
	Fundamentals of Economics	CO1	This course is designed to make the undergraduate students of other disciplines aware of the basic ideas and concepts in economics.

		CO2	Students get the basic idea regarding national income, production, distribution etc.
		CO3	This course also inculcates some reasoning ability in students from other disciplines.
Complementary Course BA History			
SEMESTER I			
	Principles of Economics	CO1	It helps the students to learn to apply the basic principles and concepts of economics to everyday issues.
		CO2	It enriches the students with rational thinking.
		CO3	It also helps the students to imbibe the relationship among the members of the society.
SEMESTER II			
	Basic Economic Studies	CO1	It intends to make the students equipped with essential understanding the basic economic issues.
		CO2	This course addresses issues like in public finance, international economic issues, and Kerala economy so that they shall be capable of realizing and solving common economic issues in the society.
		CO3	Students also get acquainted with policy requirements.

Department of History

B A History

Programme Outcome

Competence

The students who go through the Under Graduate Programme in History shall thereby acquire the competences to

- Critically understanding of the past through methodologies and theoretical insights
- Understand the present through a proper understanding of the past
- Recognize, evaluate and synthesize different perspectives, evidences and sources regarding events, processes and social phenomena and to develop a comprehensive understanding of one's own
- Appreciate and understand the various historical processes that have gone into the making of societies, cultures and civilizations
- Prod students to not take ideas, institutions and practices as given, but as aspects that have evolved over a period of time across different spatial contexts, and continue to be engaged in the process of becoming
- Go beyond the mundane textbook oriented history and introduce them to the exciting ways in which a historian practices his/her craft using highly developed tools and skills, and produces history.

Dispositions

The students who pass the undergraduate programme in history shall develop

- Conviction about the value of historical methods of inquiry.

- Professional and ethical standards of the discipline.
- Appreciation for the possibility of the multiplicity of interpretation in history.
- Recognition of the style and craft of various historical compositions.

Course Outcome

No	Sem	Code	Course Title	Outcomes
1	I	HY1 CRT0 1	Perspectives and Methodologies in Social Sciences – History	<ul style="list-style-type: none"> • To understand the relevance of the Social Sciences to solve contemporary problems at the regional, national and global levels • To be able to locate the social sciences against the historical setting • To understand the basic principles, concepts and the basic epistemology of Social Sciences • Students develop the ability to understand the relationship between history and other social science disciplines and be able to follow an interdisciplinary approach in their studies • Understand the importance of objectivity in science and try to avoid subjectivity • Develop a broad understanding of the discipline history and its epistemology
2	II	HY2 CRT0 2	Understanding Early India: From Hunting Gatherers to Land Grants	<ul style="list-style-type: none"> • Ability to trace the relationship between pre-historic life, its environmental scenario and technological base • Be able to recognize the sources of ancient Indian history • Be able to interpret the social formation of the Vedic age in relationship with the material culture • Competence to analyze and find the relationship between the social formation and material culture in a given society • Ability to trace the evolution of state system in ancient India
3	II	HY3 CRT0 3	Polity, Society and Economy in Pre-Colonial India	<ul style="list-style-type: none"> • Interpreting the Sources of the history of pre-modern India • Understand the polity and institutional structures in Delhi Sultanate • Understand the nature of the Mughal Empire and its social formation

				<ul style="list-style-type: none"> Evaluating the relationship between the Mughal Empire and the Regional Political Formations
4	III	HY3 CRT0 4	Cultural Trends in Pre-Colonial Kerala	<ul style="list-style-type: none"> Ability to recognize the sources of Kerala History Evaluate the relationship between history and geography Interpret the feudal nature of pre-modern Kerala society and brahmanic domination Interpret the routes of modern Kerala in the pre-modern history
5	IV	HY4 CRT0 5	Making of Modern Kerala	<ul style="list-style-type: none"> Discern the factors that modernized Kerala society Analyze contemporary Kerala society and identify historical roots of its issues Understands the Kerala modernity and its features
6	IV	HY4 CRT0 6	Researching The Past	<ul style="list-style-type: none"> Proficiency in the basic terms, concepts and categories of history to understand the discipline as an intelligent knowledge system Develop scientific understanding of the discipline with different approaches of history at different historical contexts and the methodology of historical writing is introduced with techniques and technicalities
7	V	HY5 CRT0 7	Inheritance and Departures in Historiography	<ul style="list-style-type: none"> Trace the historiographical trends from the traditional phase to the contemporary scene Understand historical writings and perspectives and be inspired to take up higher courses in History
8	V	HY5 CRT0 8	India: Nation in the Making	<ul style="list-style-type: none"> Be able to explain the process of the making of India as a modern nation state and the factors that worked behind Understanding various historiographical trajectories on the freedom movement and develop a comprehensive outlook on the same Recognizes freedom movement as the nation-making process
9	V	HY5 CRT 09	State and Society in Ancient and Medieval World	<ul style="list-style-type: none"> Students become able to interpret the evolution of human culture from the stone age to the close of the medieval period They critically examine the relationship between the material factors and technology on the one hand and the political and social formations on the other hand. They become able to trace the ancient and medieval roots of the contemporary world and to appreciate the cultural continuities and breaks in

				world history
10	V	HY5 CRT 10	Environmental Studies and Human Rights in Historical Outline	<ul style="list-style-type: none"> • Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers. • Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future. It encourages character building, and develops positive attitudes and values. • To develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment and helps to protect the nature and natural resources. • To help the students in acquiring the basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about the environment.
11	V	HY5 OCT 01	Open Course – Introducing Environmental History	<ul style="list-style-type: none"> • Acquiring primary knowledge about the dynamic field of environmental history. • Be well-versed about the essential concepts, concerns and methodology of environmental history in the context of global / Indian environmental history.
12	VI	HY6 CRT 11	Making of Contemporary India	<ul style="list-style-type: none"> • Be able to explain the socio-political issues and features of contemporary India in their historical context. • Critically examine the political injustices and social movements in contemporary India
13	VI	HY6 CRT 12	Understanding Modern World	<ul style="list-style-type: none"> • Ability to explain the concept of modernity and the emergence of modern world • Critically examine the role played by imperialism and colonialism in altering the previous world order, in bringing about modernity and the world wars.

14	VI	HY6 CRT 13	Capitalism and Colonialism	<ul style="list-style-type: none"> • The students trace the emergence and development of capitalism in Europe and the related scramble for colonies and imperialist domination around the world. • Students critically assess the processes and debates involved in the transition from feudalism to capitalism in Europe, the related expansion of capitalism as a world system in the light of the industrial revolution, and the growing urge for a new wave of imperialist domination in the 19th and 20th Centuries.
15	VI	HY6 CRT 14	Gender in Indian Perspectives	<ul style="list-style-type: none"> • Students become able to explain the socio-historical constructions of sexual differences in Indian society by emphasizing the plural backgrounds • Students challenge the conventional social norms about male-female dichotomy and conceive biological realities natural but as always conditioned through social norms, moral codes and historical process. • They become convinced that the very notion of gender difference is not natural but more of economic, political and therefore power oriented.
16	VI	HY6 CBT0 1	Choice Based Core – Archaeology in India	<ul style="list-style-type: none"> • Students develop an attitude favouring scientific, objective and critical approach to the study of history and the possibility of the use of Archaeology for the same. • Students become proficient in appreciating the sites of archeological significance in India
17		HY1 CMT 02	Social Formations in Pre- Modern India	<ul style="list-style-type: none"> • Students become able to interpret how material developments worked as the base of the social formations in early India • They trace the development of state system in India right from the early Vedic to the Mauryan times during which it got matured. • They critically analyse the feudal social order of the early medieval period and the role played by the land grants in its emergence along with the interplay of the society religion and polity in the organization of its social formation.

Research and PG Department of Commerce

St. Dominic's College Kanjirapally

Programme Offered and Expected Outcome

Bachelor of Commerce – Model 1 Finance and Taxation (B.Com-Model I)

Programme Outcome

PO1	Familiarize students with various forms of business and their role in society
PO2	Acquaint students with the economic concepts and principles underlying business decision making
PO3	Provide students with theoretical and practical knowledge in accounting, management, auditing, taxes and business laws and there by prepare them for careers in these respective fields
PO4	Make Students aware of the opportunities and support for entrepreneurship in India to empower students with sufficient knowledge to start up their venture with confidence
PO5	Enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing
PO6	Give the students a general understanding of direct and indirect tax law in the country with a practical perspective and employability to the students in the commercial tax practices

Programme Specific Outcome

PSO1	Equipping the students with the skill of preparing books of accounts and financial statements of various types of business
PSO2	Familiarizing the students with the management, administration and legal framework influencing business decisions
PSO3	Enabling the students to acquire basic concepts and practice of Banking and Insurance sector and to equip them to pursue career in Banking and Insurance
PSO4	Facilitating students to understand the concepts and principles of business management, marketing management, advertising and sales promotion
PSO5	To make the students understand the role of statistics and quantitative techniques in business and familiarize them with basic tools of data analysis and forecasting
PSO6	To familiarize the students with functional areas of financial management, financial market operations in India and to create an understanding about recent trends in financial services sector
PSO7	To acquaint the students with management accounting techniques for the analysis and interpretation of financial statements and to study the basic framework of financial reporting
PSO8	To acquaint the students with different methods and techniques of costing and to enable the students to identify the methods and techniques applicable for different types of industries

Course Code	Course Title	Course Outcomes	
Semester:- I			
CO1CRT01	Dimensions and Methodology of Business Studies	CO1	To create understanding on the role of business in society
		CO2	To familiarize the technology integration in business
		CO3	To inculcate the fundamentals of business research in the life of students
CO1CRT02	Financial Accounting I	CO1	To enable the students to prepare final accounts
		CO2	To equip the students with the skill of preparing financial reports from incomplete records
		CO3	To familiarize the students with the preparation of financial reports for different types of business
CO1CRT03	Corporate Regulations and Administration	CO1	Familiarise the students with the management and administration of joint stock companies in India as per Companies Act, 2013
		CO2	Gain knowledge about various provisions relating to share allotment
		CO3	Acquire knowledge on procedure of winding up of companies
CO1CMT01	Banking and Insurance	CO1	To provide the students an understanding about the basic concepts and practice of banking
		CO2	To familiarize the students with recent trends and innovations in the banking sector.
		CO3	To provide the students an understanding about the relationship between banker and customer
		CO4	To provide the students an understanding about the basic concepts and the principles of Insurance
		CO5	To familiarize the students about various kinds insurance

Semester:- II			
CO2CRT04	Financial Accounting II	CO1	To make the students competent in preparing the financial accounts of businesses with different branches or departments.
		CO2	To acquaint the students with the preparation of accounts in case of dissolution of a partnership firm
		CO3	To familiarize the students with the implications of important Accounting Standards
CO2CRT05	Business Regulatory Framework	CO1	Familiarising with legal framework influencing business decisions
		CO2	Understand about special contracts relating to bailment, pledge, indemnity and guarantee
		CO3	Familiarising the learner with the legal provisions of Sale of Goods Act 1930 and its practical applicability
CO2CRT06	Business Management	CO1	To provide conceptual understanding of principles and practice of management
		CO2	Demonstrate a basic understanding of business management.
		CO3	To familiarize with the contemporary issues in management
CO2CMT02	Principles of Business Decisions	CO1	To familiarize the students about the concept of decision-making and application of economic theories in decision-making
		CO2	To provide the students an understanding about concept of demand, demand theory demands forecasting
		CO3	To make the students familiarise about production function and analysis
		CO4	To make students understand the concept of Cost analysis

		CO5	To make the students familiar with the pricing in different markets
Semester:- III			
CO3CRT07	Corporate Accounts -I	CO1	Learn about the accounting procedures in the companies regarding issue of shares and debentures, bonus issue and right issue, redemption, buyback and underwriting.
		CO2	Know about the final accounts of the companies and to differentiate profit prior to incorporation and post incorporation profits in companies accounts.
		CO3	Understanding about the investment accounts and the fire insurance claims of companies.
CO3CRT08	Quantitative Techniques for Business- 1	CO1	Have an introductory idea about statistical methods and tools that are essential for the empirical and analytical study of Business that helps to tackle business problems through the use of statistical techniques.
		CO2	Describe basic statistical techniques for data collection, presentation and analysis.
		CO3	Be able to read and interpret statistical information and be able recognize when meaningful statistics are (and are not) being used.
CO3CRT09	Financial Markets and Operations	CO1	To familiarize the students with the different financial instruments available in the market to enable informed financial decision making
		CO2	To acquaint the students with the regulatory system for financial markets in India
		CO3	To enable the students to engage in or take up jobs related to securities trading and to offer financial market related basic advisory services

CO3CRT 10	Marketing Management	CO1	To understand the different marketing strategies used by business firms.
		CO2	To understand branding and also the different pricing strategies adopted in the marketing process.
		CO3	To understand logistics and supply chain management and a familiarization with recent trends in marketing.
CO3OCT01	Goods and Services Tax	CO1	Familiarize the students a general understanding of GST law prevailing in the country
		CO2	Enhance the employability of the students by familiarizing them with the practical aspect of GST
		CO3	Encourage students to pursue career in commercial tax practice
Semester:- IV			
CO4CRT11	Corporate Accounts II	CO1	To introduce and develop knowledge in the preparation of Banking and Insurance Company Accounts as per Companies Act 2013
		CO2	To understand the accounting procedure for reconstruction of company's including internal, external, amalgamation and absorption.
		CO3	Enable the students to gain an idea on liquidation of companies which helps them to handle different financial issues related to the companies in an effective way as per companies Act 2013.
CO4CRT12	Quantitative Techniques For Business II	CO1	To instill analytical and computational ability among the students.
		CO2	Equipped to evaluate primary data using appropriate statistical tools
		CO3	Acquire skill to carry out descriptive analysis on primary and secondary data

CO4CRT13	Entrepreneurship Development & Project Management	CO1	Develop entrepreneurial spirit among students
		CO2	Empower students with sufficient knowledge to start up their venture with confidence
		CO3	Make them aware of the opportunities and support for entrepreneurship in India
		CO4	Mould young minds to take up challenges and become employer than seeking employment
CO4OC T01	Financial Services	CO1	To get a basic understanding of different financial services and also about merchant bankers.
		CO2	To familiarize students with venture capital and securitization of debt and the provisions of SARFAESI Act 2002.
		CO3	Develop and understanding about leasing and different forms of factoring.
		CO4	To acquaint basic knowledge about credit rating and to familiarize different credit rating agencies in India.
		CO5	To understand different means for expansion of business firms and to acquaint knowledge on Mergers, acquisitions and take over.
Semester:- V			
CO5CRT14	Cost Accounting-1	CO1	Familiarize students with the fundamentals of cost accounting
		CO2	Acquaint students with inventory control and control of labor cost
		CO3	Familiarize students with accounting for overhead and preparations of cost sheet.
CO5CRT15	Environment Management and Human Rights	CO1	To introduce the multi disciplinary nature of environment studies, natural resources and threats for the environment
		CO2	Understanding the emerging environmental and

			biodiversity issues as ozone depletion, climate change, energy crisis, nuclear issues, waste accumulation etc .and the viability of posited solutions.
		CO3	Identify and reflect on the limits and utility of human rights norms (international and domestic) and its effect on environment protection
CO5CRT16	Financial Management	CO1	Familiarize the students with the functional areas and principles of financial management
		CO2	Equip students with the required knowledge to take various financial decisions in business
		CO3	Provide students an exposure to various investment decisions used in business
CO5OCT01	Income Tax I	CO1	Familiarising the students with Income tax act 1961, its amendments and latest rates of tax
		CO2	Learner should get awareness about residential status and various exempted incomes
		CO3	Able to compute income taxable under the first three heads of income
C05OP03	Fundamentals of Accounting	CO1	Familiarize the students with different accounting concepts and conventions
		CO2	To gain working knowledge on Journal and Ledger.
		CO3	To get and understanding on different subsidiary books and also about petty cash book.
		CO4	To equip the students with practical knowledge on preparation of trial balance and final accounts.
Semester:- VI			
C06CRT17	Cost Accounting-II	CO1	Familiarize student with different costing method, technique and help identify the application of different method in industries.
		CO2	Acquaint student with operating and process costing

			applicable to different industries
		CO3	Familiarize students with Marginal costing mechanism and budgetary control system.
CO6CRT18	Advertisement and Sales Management	CO1	Make the students aware of the strategy, concept and methods of advertising and sales promotion.
		CO2	Familiarize students with application of advertising and sales promotion in business and industry
		CO3	Equip students with sales promotion and personnel selling skills
CO6CRT19	Auditing and Assurance	CO1	Understand the concepts and principles of auditing, auditing process and the objectives of auditing.
		CO2	Familiarize the importance of internal control and internal check system in an organization and the duties and liabilities of a company auditor.
		CO3	Understanding the special audits and investigation duty of auditor and make the students acquainted with the form, content and importance of the reports provided at the end of the audit or assurance service.
CO6CRT 20	Management Accounting	CO1	To understand the meaning, functions and tools of management accounting.
		CO2	To gain practical knowledge about Vertical and Horizontal Financial Analysis.
		CO3	Develop an understanding about ratio analysis
		CO4	To acquaint the students with working knowledge on the preparation of Cash Flow Statement and Fund Flow Statement.
CO6OCT01	Income Tax II	CO1	Learner should be able to compute Total Income and tax payable by individuals
		CO2	Able to understand various types of returns to be filed by an individual including e-filing

		CO3	Acquire knowledge about the assessment procedure of individuals, TDS and advance payment of tax and application in various situations
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DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS (SF)

B.COM COMPUTER APPLICATIONS - MODEL II

Programme Outcome

PO1	Aims at providing holistic and value-based knowledge and guidance that students need to become worthy accounting and management professionals.
PO2	To provide basic understanding about Commerce and Computer Applications.
PO3	To provide a sound intellectual base from which an advanced career in modern business fields can be developed.
PO4	To make the student familiar with the mechanism of conducting business dealings through electronic media.
PO5	To provide bright future in the IT fields, Software, Banks, MNC, BPOs and KPOs.
PO6	Successful graduates fascinated in pursuing higher studies in the discipline may go for pursuing MBA, MCA, M.Com., M.Com (CA)., M.Com (CS)., M.Com (CSCA)., M.Com (IB)., MSW., ACCA., ACS., ACMA, ACA.

Programme Specific Outcome

PSO1	To provide students with specific knowledge and skills in Accounting, Banking, Insurance, Computer Language, Software and Software application in Commerce, Accounting and Statistics.
PSO2	To make the students acquainted with technical and practical concepts for understanding the real business problems using different programming languages
PSO3	To train the students on practical business applications using high level programming languages and software packages.
PSO4	To make the students aware about the useful applications of different computer languages and software packages that solve real world problems.
PSO5	To enhance the knowledge in different business applications using various design principles portraying the concepts of computer applications in business activities
PSO6	The curriculum has been designed to furnish to the ever-changing demands of information technology along with necessary inputs from the Industry.
PSO7	Courses are meant to heighten technological know-how, to train students to become industry specialists, to provide research-based training and to encourage software or web page development.

Course Outcomes

SEMESTER 1

Course Code	Course Title	Course Outcomes	
CO1CRT01	Dimensions and Methodology of Business Studies	CO1	To understand business and its role in society
		CO2	To have an understanding of Business ethics and CSR
		CO3	To comprehend the business environment and various dimensions
		CO4	To familiarize technology integration in business
		CO5	To inculcate the fundamentals of business research in the life of students.
CO1CRT02	Financial Accounting I	CO1	To enable the students to accurately prepare an organization's financial accounts for a specific period
		CO2	To equip the students how to read and analyze three key financial statements: the balance sheet, income statement, and cash flow statement which shows the financial health of an organization.
		CO3	By studying financial statements students will be able deal with current financial health of an organization and can make decisions for future success.
CO1CRT03	Corporate Regulations and Administration	CO1	Familiarize the students with the management and administration of joint stock companies in India as per Companies Act, 2013
		CO2	To make efficient management as well as inspire and strengthen the trust and confidence of the people by ensuring business's commitment to higher growth and development.
		CO3	To study the concept of corporate Governance and how best organizations could be manage and benefit from the benefit of sound corporate governance.
CO1CMT01	Banking and Insurance	CO1	To provide students with a deep insight into the real world of banking and insurance through theory and practical sessions.
		CO2	To provide the students an understanding about the basic concepts and practice of banking
		CO3	To familiarize the students with recent trends and innovations in the banking sector.
		CO4	To provide the students an understanding about the relationship between banker and customer
		CO5	To provide the students an understanding about the basic concepts and the principles of Insurance.

SEMESTER 2

Course Code	Course Title	Course Outcomes	
CO2CRT04	Financial Accounting II	CO1	To make the students competent in preparing the financial accounts of businesses with different branches or departments.
		CO2	To acquaint the students with the preparation of accounts in case of dissolution of a partnership firm
		CO3	To familiarize the students with the implications of important Accounting Standards
CO2CRT05	Business Regulatory Framework	CO1	Understanding the fundamental aspects of Indian contract Act and Sale of Goods Act.
		CO2	Remember the fundamental aspects of Negotiable Instruments Act
		CO3	Understanding the fundamental aspects of Factories Act, Payment of Wages Act, Payment of Bonus Act, Minimum Wages Act and Industrial Disputes Act.
		CO4	Knowledge of the fundamental aspects of Companies Act.
		CO5	Able to understand the fundamental aspects of Partnership Act and LLP Ac
CO2CRT06	Business Management	CO1	To build key management skills that will allow you to be a valuable asset to any organization.
		CO2	Studying business management are presented with a variety of job opportunities in management, consultancy, marketing and advertising, human resources, retail and sales, finance.
		CO3	To gain in-depth knowledge and understanding of the core elements of real-life business situations
CO2CMT02	Principles of Business Decisions	CO1	Understand the concepts related to Business.
		CO2	Demonstrate the roles, skills and functions of management.
		CO3	Analyze effective application of PPM knowledge to diagnose and solve organizational problems and develop optimal managerial decisions
		CO4	Understand the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities.

SEMESTER 3

Course Code	Course Title	Course Outcomes	
CO3CRT07	Corporate Accounts –I	CO1	Learn about the accounting procedures in the companies regarding issue of shares and debentures, bonus issue and right issue, redemption, buyback and underwriting.
		CO2	Know about the final accounts of the companies and to differentiate profit prior to incorporation and post

			incorporation profits in companies' accounts.
		C03	Understanding about the investment accounts and the fire insurance claims of companies.
		C04	To train students in the field of corporate finance
		C05	To respond to the demands presented by competitive and globalized economy which more and more requires specialized agents in these disciplines.
CO3CRT08	Quantitative Techniques for Business-1	CO1	Understand relevance & need of quantitative methods for making business decisions
		CO2	Demonstrate a sound knowledge of fundamentals of statistics and statistical techniques
		CO3	Be able to read and interpret statistical information
CO3CRT09	Financial Markets and Operations	CO1	To increase the knowledge of how to raise finance for the organization. It would enhance the knowledge of corporate finance and cost of capital, its relevance and importance in any organization.
		CO2	To understand the meaning of capital structure and its importance in business.
		CO3	Understand the trade-off between risk and reward in investing
CO3CRT10	Marketing Management	CO1	To understand the concepts of marketing management
		CO2	To learn about marketing process for different types of products and services
		CO3	To understand the tools used by marketing managers in decision situations
		CO4	To study information regarding specific products and their pricing, promotions and distribution channels, as well as those concerning the trends, competitors and consumer characteristics that affect the evolution of a market as a whole.
CO3OCT02	Information Technology for Business (Theory and Practical)	CO1	Introduce the fundamentals of computing devices and reinforce computer vocabulary, particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing
		CO2	To study how to developed a product or process by applying web-designing, human computer interaction, networking and security tools
		CO3	To understand the balance of business and information technology and responds to industry needs, enhancing your employment prospects.
		CO4	To get practical knowledge of developing web pages for a business

SEMESTER 4

Course Code	Course Title	Course Outcomes	
CO4CRT11	Corporate Accounts –II	CO1	To introduce and develop knowledge in the preparation of Banking and Insurance Company Accounts as per Companies Act 2013.
		CO2	Explain the concepts of Amalgamation and External Reconstruction
		CO3	Prepare the accounts of companies undergoing amalgamation and external reconstruction
		CO4	Enable the students to gain an idea on liquidation of companies which helps them to handle different financial issues related to the companies in an effective way as per companies Act 2013
CO4CRT12	Quantitative Techniques for Business - II	CO1	Be able to perform statistical analysis
		CO2	Be able to apply quantitative methods to solve a variety of business problems
		CO3	Understand data and draw inference from data
		CO4	Calculate and interpret statistical values by using statistical tool (correlation & regression)
		CO5	Demonstrate an ability to apply various statistical tool to solve business problem
CO4CRT13	Entrepreneurship Development & Project Management	CO1	The students develop and can systematically apply an entrepreneurial way of thinking that will allow them to identify and create business opportunities that may be commercialized successfully.
		CO2	Have the ability to discern distinct entrepreneurial traits.
		CO3	Know the parameters to assess opportunities and constraints for new business ideas
		CO4	Understand the systematic process to select and screen a business idea
		CO5	To learn design strategies for successful implementation of ideas and write a business plan
CO4OCT02	Information Technology for Office (Theory and Practical)	CO1	To develop an in-depth understanding of why computers are essential components in offices, business, education and society.
		CO2	To provide hands-on use of Microsoft Office 2013 applications Word, Excel, PowerPoint and Page Maker.
		CO3	Completion of the course will result in MS Office applications knowledge and skills
		CO4	Will get practical knowledge on all areas of office works from letter writing to presentation preparation.

SEMESTER 5

Course Code	Course Title	Course Outcomes	
C05CRT14	Cost Accounting-I	CO1	Familiarize students with the fundamentals of cost Accounting
		CO2	To learn a correct analysis of cost both by process or operations and by different elements of cost.
		CO3	Acquaint students with inventory control and control of labor cost
C05CRT15	Environment Management and Human Rights	CO1	Creating the awareness about environmental problems among students
		CO2	Imparting basic knowledge about the environment and its allied problems.
		CO3	Developing an attitude of concern for the environment.
		CO4	Enhance the knowledge and understanding of human rights.
		CO5	Foster attitudes of tolerance, respect, solidarity, and responsibility.
		CO6	Develop skills for protecting human rights
C05CMT08	Programming in 'C' (Theory and Practical)	CO1	To provide students complete knowledge of a structured language.
		CO2	Make students able to develop logics which will help them to create programs and business applications in C
		CO3	By learning the basic programming constructs, they can easily understand and switch over to any other language in future.
C05OCT02	Computerised Accounting (Theory and Practical)	CO1	To understand the composition of Computerized Accounting System.
		CO2	To understand the Management Information System and Accounting Information System.
		CO3	Developing an attitude of concern for the environment.
		CO4	To learn about Computerized Accounting Software Tally ERP .
		CO5	To understand manual and Computerized Accounting Systems.
EC5OPT01	Fundamentals of Economics	CO1	Students will apply the basic theories of economics in critical thinking and problem solving.
		CO2	Students will demonstrate an awareness of their role in the global economics environment.
		CO3	Students will be able to make decisions wisely using cost-benefit analysis.
		CO4	Students will demonstrate the ability to recognize when change is appropriate, to adapt to change as it occurs, and to take the lead in creating change as the country's economic environment changes.

SEMESTER 6

Course Code	Course Title	Course Outcomes	
C06CRT17	Cost Accounting-II	CO1	Familiarize student with different costing method, technique and help identify the application of different method in industries.
		CO2	Acquaint student with operating and process costing applicable to different industries
		CO3	Familiarize students with Marginal costing mechanism and budgetary control system.
CO6CRT18	Advertisement and Sales Management	CO1	To learn different types of advertisements.
		CO2	To study and make decisions regarding the most feasible advertising appeal and media mix.
		CO3	Learn about the dealer-oriented promotion techniques, customer-oriented promotion techniques and the salesmen-oriented promotion techniques.
		CO4	To study sales force management.
CO6CRT20	Management Accounting	CO1	To understand the meaning, scope and functions of Management Accounting
		CO2	Students would understand the working of accounting statements and the techniques to be used in management accounting.
		CO3	To study and analyze and interpret financial statements using the various tools & techniques of Management Accounting.
CO6CMT10	Database Management System (Theory and Practical)	CO1	Knowledge of DBMS both in terms of business use and implementation
		CO2	Experience with MS Access which is largely used to store and process business data
		CO3	Experience analysis and design of database software in business systems
		CO4	To provide the theoretical models used in database management systems to answer business questions.
CO6OCT02	Software for Business and Research (Theory and Practical)	CO1	To introduce students to the basic practice of statistics by using SPSS Statistics
		CO2	To introduce students to the use of advanced SPSS for analyzing project data for reporting purposes focusing on database management tasks, descriptive statistics and graphics, and basic inferential statistics for comparisons and correlations.
		CO3	To be able to perform a wide range of data management tasks in SPSS application
		CO4	To perform data checking and create simple tables and charts.
		CO5	To perform advanced analysis in SPSS
		CO6	To familiarize with free office software Libre Office

DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS (SF)

B.COM COMPUTER APPLICATIONS - MODEL III

Programme Outcome

PO1	Aims at providing holistic and value-based knowledge and guidance that students need to become worthy accounting and management professionals.
PO2	To provide basic understanding about Commerce and Computer Applications.
PO3	To provide a sound intellectual base from which an advanced career in modern business fields can be developed.
PO4	To make the student familiar with the mechanism of conducting business dealings through electronic media.
PO5	To provide bright future in the IT fields, Software, Banks, MNC, BPOs and KPOs.
PO6	Successful graduates fascinated in pursuing higher studies in the discipline may go for pursuing MBA, MCA, M.Com., M.Com (CA)., M.Com (CS)., M.Com (CSCA)., M.Com (IB)., MSW., ACCA., ACS., ACMA, ACA.

Programme Specific Outcome

PSO1	To provide students with specific knowledge and skills in Accounting, Banking, Insurance, Computer Language, Software and Software application in Commerce, Accounting and Statistics.
PSO2	To make the students acquainted with technical and practical concepts for understanding the real business problems using different programming languages
PSO3	To train the students on practical business applications using high level programming languages and software packages.
PSO4	To make the students aware about the useful applications of different computer languages and software packages that solve real world problems.
PSO5	To enhance the knowledge in different business applications using various design principles portraying the concepts of computer applications in business activities
PSO6	The curriculum has been designed to furnish to the ever-changing demands of information technology along with necessary inputs from the Industry.
PSO7	Courses are meant to heighten technological know-how, to train students to become industry specialists, to provide research-based training and to encourage software or web page development.

Course Outcomes

SEMESTER 1

Course Code	Course Title	Course Outcomes	
CO1CRT01	Dimensions and Methodology of Business Studies	CO1	To understand business and its role in society
		CO2	To have an understanding of Business ethics and CSR
		CO3	To comprehend the business environment and various dimensions
		CO4	To familiarize technology integration in business
		CO5	To inculcate the fundamentals of business research in the life of students.
CO1CRT02	Financial Accounting I	CO1	To enable the students to accurately prepare an organization's financial accounts for a specific period
		CO2	To equip the students how to read and analyze three key financial statements: the balance sheet, income statement, and cash flow statement which shows the financial health of an organization.
		CO3	By studying financial statements students will be able deal with current financial health of an organization and can make decisions for future success.
CO1CRT03	Corporate Regulations and Administration	CO1	Familiarize the students with the management and administration of joint stock companies in India as per Companies Act, 2013
		CO2	To make efficient management as well as inspire and strengthen the trust and confidence of the people by ensuring business's commitment to higher growth and development.
		CO3	To study the concept of corporate Governance and how best organizations could be manage and benefit from the benefit of sound corporate governance.
CO1CMT01	Banking and Insurance	CO1	To provide students with a deep insight into the real world of banking and insurance through theory and practical sessions.
		CO2	To provide the students an understanding about the basic concepts and practice of banking
		CO3	To familiarize the students with recent trends and innovations in the banking sector.
		CO4	To provide the students an understanding about the relationship between banker and customer
		CO5	To provide the students an understanding about the basic concepts and the principles of Insurance.
CO1CMT03	Business Communication and MIS	CO1	To provide an overview of Prerequisites to Business Communication.
		CO2	To put in use the basic mechanics of Grammar
		CO3	To provide an outline to effective Organizational Communication.
		CO4	To underline the nuances of Business communication.
		CO5	To impart the correct practices of the strategies of Effective Business writing.

SEMESTER 2

CourseCode	Course Title	Course Outcomes	
CO2CRT04	Financial Accounting II	CO1	To make the students competent in preparing the financial accounts of businesses with different branches or departments.
		CO2	To acquaint the students with the preparation of accounts in case of dissolution of a partnership firm
		CO3	To familiarize the students with the implications of important Accounting Standards
CO2CRT05	Business Regulatory Framework	CO1	Understanding the fundamental aspects of Indian contract Act and Sale of Goods Act.
		CO2	Remember the fundamental aspects of Negotiable Instruments Act
		CO3	Understanding the fundamental aspects of Factories Act, Payment of Wages Act, Payment of Bonus Act, Minimum Wages Act and Industrial Disputes Act.
		CO4	Knowledge of the fundamental aspects of Companies Act.
		CO5	Able to understand the fundamental aspects of Partnership Act and LLP Ac
CO2CRT06	Business Management	CO1	To build key management skills that will allow you to be a valuable asset to any organization.
		CO2	Studying business management are presented with a variety of job opportunities in management, consultancy, marketing and advertising, human resources, retail and sales, finance.
		CO3	To gain in-depth knowledge and understanding of the core elements of real-life business situations
CO2CMT02	Principles of Business Decisions	CO1	Understand the concepts related to Business.
		CO2	Demonstrate the roles, skills and functions of management.
		CO3	Analyze effective application of PPM knowledge to diagnose and solve organizational problems and develop optimal managerial decisions
		CO4	Understand the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities.
CO2CMT04	Business Environment	CO1	To give students understanding about the various constituents of global business environment.
		CO2	To study the benefits and cost of globalization.
		CO3	To study economics of regional trading blocs and multilateralism.
		CO4	To study the various exchange rate regimes and their respective advantages and disadvantage

SEMESTER 3

Course Code	Course Title	Course Outcomes	
CO3CRT07	Corporate Accounts –I	CO1	Learn about the accounting procedures in the companies regarding issue of shares and debentures, bonus issue and right issue, redemption, buyback and underwriting.
		CO2	Know about the final accounts of the companies and to differentiate profit prior to incorporation and post incorporation profits in companies' accounts.
		CO3	Understanding about the investment accounts and the fire insurance claims of companies.
		CO4	To train students in the field of corporate finance
		CO5	To respond to the demands presented by competitive and globalized economy which more and more requires specialized agents in these disciplines.
CO3CRT08	Quantitative Techniques for Business-1	CO1	Understand relevance & need of quantitative methods for making business decisions
		CO2	Demonstrate a sound knowledge of fundamentals of statistics and statistical techniques
		CO3	Be able to read and interpret statistical information
CO3CRT09	Financial Markets and Operations	CO1	To increase the knowledge of how to raise finance for the organization. It would enhance the knowledge of corporate finance and cost of capital, its relevance and importance in any organization.
		CO2	To understand the meaning of capital structure and its importance in business.
		CO3	Understand the trade-off between risk and reward in investing
CO3CRT10	Marketing Management	CO1	To understand the concepts of marketing management
		CO2	To learn about marketing process for different types of products and services
		CO3	To understand the tools used by marketing managers in decision situations
		CO4	To study information regarding specific products and their pricing, promotions and distribution channels, as well as those concerning the trends, competitors and consumer characteristics that affect the evolution of a market as a whole.
CO3OCT02	Information Technology for Business (Theory and Practical)	CO1	Introduce the fundamentals of computing devices and reinforce computer vocabulary, particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing
		CO2	To study how to developed a product or process by applying web-designing, human computer interaction, networking and security tools

		CO3	To understand the balance of business and information technology and responds to industry needs, enhancing your employment prospects.
		CO4	To get practical knowledge of developing web pages for a business
CO3CMT05	Business Ethics and Corporate Social Responsibility	CO1	To raise students' general awareness of ethical dilemmas at work
		CO2	To better understand differing perceptions of interests in business-related situations
		CO3	To present the concept of Corporate Social Responsibility, and explore its relevance to ethical business activity
		CO4	To investigate the ethical obligations and ethical ideals present in the relationship between employers and employees
		CO5	To prepare students to play a constructive role in improving the ethical considerations of organizations with which they may become involved.

SEMESTER 4

CourseCode	Course Title	Course Outcomes	
CO4CRT11	Corporate Accounts –II	CO1	To introduce and develop knowledge in the preparation of Banking and Insurance Company Accounts as per Companies Act 2013.
		CO2	Explain the concepts of Amalgamation and External Reconstruction
		CO3	Prepare the accounts of companies undergoing amalgamation and external reconstruction
		CO4	Enable the students to gain an idea on liquidation of companies which helps them to handle different financial issues related to the companies in an effective way as per companies Act 2013
CO4CRT12	Quantitative Techniques for Business - II	CO1	Be able to perform statistical analysis
		CO2	Be able to apply quantitative methods to solve a variety of business problems
		CO3	Understand data and draw inference from data
		CO4	Calculate and interpret statistical values by using statistical tool (correlation & regression)
		CO5	Demonstrate an ability to apply various statistical tool to solve business problem
CO4CRT13	Entrepreneurship Development & Project Management	CO1	The students develop and can systematically apply an entrepreneurial way of thinking that will allow them to identify and create business opportunities that may be commercialized successfully.
		CO2	Have the ability to discern distinct entrepreneurial traits.
		CO3	Know the parameters to assess opportunities and constraints for new business ideas

		CO4	Understand the systematic process to select and screen a business idea
		CO5	To learn design strategies for successful implementation of ideas and write a business plan
CO4OCT02	Information Technology for Office (Theory and Practical)	CO1	To develop an in-depth understanding of why computers are essential components in offices, business, education and society.
		CO2	To provide hands-on use of Microsoft Office 2013 applications Word, Excel, PowerPoint and Page Maker.
		CO3	Completion of the course will result in MS Office applications knowledge and skills
		CO4	Will get practical knowledge on all areas of office works from letter writing to presentation preparation.
CO4CMT06	Logistics and Supply Chain Management	CO1	Familiarize students with the increasing significance of logistics and its impact on both costs and service in business and commerce.
		CO2	To incorporate and learn the critical elements of logistics and supply-chain management processes based on the most relevant application in forward-thinking companies.
		CO3	To develop criteria and standards to achieve improved business performance by integrating and optimizing the total logistics and supply-chain process

SEMESTER 5

Course Code	Course Title	Course Outcomes	
CO5CRT14	Cost Accounting-I	CO1	Familiarize students with the fundamentals of cost Accounting
		CO2	To learn a correct analysis of cost both by process or operations and by different elements of cost.
		CO3	Acquaint students with inventory control and control of labor cost
CO5CRT15	Environment Management and Human Rights	CO1	Creating the awareness about environmental problems among students
		CO2	Imparting basic knowledge about the environment and its allied problems.
		CO3	Developing an attitude of concern for the environment.
		CO4	Enhance the knowledge and understanding of human rights.
		CO5	Foster attitudes of tolerance, respect, solidarity, and responsibility.
		CO6	Develop skills for protecting human rights
CO5CMT08	Programming in 'C' (Theory and Practical)	CO1	To provide students complete knowledge of a structured language.
		CO2	Make students able to develop logics which will help them to create programs and business applications in C

		C03	By learning the basic programming constructs, they can easily understand and switch over to any other language in future.
CO5OCT02	Computerised Accounting (Theory and Practical)	CO1	To understand the composition of Computerized Accounting System.
		CO2	To understand the Management Information System and Accounting Information System.
		CO3	Developing an attitude of concern for the environment.
		CO4	To learn about Computerized Accounting Software Tally ERP .
		CO5	To understand manual and Computerized Accounting Systems.
EC5OPT01	Fundamentals of Economics	CO1	Students will apply the basic theories of economics in critical thinking and problem solving.
		CO2	Students will demonstrate an awareness of their role in the global economics environment.
		CO3	Students will be able to make decisions wisely using cost-benefit analysis.
		CO4	Students will demonstrate the ability to recognize when change is appropriate, to adapt to change as it occurs, and to take the lead in creating change as the country's economic environment changes.

SEMESTER 6

Course Code	Course Title	Course Outcomes	
C06CRT17	Cost Accounting-II	CO1	Familiarize student with different costing method, technique and help identify the application of different method in industries.
		CO2	Acquaint student with operating and process costing applicable to different industries
		CO3	Familiarize students with Marginal costing mechanism and budgetary control system.
CO6CRT18	Advertisement and Sales Management	CO1	To learn different types of advertisements.
		CO2	To study and make decisions regarding the most feasible advertising appeal and media mix.
		CO3	Learn about the dealer-oriented promotion techniques, customer-oriented promotion techniques and the salesmen-oriented promotion techniques.
		CO4	To study sales force management.
CO6CRT20	Management Accounting	CO1	To understand the meaning, scope and functions of Management Accounting
		CO2	Students would understand the working of accounting statements and the techniques to be used in management accounting.
		CO3	To study and analyze and interpret financial statements

			using the various tools & techniques of Management Accounting.
CO6CMT10	Database Management System (Theory and Practical)	CO1	Knowledge of DBMS both in terms of business use and implementation
		CO2	Experience with MS Access which is largely used to store and process business data
		CO3	Experience analysis and design of database software in business systems
		CO4	To provide the theoretical models used in database management systems to answer business questions.
CO6OCT02	Software for Business and Research (Theory and Practical)	CO1	To introduce students to the basic practice of statistics by using SPSS Statistics
		CO2	To introduce students to the use of advanced SPSS for analyzing project data for reporting purposes focusing on database management tasks, descriptive statistics and graphics, and basic inferential statistics for comparisons and correlations.
		CO3	To be able to perform a wide range of data management tasks in SPSS application
		CO4	To perform data checking and create simple tables and charts.
		CO5	To perform advanced analysis in SPSS
		CO6	To familiarize with free office software Libre Office

BACHELOR OF FINANCIAL MARKETS

Programme Outcomes

BFM degree programme offered by the University is outcome based and the outcomes expected are as follows:

PO1	Offers theoretical and practical knowledge of managing the capital resources of an organization or company in an efficient way
PO2	Provide analytical skill and facilitate study of financial markets, basics of trading and its regulation, market forces, demand and supply
PO3	Understand the risks, returns as well as legal parameters of a financial market
PO4	Develop awareness & understanding of the role and structure of the financial system and its components
PO5	Observe and interpret financial markets to uncover potential opportunities
PO6	Apply best practices to create, evaluate and rebalance financial portfolios to achieve investment outcomes
PO7	Enhance the professional and communication skills of students and acquire the ability to pursue careers in the ever growing field of finance and financial markets

Course Code	Course Title	Course Outcomes	
Semester:- I			
	INTRODUCTION TO FINANCIAL MARKETS	CO1	To provide an overview of Indian Financial Market
		CO2	To help students to understand the role of money market in the development of the economy

		CO3	To enable the students to understand the role of central bank in the operation of money market
		CO4	To get a basic understanding of different Financial Institutions in the Indian Financial System and their functions
		CO5	To familiarize about the regulatory framework in Financial Markets
	INTRODUCTION TO CAPITAL MARKETS	CO1	To get an understanding of Indian Securities Market
		CO2	To familiarize the students with the events and players in primary and secondary market
		CO3	To get a basic understanding of different intermediaries in the market
		CO4	To get a basic awareness on the SEBI-Regulations for Issue and Listing
	ECONOMICS OF FINANCE	CO1	To familiarize students with elementary aspects of money
		CO2	To understand the concept of money supply and circulation
		CO3	To get acquaint with the meaning and operative mechanism of monetary policies
		CO4	To enable the students to understand public finance and public revenue
		CO5	To familiarize students with public debt and fiscal policies

	LEGAL AND REGULATORY FRAMEWORK OF FINANCIAL MARKETS - II	CO1	To acquire knowledge about various types of companies, major documents and prospectus of companies
		CO2	To able to understand membership in companies, meetings and winding up of companies
		CO3	To understand the provisions of Securities Contract Regulation Act 1956
		CO4	To able to understand the provisions of Depositories act 1996
		CO5	To acquire knowledge about SEBI act 1992
Semester II			
	FINANCIAL ACCOUNTING	CO1	To develop basic understanding about Accounting
		CO2	To develop a deeper understanding about Journal and Ledger
		CO3	To acquaint the practical knowledge to prepare financial statements
		CO4	To familiarize students with valuation of shares and goodwill.
		CO5	To provide understanding about theoretical and practical aspects of Accounting Standard – 10 and to apply the same in different practical situations.
	RISK AND	CO1	To familiarize students with the basics of investment,

	RETURN IN INVESTMENT DECISION		interest calculation, equated monthly installment schemes and asset classification
		CO2	To understand the concept of time value of money and its effective application in investment decision process
		CO3	To enable students to differentiate different types of return while evaluating different investment options
		CO4	To create an awareness among students regarding different types of risk involved in investment
		CO5	To familiarize the students with basic idea leading to rational investment decisions
		CO6	To understand and to evaluate the alternative forms of investment
	BUSINESS ECONOMICS	CO1	To familiarizing students with elementary aspects of business economics
		CO2	To understand the concept of demand and elasticity of demand and assist students in scientific demand forecasting
		CO3	To understand the economies and diseconomies of scale and Laws of production function
		CO4	To understand the concept of cost and prepare students for effective cost analysis
		CO5	To enable the students to understand various market conditions leading to effective price determination

	LEGAL AND REGULATORY FRAMEWORK OF FINANCIAL MARKETS - II	CO1	To familiarise students with the fundamental legal framework of Contract Act which influences all business relationships
		CO2	To make students understand the application of Law of Agency while dealing in financial market
		CO3	To understand the meaning, essential characteristics and types of negotiable instruments and various provisions of negotiable instrument act 1881
		CO4	To familiarise students with Insurance Regulatory And Development Authority Of India Act, 1999
		CO5	To understand investor protection in financial markets
CO1CR T01	Dimensions and Methodology of Business Studies	CO1	To create understanding on the role of business in society
		CO2	To familiarize the technology integration in business
		CO3	To inculcate the fundamentals of business research in the life of students

DEPARTMENT OF B.VOC PROGRAMMES

B.Voc AGRICULTURE TECHNOLOGY

Programme Outcome

After completing a course in B.Voc Agriculture Technology, a student will:

PO1	Get motivated and enrich with knowledge in the field of agriculture.
PO2	Learn the basic principles and methods for cultivation of different crops.
PO3	Get awareness about different pests that may occur in crops and learn about their control measures.
PO4	Familiarize with both bio and synthetic fertilizers, weedicides, pesticides, insecticides etc.
PO5	Learn to construct a field layout for different plantation and horticultural crops.
PO6	Learn the working principle and operating methods of different farm machineries.
PO7	Skilled with practicing the modern farming methodologies.
PO8	Get the basic knowledge about livestock farming and agribusiness management.
PO9	Visit a number of agricultural fields, gardens, plantations and nurseries, so that they will get a skilled knowledge about the farming practices, nursery management, problems faced by the farmers etc.
PO10	Motivated with entrepreneurship goals and practices.
PO11	Learn the post-harvest processing and value addition of agricultural produce.
PO12	Practice the 'Earn-while-you-learn' system.
PO13	Get awareness about the national and international standards and regulatory authorities related to the use of fertilizers and farming practices.
PO14	Get awareness about government subsidies, grants and other programs to buy agricultural machineries, seeds, fertilizers etc. and for starting up their own agricultural business

Course Outcome

SEMESTER 1

GENERAL EDUCATION COURSES

BOCG101- LISTENING AND SPEAKING SKILLS IN ENGLISH

Course Outcome:

- The students will learn the basic grammar, correct pronunciation of words, sounds and will accrue good listening and speaking skills.

CORE COURSE

➤ **BAT1S01- FUNDAMENTALS OF AGRONOMY**

Course Outcome:

- To enable the students to acquire knowledge on importance of agriculture and various types of advanced farming.
- To study the fundamentals of agronomy and cultivation of field crops.

➤ **BAT1S02- FUNDAMENTALS OF HORTICULTURE**

Course Outcome:

- To acquaint with importance, division and classification of horticultural crops.
- To understand the basic principles and types of plant propagation.

➤ **BAT1S03-FUNDAMENTALS OF SOIL SCIENCES**

Course Outcome:

- To study fundamentals of soil science.
- To familiarize with plant nutrients and identification of deficiency symptoms.

COMPLIMENTRY COURSE

➤ **AFP1G03- BASIC PRINCIPLES OF FOOD PROCESSING**

Course Outcome:

- To provide a basic sequence of steps to produce an acceptable and quality food product from raw materials.
- Study of scientific and technological advancements in food processing.

ACTIVITY ORIENTED CLASS (AOC)

- To familiarize with cultivation aspects of cereals and millets, pulses and tuber crops.
- To develop skill in propagation and cultivation aspects of horticultural crops.
- To study soil testing procedure and identify deficiency symptoms.
- To study the manufacture of various food products.
- To develop skill in setting up of a crop museum for major field crops.

SEMESTER-II

GENERAL EDUCATION COURSE

BOCG201- WRITING AND PRESENTATION SKILLS IN ENGLISH

Course Outcome:

- The students will accrue good writing skills, business communication skills and presentation skills.

CORE COURSE

➤ **BAT2S01-FUNDAMENTALS OF ENTOMOLOGY AND INSECT ECOLOGY**

Course Outcome:

- To familiarize with insect pests and to understand about the Insect ecology.

➤ **BAT2S02- PLANTATION CROPS, SPICES AND FRUITS**

Course Outcome:

- To acquaint with the cultivation aspects of Plantation crops, spices and fruit crops.

➤ **BAT2S03- FUNDAMENTALS OF AGRICULTURAL ENGINEERING**

Course Outcome:

- To familiarize with fundamentals of water management.
- To acquaint with various soil conservation methods.

COMPLIMENTRY COURSE

➤ **AFP2G02- FRUIT AND VEGETABLE PROCESSING TECHNOLOGY**

Course Outcome:

- To acquire knowledge about the selection of fruits for processing and value addition
- To introduce the latest technologies, manufacturing processes and tools for effective control of safety and quality during processing

➤ **BAT2G03-CULTIVATION OF COCONUT, PEPPER AND BANANA [AOC]**

Course Outcome:

- To develop skill and to get experience in the cultivation practices of coconut, pepper and banana.
- To practice High density planting of Banana Precision farming, Fertigation of Banana

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To develop skill in different IPM practices in insect pest management and to familiarize with insect morphology.
- To acquire skill on cultivation aspects of Plantation crops, spices and fruit crops.
- To familiarize with fundamentals of water management measures.
- To acquaint with various soil conservation methods.
- To be innovative in exploring various processed and value added from agricultural commodities.

SEMESTER-III

GENERAL EDUCATION COURSES

BOCG301 -PRINCIPLES OF MANAGEMENT

Course Outcome:

- Students will accrue administrative and office management skills.

CORE COURSE

➤ **BAT3S01- FUNDAMENTALS OF PLANT PATHOLOGY AND CROP DISEASE MANAGEMENT**

Course Outcome:

- To understand the general characters of major plant pathogens.
- To acquaint with principles of crop disease management.

➤ **BAT3S02-PLANT PHYSIOLOGY**

Course Outcome:

- To familiarise with the physiological processes in plants.
- To learn about plant nutrients and use of growth regulators.

➤ **BAT3S03-INTEGRATED PEST MANAGEMENT IN CROPS**

Course Outcome:

- Familiarization with cultural methods of pest control.
- Familiarization with Mechanical methods of pest control.
- Identification of predators.
- Identification of microbial agents.
- Familiarization with different formulations of insecticides.

➤ **BAT3G03 -PROTECTED CULTIVATION OF HORTICULTURAL CROPS**

Course Outcome:

- To familiarize with protected cultivation structures and cultivation practices.

COMPLIMENTRY COURSE

➤ **AFP3G02- CEREALS AND PULSES PROCESSING TECHNOLOGY**

Course Outcome:

- To give a general outline about the principles, structure and composition, economic importance and storage of different cereals, pulses and their products.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To familiarize with the symptomatology of plant diseases.
- To develop skill in preparing and using plant protection chemicals and use of plant protection equipment.
- To practise with the estimation of physiological parameters in plants.
- To learn the method of processing of various cereals and pulses.
- Setting up a polyhouse for vegetable production with drip irrigation facility and a hardening unit with mist propagation in college field as a part of earn while you learn programme.
- To practice with protected cultivation practices of important crops.

SEMESTER- 4

GENERAL EDUCATION COURSES

BOCG401 - SOFTSKILLS AND PERSONALITY DEVELOPMENT

Course Outcome:

- The students will develop a good personality characteristics and a social communication skills.

CORE COURSE

➤ **BAT4S01- WEED MANAGEMENT AND FODDER CROP PRODUCTION**

Course Outcome:

- To understand the general characters of weeds and their management.
- To acquaint with cultivation of rice, fibre crops, fodder crops, etc.

➤ **BAT4S02 - FARM POWER AND MACHINERY**

Course Outcome:

- To acquaint with principles of farm machineries and their working.

➤ **BAT4S03 - LIVESTOCK FARMING**

Course Outcome:

- To familiarize with fundamentals of livestock farming.
- To acquaint with the management of various farms.

➤ **BAT4G03- COMMERCIAL VEGETABLE PRODUCTION**

Course Outcome:

- The students will learn the latest technologies and correct methods for the commercial production of vegetable crops.

COMPLIMENTRY COURSE

AFP4G02- FAT AND OIL PROCESSING TECHNOLOGY

Course Outcome:

- To understand various aspects of oil processing technology employed in food industry.
- To learn various chemical and packaging of oils.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To familiarize with the general characters of weeds and their management.
- To familiarize with cultivation of rice, fibre crops, fodder crops etc.
- To acquaint with principles of farm machineries and their working.
- To familiarize with practices in livestock farming.
- To acquaint with the management of important farm animals and birds.
- To give foundation to fat analysis.

SEMESTER – 5

GENERAL EDUCATION COURSES

BOCG501-ENVIRONMENTAL STUDIES

Course Outcome:

- Students get proper awareness on Environmental Issues.
- To build a pro-environmental attitude and a behavioural pattern in society based on sustainable lifestyles.
- To impart basic knowledge on pollution and environmental degradation.

CORE COURSE

➤ **BAT5S01- LANDSCAPE DESIGNING AND INDOOR GARDENING**

Course Outcome:

- To get awareness on designing and laying out of a landscape.
- To familiarise with different types and features of garden.

➤ **BAT5S02 - COMMERCIAL ENTERPRISES**

Course Outcome:

- To understand various commercial enterprises in agricultural sector through observation, field visits and presentation.

➤ **BAT5S03- TISSUE CULTURE AND CROP IMPROVEMENT**

Course Outcome:

- To get practiced with various aspects of tissue culture.
- To learn applications of tissue culture in crop improvement.

➤ **BAT5G02- PRINCIPLES OF AGRIBUSINESS MANAGEMENT**

Course Outcome:

- To familiarise with the fundamentals of information and communication management.
- To understand entrepreneurship strategies.

➤ **BAT5G03 - FUNDAMENTALS OF ORGANIC FARMING**

Course Outcome:

- To familiarize with the concept of sustainability and sustainable development.
- To acquaint with the fundamentals of organic farming.
- To have the knowledge about the organic certification procedures.

ACTIVITY ORIENTED CLASS (AOC)**Course Outcome:**

- To develop skill in planning and planting of garden lawn.
- To develop skill in preparation of different types of gardens.
- To develop awareness on bee keeping, sericulture and lac culture through observation, field visit and reporting.
- To develop skill in cultivation of edible mushrooms and to develop skill in dry flower production and bouquet making.
- To familiarise various activities involved in tissue culture crop production.
- To familiarize with the production and utilization of bio fertilizers and bio control agents.

SEMESTER – 6**GENERAL EDUCATION COURSES****BOCG601 - ENTREPRENEURSHIP DEVELOPMENT****Course Outcome:**

- Understand the significance of entrepreneurs in the development of a country.
- Familiarize with procedures and legal issues involved in setting up an enterprise.
- Get motivated to become an entrepreneur.

CORE COURSE**➤ BAT6S01-AGRO METEOROLOGY****Course Outcome:**

- To study various meteorological aspects in relation with crop production.

➤ **BAT6S02 - INFORMATION TECHNOLOGY AND NETWORKING FOR AGRICULTURE**

Course Outcome:

- Smart farming familiarizing concept, integration of advanced technology in order to increase production efficiency and quality of agriculture produce.

➤ **BAT6S03 -DISEASE MANAGEMENT IN COMMERCIAL CROPS**

Course Outcome:

- To understand the sustainable disease management strategies in plantation crops and spices.
- To understand the sustainable disease management strategies in vegetables, fruits and field crops.

➤ **BAT6G02-GOVERNMENT POLICIES AND PROGRAMMES RELATED TO AGRICULTURE**

Course Outcome:

- To acquaint with various Government Policies related to Agriculture in Kerala and India.
- To familiarise with five year plans and Panchayathiraj system in India.

➤ **BAT6G03 - FARMING SYSTEM APPROACH FOR SUSTAINABLE CROP PRODUCTION**

Course Outcome:

- Familiarising with the Farming System Approach for Sustainable Crop Production
- To make idea about different non-traditional practices in organic farming.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To study the practical meteorological aspects in relation with crop production.
- To familiarize with the major diseases in plantation crops, spices, vegetables, fruits and field crops.
- Preparation of cropping scheme for irrigated situations and dry land situations.

DEPARTMENT OF B.VOC PROGRAMMES

B.Voc AGRO FOOD PROCESSING

Programme Outcome

After completing a course in B.Voc Agro Food Processing, a student will,

PO1	Accrue the basic knowledge about the chemical structure, processing methods, additives used and the preservative techniques of foods.
PO2	Get the basic knowledge about the cultivation and production of different agricultural crops.
PO3	Learn the basic processing methods of different classes of foods such as, fruits and vegetables, milk, meat and fish, cereals and pulses, Bakery products etc.
PO4	Learn, how to formulate a nutritional food or a balanced diet.
PO5	Accrue skilled knowledge in the chemical and microbiological analysis of food.
PO6	Get awareness about different adulterants used in food and the methods to detect those adulterants in foods.
PO7	Study the working principles and experience the operating methods of different food processing equipments and machineries.
PO8	Learn to practice safe and sanitary procedures to make a hygienic and hazard free nutritious food.
PO9	Get skilled training to make different value added products from agricultural produces and their marketing practices. So that the wastage of agricultural produce can be minimized.
PO10	Learn about the construction and layout of a food processing industry.
PO11	Motivated with entrepreneurship goals and practices.
PO12	Practice the 'Earn-while-you-learn' system.
PO13	Get awareness about the national and international standards and regulatory authorities related to food processing and marketing.
PO14	Get awareness about government subsidies, grants and other programs that help people to make their own food processing industries and business.

Course Outcome

SEMESTER – I

GENERAL EDUCATION COURSES

BOCG101- LISTENING AND SPEAKING SKILLS IN ENGLISH

Course Outcome:

- The students will learn the basic grammar, correct pronunciation of words, sounds and will accrue good listening and speaking skills.

CORE COURSES

➤ **AFP1S01- BASIC PRINCIPLES OF FOOD PROCESSING**

Course Outcome:

- To deliver a sequence of steps to produce an acceptable and quality food product from raw materials.
- Study of scientific and technological advancements in food processing.

➤ **AFP1S02- BASIC PRINCIPLES OF FOOD PRESERVATION**

Course Outcome:

- To enable the students to acquire knowledge on different preservation techniques used to enhance the shelf span of food product.
- To study the different mode of spoilage in foods and minimize the contamination by different preservation technology.

➤ **AFP1S03- FOOD CHEMISTRY**

Course Outcome:

- To acquaint various functional chemical constituents of food.
- To build a relationship between the dynamic forces of food and the dynamic forces of digestion and growth.

COMPLIMENTRY COURSE

BAT1G03-FUNDAMENTALS OF HORTICULTURE

Course Outcome:

- To acquaint with importance, division and classification of horticultural crops.
- To understand the basic principles and types of plant propagation.

ACTIVITY ORIENTED CLASS(AOC)

Course Outcome:

- To study the manufacture of various food products
- To test the presence of carbohydrates and proteins in food samples.
- To estimate the nutrients in different food samples.
- To develop skill in propagation and cultivation aspects of horticultural crops.

SEMESTER-2

GENERAL EDUCATION COURSES

BOCG201- WRITING AND PRESENTATION SKILLS IN ENGLISH

Course Outcome:

- The students will accrue good writing skills, business communication skills and presentation skills.

CORE COURSES

➤ AFP2S01- FOOD ADDITIVES

Course Outcome:

- To attain knowledge regarding the use of additives in the food industry, laws related to food additives and to prevent the involuntary infringement of analytical procedures.

➤ AFP2S02- BASIC PRINCIPLES OF FOOD ENGINEERING

Course Outcome:

- Students will be able to apply material balances and energy balances to the field of food engineering.
- Students will be able to understand equipment used in the food industry.

➤ **AFP2S03- BASIC MICROBIOLOGY**

Course Outcome:

- Acquire an elementary knowledge about microorganisms.
- Develop an understanding of microbial contamination and hazards in a food industry.

➤ **AFP2G02- FRUIT AND VEGETABLE PROCESSING TECHNOLOGY**

Course Outcome:

- To acquire knowledge about the selection of fruits for processing and value addition.
- Learn to introduce the latest technologies, manufacturing processes and tools for effective control of safety and quality during processing.

COMPLIMENTRY COURSE

BAT2G03-CULTIVATION OF COCONUT, PEPPER AND BANANA [AOC]

Course Outcome:

- To develop skill and to get experience in the cultivation practices of coconut, pepper and banana.
- To practice High density planting of Banana Precision farming, Fertigation of Banana.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To study the basic rules and requirements of a microbiology laboratory.
- Give emphasis towards the preparation of biological stains, reagents, media and their composition.
- To get thorough with different methods for staining for detection of microorganisms.
- To be innovative in exploring various processed and value added products from agricultural commodities.

SEMESTER-3

GENERAL EDUCATION COURSES

BOCG301 -PRINCIPLES OF MANAGEMENT

Course Outcome:

- Students will accrue administrative and office management skills.

CORE COURSES

➤ AFP3S01- FOOD PROCESSING MACHINERIES

Course Outcome:

- Students will be able to understand a food plant design, functioning of different machines in the industry.
- Understand the various processing equipment on the basis of unit operations of mechanical processes.

➤ AFP3S02- BAKERY AND CONFECTIONERY TECHNOLOGY

Course Outcome:

- Understand the processing methods used in the manufacturing of confectionary and bakery products.

➤ AFP3S03- FOOD ANALYSIS AND ADULTERATION TESTING

Course Outcome:

- To understand different sampling techniques employed in chemical analysis of foods.
- To learn various chemical methods of food analysis.
- To be familiar with adulteration test used for quality control.

➤ AFP3G02- CEREALS AND PULSES PROCESSING TECHNOLOGY

Course Outcome:

- To give a general outline about the principles, structure and composition, economic importance and storage of different cereals, pulses and their products.

COMPLIMENTRY COURSE

BAT3G03 -PROTECTED CULTIVATION OF HORTICULTURAL CROPS

Course Outcome:

- To familiarize with protected cultivation structures and cultivation practices.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To learn various processing aspects of food products, having economic importance.
- To learn the method of processing of various cereals and pulses.
- Setting up a polyhouse for vegetable production with drip irrigation facility and a hardening unit with mist propagation in college field as a part of earn while you learn programme.
- To practice with protected cultivation practices of important crops.

SEMESTER – 4

GENERAL EDUCATION COURSES

BOCG401-SOFTSKILLS AND PERSONALITY DEVELOPMENT

Course Outcome:

- The students will develop a good personality characteristics and a social communication skills.

CORE COURSES

➤ AFP4S01- DAIRY TECHNOLOGY

Course Outcome:

- Understand the importance of milk as an agricultural commodity.
- To be innovative in exploring various traditional and nontraditional milk products.
-

➤ **AFP4S02- MEAT FISH AND POULTRY PROCESSING TECHNOLOGY**

Course Outcome:

- To provide an extensive description of meat, fish and poultry processing.
- To introduce the latest technologies, manufacturing processes and tools for effective control of safety and quality during processing.

➤ **AFP4S03- FOOD SCIENCE AND NUTRITION**

Course Outcome:

- To know and understand the functions, importance of all nutrients present in foods.
- To know about the various types of nutrients and their functions in the body.
- To familiarize with the recent advances in field of nutrition.
- To understand the different types of newly developed food products.

➤ **AFP4G02- FAT AND OIL PROCESSING TECHNOLOGY**

Course Outcome:

- To understand various aspects of oil processing technology employed in food industry.
- To learn various chemical properties and packaging methods of oils.

COMPLIMENTRY COURSES

BAT4G03- COMMERCIAL VEGETABLE PRODUCTION

Course Outcome:

- The students will learn the latest technologies and correct methods for the commercial production of vegetable crops.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To analyze the chemical constituents of milk as an agricultural commodity.
- To be innovative in exploring various traditional and nontraditional milk products.
- To give foundation to fat analysis.
- Familiarization of different vegetable crops- through field visits and slide show.

SEMESTER - 5

GENERAL EDUCATION COURSES

BOCG501-ENVIRONMENTAL STUDIES

- The students will get proper awareness on Environmental Issues.
- To build a pro-environmental attitude and a behavioral pattern in society based on sustainable lifestyles.
- To impart basic knowledge on pollution and environmental degradation.

CORE COURSES

➤ **AFP5S01- FOOD PACKAGING**

Course Outcome:

- To be familiar with different methods and materials used for packaging of foods.
- To understand the technology behind packaging.

➤ **AFP5S02- TECHNOLOGY OF BEVERAGES**

Course Outcome:

- Enables the students to get knowledge on fermented, non-fermented and distilled beverages.

➤ **AFP5S03- SENSORY EVALUATION**

Course Outcome:

- To understand different aspects of sensory science and its application.

➤ **AFP5G02- SANITATION AND HYGIENE**

Course Outcome:

- To know the principles and applications of sanitation in food industry.

➤ **AFP5G03- DRYING TECHNOLOGY**

Course Outcome:

- To be familiar with different methods of drying.
- To understand the technology behind drying.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- Visit pack house of various industries and design new generation packing technology.
- Accrues knowledge about the preparation of various soft drinks, alcoholic and non-alcoholic beverages.
- Understands different aspects of various sensory parameters and its application in food quality analysis.

SEMESTER 6

GENERAL EDUCATION COURSES

BOCG601- ENTREPRENEURSHIP DEVELOPMENT

Course Outcome:

- Understand the significance of entrepreneurs in the development of a country.
- Familiarize with procedures and legal issues involved in setting up an enterprise.
- Get motivated to become an entrepreneur.

CORE COURSES

➤ **AFP6G02- COMPUTER HARDWARE AND NETWORKING**

Course Outcome:

- Understands the hardware components of a system.
- Understands basic issues in installing and using software.
- Understands how a network functions and the issues of network security.

➤ **AFP6S01- ANALYTICAL METHODS IN FOOD PROCESSING**

Course Outcome:

- To know the principles and applications of different techniques used in food and nutrition research.
- To gain knowledge about different instruments used in chemical analysis of food.

➤ **AFP6S02- FOOD PLANT DESIGN**

Course Outcome:

- Understands concepts of food plant layout.
- Accrues the knowledge on building, utilities in the plant.
- Understand the importance of proper food plant design.

➤ **AFP6G03- FOOD TOXICOLOGY**

Course Outcome:

- Provide students with a basic understanding of the principles of toxicology.
- Provide students an in depth understanding of how the science of toxicology is applied to chemical food and feed safety, including food regulation and risk assessment.

ACTIVITY ORIENTED CLASS (AOC)

Course Outcome:

- To gain knowledge about different instruments used in food analysis
- Familiarize with food plant design.

Department of Malayalam

Course Outcomes

SECOND LANGUAGES – Malayalam				
Name of the Programme	Course code	Course Title	Course Outcomes	
SEMESTER 1				
BA / B. Sc.	ML1CCT 01	Kadha Sahithyam	CO1	Recognize general awareness in literature
			CO2	Appreciate importance of literature and life to sensitize aspects in Malayalam
B. Com	ML1CCT 05	Kadhayum Kavithayum	CO1	General awareness about Malayalam literature
			CO2	Introducing new Common trends in Malayalam literature
B. Sc. Model II	ML1CCT 09	Kadha, Kavitha	CO1	General awareness about Malayalam literature
			CO2	Introducing new Common trends in Malayalam literature
BA Model II	ML1CCT07	Kadha, Novel	CO1	Recognize general awareness in literature
			CO2	Appreciate importance of literature and life to sensitize aspects in Malayalam
SEMESTER 2				
BA/ B. Sc	ML2CCT02	Kavitha	CO1	To identify new trends in poetry.
			CO2	Appreciate importance of poetry and life To sensitize aspects in Malayalam.

BCom	ML2CCT06	Athmakadha, Lekhanam	CO1	Introducing awareness about creativity in Malayalam Literature.
			CO2	Realize Aesthetic power of prose in Malayalam.
B. Sc. Model II	ML2CCT10	Gadhyaparichayam	CO1	Realize Aesthetic power of prose in Malayalam.
			CO2	Recognize general awareness in literature
BA Model II	ML2CCT08	Kavidhayum Nadakavum	CO1	Appreciate importance of poetry and life To sensitize aspects in Malayalam.
			CO2	To identify new trends in malayalam drama.
SEMESTER 3				
BA/ B.Sc.	ML3CCT03	Drishyakala Sahithyam	CO1	General awareness about Malayalam drishyakala.
			CO2	Introducing ancient literature in a malayalam.
SEMESTER 4				
BA/ B. Sc.	ML4CCT04	Malayala Gadhyarachanakal	CO1	Realize Aesthetic power of prose in Malayalam.
			CO2	Recognize general awareness in literature

Department of Hindi

Course Outcomes

SECOND LANGUAGES – HINDI				
Name of the Programme	Course code	Course Title	Course Outcomes	
SEMESTER 1				
BA / B. Sc.	HN1CCT01	Prose & One Act Plays	CO1	Recognize general awareness in Hindi literature
			CO2	Introducing different One Act Plays in Hindi literature
B. Com	HN1CCTO2	Prose & Mass Media	CO1	General awareness about Hindi literature
			CO2	Introducing the role of mass media in Literature
BA Model II	HN1CCTO3	Drama & Long Poem	CO1	General awareness about Hindi literature
			CO2	Introducing new Common trends in Hindi Drama & poetry
B.Sc. Model II	HN1CCTO4	poetry & One Act Plays	CO1	Recognize general awareness in literature
			CO2	Appreciate importance of poetry and life to sensitize aspects in Hindi
SEMESTER 2				
BA / B. Sc	HN2CCTO1	Short Stories & Novel	CO1	General awareness about Hindi literature
			CO2	To identify new trends in Hindi Short Stories & Novels
B.Com	HN2CCTO4	Poetry Commercial Correspondence & Translation	CO1	General awareness about Hindi literature
			CO2	General awareness about Poetry Commercial Correspondence & Translation

BA Model II	HN2CCTO3	Prose & Poetry	CO1	Realize aesthetic power of prose in Hindi
			CO2	Appreciate importance of poetry and life to sensitize aspects in Hindi.
B.Sc. Model II	HN2CCT04	Prose & Short Stories	CO1	General awareness about Hindi literature
			CO2	Introducing the trends & development of Short stories & prose in Hindi literature
SEMESTER 3				
BA/ B.Sc.	HN3CCT01	Poetry Grammar & Translation	CO1	General awareness about Hindi literature
			CO2	Introducing poetry, grammar & Translation in Hindi literature
SEMESTER 4				
BA/ B. Sc.	HN4CCT01	Drama & Long Poem	CO1	General awareness about Hindi literature
			CO2	Introducing new Common trends in Hindi Drama & long poems

Department of Physical Education

Open Course in Physical Education: Physical, Health and Life Skill Education

Course Objectives

- To improve the health and well-being of our students and to guide and motivate them to face the immediate challenges of our daily lives.
- They can demonstrate good health behaviours that help improve their own health and the health of others.
- A struggling community moving forward with their goals. The rise of obesity in modern life urges us to stay steadfast in urgent fitness.
- Maintain the maximum requirement of our body.

Course outcome

Different strategies can be used to manage resources and promote self-responsibility, problem solving and team building. It can also promote fitness among them and in the community.

Expected Course Outcomes upon completion of this course, the students will be able to:

1. Understand the basic of sports sciences
2. To provide knowledge on health and nutrition
3. To familiarize the safety education, First aid and health promotion measures
4. Understand the value of sports in life