COURSE OUTCOMES (CO)
OF VARIOUS PROGRAMMES

COURSE OUTCOME

B.COM (TRAVEL & TOURISM)

SEMESTER 1

BUSINESS MANAGEMENT (Core)

CO1	To recall the concept of management, schools of management thoughts and its functions.
CO2	To understand the topic motivation and important contributions of McGregor, Maslow and Herzberg.
CO3	To recall the basic knowledge about business ethics.
CO4	To understand about corporate social responsibility.
CO5	To apply various emerging concepts in management.

MANAGERIAL ECONOMICS (Compl)

CO1	To recall the concept of economics and managerial decisions.
CO2	To understand knowledge of managerial economics and Indian economy
CO3	To apply managerial decisions for business.
CO4	To analyse different types of market and their problems.
CO5	To develop new ideas for managerial decision making.

SEMESTER 2

FINANCIAL ACCOUNTING (Core)

CO1	To develop skill in the preparation of accounts from Incomplete Records system
CO2	To recall basic knowledge about the accounting of issue of shares.
CO3	To understand the basic concepts, definitions, terms, journal entries related to debentures and basic concept of convergence to IFRS
CO4	To examine 'AS' and IFRS.
CO5	To apply 'IFRS' and its compliance for various business entities under new format (SOPL, SOCE and SOFP).

MARKETING MANAGEMENT (Compl.)

CO1	To recall the concept marketing management.
CO2	To understand the concept of creating and capturing value in order to gain competitive advantage.
CO3	To get idea about distribution of product and E- commerce
CO4	To Adopting various techniques of marketing to withstand competition
CO5	To develop an idea about the latest trends in e-commerce and e-marketing.

SEMESTER 3

BASIC NUMERICAL METHODS (Common)

CO1	To understand the knowledge of numerical equations, matrices, progressions, financial mathematics and descriptive statistics.
CO2	To learn matrices, types, use and its application on various business situations
CO3	To understand basic knowledge in mathematical statistical methods like simple average, simple and compound interest, equations, progressions helps for attempting competitive examination.
CO4	To application of simple mathematical and statistical methods provide an insight to solving real life problems
CO5	To develop the skill of using descriptive statistical tools.

PROFESSIONAL BUSINESS SKILLS (Common)

CO1	To understand the basic concepts, definition and meaning related to professionalism.
CO2	To create aware about E-Learning, online education, digital age learners, E-books, MOOCS.
CO3	To understand artificial intelligence and data analysis helps to diversify and grow business cutting across obstacles.
CO4	To implement knowledge about business data analysis.
CO5	To use digital marketing, types of digital marketing, social media and advertisements in business

BUSINESS REGULATION (Core)

CO1	To understand Indian Contract Act 1872 helps to enter into valid contracts in life and business.
CO2	To Learn Sale of Goods Act 1930 and its application.
CO3	To develop awareness about consumer protection Act and grievance handling mechanism
CO4	To understand Limited Liability Partnership and its application of partnership business.
CO5	To create ability for starting business, partnership and LLP with sound legal knowledge.

CORPORATE ACCOUNTING (Core)

CO1	To recall the knowledge in company accounts such as meaning of a company, characteristics of a company, definition of shares, debentures, underwriting and goodwill, types of shares, bonus share, right share and underwriting, liquidation.
CO2	To understand the accounting treatment in issue of shares at par premium and discount, issues of debenture, managerial remuneration, calculation of goodwill and shares and liquidator's statement of affairs.
CO3	Develop the application skills to computation of pro-rate allotment, redemption of preference shares, profit and loss account and preparation of balance sheet of companies (new format).
CO4	Develop the skill of preparation of final accounts of life insurance companies
CO5	Evaluate the techniques for redemption of preference share, valuation of goodwill and shares, deficiency account in liquidation.

HUMAN RESOURCE MANAGEMENT M (Compl.)

CO1	To identify the implications of various issues involved in Human Resource Management.
CO2	To understand the impact of various challenges to human resource management regarding human resource policies.
CO3	To understand the compensation management and grievance redressal practices in the organization.
CO4	To analyse the concept of performance appraisal and career planning.
CO5	To develop the organizational practices of induction and organizational training practices.

SEMESTER 4

ENTREPRENEURSHIP DEVELOPMENT (Common)

CO1	To recall the basic concepts, definitions and terms related to entrepreneurship.
CO2	To understand about the institutional support and incentives to entrepreneurs.
CO3	To understand about micro small and medium enterprises its features, objectives, importance and role of SME in the economic development.
CO4	To apply Knowledge of establishing industrial units helps to start with business units easily
CO5	The learner can draft and finalise project report without external helps and supports.

BANKING AND INSURANCE (Common)

CO1	To recall the basic concepts, definitions and terms related to banking and insurance
CO2	Analysis the Role and organization structure of Indian banking system
CO3	Apply knowledge of negotiable instruments in practical scenarios, demonstrating the ability to navigate banking formalities and execute accurate fund transfers
CO4	To understand general insurance and Life Insurance business in India and the role of IRDA.
CO5	To solve how to choose life insurance policies based on needs.

COST ACCOUNTING (Core)

CO1	To understand the basic knowledge of cost accounting and the terms associated with it
CO2	To understand measures for materials, Labour and overhead cost control by Management.
CO3	To discuss the various methods of costing and its application.
CO4	To give an overview of budgeting and standard costing tools and techniques
CO5	To develop ability to execute the various methods of costing for managerial decision.

CORPORATE REGULATION (Core)

CO1	To understand the Indian Companies Act, grasping its foundational principles and legal structure.
CO2	To discuss the steps for establishing a company under the Indian Companies Act, facilitating the creation of new corporate entities and winding up of a company.
CO3	To compare debt and equity options in fundraising, aiding informed decision-making on financial avenues.
CO4	Value the importance of understanding roles, duties, and authorities within a company for effective oversight and management.
CO5	To develop knowledge about formation and liquidation winding up of a company

QUANTITATIVE TECHNIQUES FOR BUSINESS (Compl.)

CO1	To understand the basic concepts, definition and meaning related to quantitative techniques.
CO2	To understand knowledge about the use of quantitative techniques in managerial decision making
CO3	To understand knowledge about the techniques like correlation, regression, probability, linear programming, decision strategies etc.
CO4	To apply quantitative techniques for decision making in business, research, product designing and development etc.
CO5	To construct various model building techniques for solving complex business and research problems

SEMESTER 5

ACCOUNTING FOR MANAGEMENT (Core)

CO1	To Remember the methods used to conceive, interpret, and analyse financial statements
CO2	To understand the importance and application of financial ratios in analysis and interpretation.
CO3	To Apply knowledge of financial statements to interpret and analyse real-world financial data
CO4	To Analyse and interpret financial ratios to make informed decisions
CO5	To develop strategies utilizing CVP analysis for effective managerial decision-making.

BUSINESS RESEARCH METHODS (Core)

CO1	To recall problem solving techniques in business research.
CO2	To understand general concepts and types of research.
CO3	To apply scientific data processing techniques and hypothesis testing methods.
CO4	To analyse the results to arrive at a valid conclusion
CO5	To develop and draft research reports.

INCOME TAX LAW AND ACCOUNTS (Core)

CO1	To understand of basic knowledge and equip students with application of principles and provisions of income tax act 1961.
CO2	Grasp the provisions related to the computation of taxable salary income, comprehending the intricacies of determining taxable earnings in various employment scenarios.
CO3	Apply the knowledge of taxing income from house property to accurately compute taxable income under the head of House Property and head of profits and gains of business or profession, enabling effective analysis and application of tax-related principles in real-life business situations ensuring adherence to relevant tax regulations.
CO4	Evaluate the ability to compute income under the head of Capital Gains and other sources, fostering self-confidence and competence in the practice of income tax, reflecting a comprehensive understanding of diverse income streams and associated tax implications
CO5	To develop problem solving skill relating to different heads.

TOURISM PRINCIPLES AND PRACTICES (Core-Specl.)

CO1	To understand the basic concepts of travel and tourism.
CO2	To evaluate positive and negative impact of tourism.
CO3	To apply theoretical knowledge to real world tourism scinarios
CO4	To evaluate the role of different tourism organisations for the growth of tourism
CO5	To develop and propose innovative tourism initiatives

TOURISM PRODUCT AND PROMOTION (Core-Specl.)

CO1	To recall the basic concept of tourism product and promotion
CO2	Develop ongoing professional development strategies and plans to enhance industry knowledge and leadership skills for tourism industry sectors
CO3	Access and appropriately disseminate accurate and detailed product knowledge and destination information about different types of tourist.
CO4	To understand the concepts, classification, and nature of tourism
CO5	The students will understand the cultural heritage of the country and festivals of India.

E-COMMERCE (Open Course)

CO1	To understand the knowledge of the basics of E-Commerce
CO2	To explain the various Business Models of E-Commerce.
CO3	To develop the students' skills for designing and developing websites.
CO4	To use the emerging modes of E-payment.
CO5	It also Identify the security issues on electronic payment system and solutions to various security issues relating to E-payment.

SEMESTER 6

INCOME TAX AND GST (Core)

CO1	Recall income tax computation basics and computation of five heads of incomes
CO2	Students will be able to Compute tax liability of individuals
CO3	To familiarize the students with income tax authorities and assessment and the offences and penalties under the Acts
CO4	To understand basic concept of GST and e-filing procedures
CO5	To develop problem solving skill relating to individual tax assessment and equip students with application of principles and provisions of GST

AUDITING AND CORPORATE GOVERNANCE (Core)

CO1	To recall the basic terms related to auditing such as auditing, investigation.
CO2	To understand the principles and techniques of auditing
CO3	To evaluate effectiveness of corporate governance codes and standards in different context.
CO4	To analyse the reason behind corporate governance.
CO5	To propose a set of recommendations to enhance corporate governance practices in business.

TOURIST TRANSPORT AND TOUR OPERATIONS (Core-Specl.)

CO1	To understand various skills necessary for travel agency and other operation business.
CO2	To understand various travel terminology.
CO3	Gaining in-depth knowledge of history of travel agency, nature and form of travel.
CO4	To explain the terminologies and functions related to aviation and air cargo.
CO5	To apply IT tools and software to manage tourism related data, reservation and customer interaction.

HOSPITALITY MANAGEMNT (Core-Specl.)

CO1	To give a broad view about the basic concept of hospitality.
CO2	The students will get knowledge about classification of hotels and its evolution.
CO3	To make an awareness about duties and responsibilities if the staff in different sections.
CO4	To create an idea about different types of rooms available in a hotel, food plan, room rent, tariff, tools of reservation and basic terminologies of front office.
CO5	To prepare the students for careers in the industry management, marketing and operations of restaurants and other food services, lodging, attractions, recreational events and travel related services

COURSE OUTCOME

B.COM (COMPUTER APPLICATION)

SEMESTER 1

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SEMESTER 3

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SEMESTER 4

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SEMESTER 5

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CO9	Evaluate the ability to compute income under the head of Capital Gains and other sources, fostering self-confidence and competence in the practice of income tax, reflecting a comprehensive understanding of diverse income streams and associated tax implications
CO10	To develop problem solving skill relating to different heads.

COMPUTER APPLICATION IN BUSINESS (Core-Specl.)

CO1	To recall the different types of networks (LAN,WAN,MAN etc.) and their applications in business.
CO2	To describe the principles involved in developing a business website.
CO3	To analyse role of multimedia elements in enhancing website functionality.
CO4	To evaluate the security and usability of various digital payment methods.
CO5	To develop a comprehensive digital security strategy for a business.

BUSINESS INFORMATION SYSTEM (Core-Specl.)

CO1	To acquire basic knowledge in the MIS and its relevance to the various areas of the business.
CO2	Grasp the significance of MIS in providing timely and accurate information in appropriate quantities, understanding its impact on decision-making efficiency.
CO3	To understand DBMS and types and models
CO4	Evaluate the role of Enterprise Resource Planning (ERP) in automating business processes, recognizing its contribution to cost reduction and operational efficiency
CO5	To Implement Business Process Reengineering (BPR) strategiesto enhance the dignity of business processes, leading to increased profits through the optimization of workflows and resource utilization

E-COMMERCE (Open Course)

CO6	To understand the knowledge of the basics of E-Commerce
CO7	To explain the various Business Models of E-Commerce.
CO8	To develop the students' skills for designing and developing websites.
CO9	To use the emerging modes of E-payment.
CO10	It also Identify the security issues on electronic payment system and solutions to various security issues relating to E-payment.

SEMESTER 6

INCOME TAX AND GST (Core)

CO6	Recall income tax computation basics and computation of five heads of incomes
CO7	Students will be able to Compute tax liability of individuals
CO8	To familiarize the students with income tax authorities and assessment and the offences and penalties under the Acts
CO9	To understand basic concept of GST and e-filing procedures
CO10	To develop problem solving skill relating to individual tax assessment and equip students with application of principles and provisions of GST

AUDITING AND CORPORATE GOVERNANCE (Core)

CO6	To recall the basic terms related to auditing such as auditing, investigation.
CO7	To understand the principles and techniques of auditing
CO8	To evaluate effectiveness of corporate governance codes and standards in different context.
CO9	To analyse the reason behind corporate governance.
CO10	To propose a set of recommendations to enhance corporate governance practices in business.

OFFICE AUTOMATION TOOLS (Core-Specl.)

CO6	To Recall MS-Word functionalities for document preparation
CO7	To Understand PowerPoint's role in business meetings.
CO8	To Apply Excel functions practically and MS-Word skills for document creation.
CO9	Assess advantages and limitations of Excel invarious contexts.
CO10	Develop strategies for internet applications in business education and governance.

COMPUTERISED ACCOUNTING WITH TALLY

CO1	Recall accounting concepts and principles fundamental to computerized accounting.
CO2	Understand and comprehend the documentation, accounting, and inventory operations using Tally software.
CO3	Apply Tally software skills to perform tasks such as preparing financial statements, tax documents, budgets, and presentations.
CO4	Analyze and evaluate the functioning of an accounting information system and its practical applications.
CO5	Create and excel in executing budgets, reporting, and accounting tasks using Tally software, demonstrating advanced proficiency in its utilization.

B.Sc CHEMISTRY

COURSE OUTCOME (CO)

Paper No.	Paper Name
CC-I	**THEORETICAL AND INORGANIC CHEMISTRY- I**
CO1	To apply the methods of a research project.
CO2	To understand the principles behind volumetry.
CO3	To analyse the characteristics of different elements
CO4	To distinguish between different acid base concepts.
CO5	To analyse the stability of different nuclei
CC-II	**THEORETICAL AND INORGANIC CHEMISTRY- II**
CO1	To understand the importance and the impact of quantum revolution in science.
CO2	To understand and apply the concept that the wave functions of hydrogen atom are nothing but atomic orbitals.
CO3	To understand that chemical bonding is the mixing of wave functions of the two combining atoms.
CO4	To understand the concept of hybridization as linear combination of orbitals of the same atom
CO5	To inculcate an atomic/molecular level philosophy in the mind
CC-III	**PHYSICAL CHEMISTRY - I**
CO1	To understand the properties of gaseous state and how it links to thermodynamic systems.
CO2	To understand the concepts of thermodynamics and it's relation to statistical thermodynamics
CO3	To apply symmetry operations to categorize different molecules.
CC-IV	**ORGANIC CHEMISTRY– I**
CO1	To apply the concept of stereochemistry to different compounds
CO2	To understand the basic concepts of reaction mechanism
CO3	To analyse the mechanism of a chemical reaction
CO4	To analyse the stability of different aromatic systems.
CC-VI	**INORGANIC CHEMISTRY PRACTICAL – I**
CO1	To enable the students to develop skills in quantitative analysis and preparing inorganic complexes.
CO2	To understand the principles behind quantitative analysis.
CO3	To apply appropriate techniques of volumetric quantitative analysis in estimations
CO4	To analyse the strength of different solutions

CC-VII	INORGANIC CHEMISTRY – III
CO1	To understand the principles behind qualitative and quantitative analysis
CO2	To understand basic processes of metallurgy and to analyse the merits of different alloys
CO3	To understand the applications of different inorganic polymers
CO4	To apply the principles of solid waste management
CC-VIII	**ORGANIC CHEMISTRY – II**
CO1	To understand the difference between alcohols and phenols
CO2	To understand the importance of ethers and epoxides
CO3	To apply organometallic compounds in the preparation of different functional groups.
CO4	To apply different reagents for the inter conversion of aldehydes, carboxylic acids and acid derivatives
CO5	To apply active methylene compounds in organic preparations.
CC-IX	**PHYSICAL CHEMISTRY – II**
CO1	To apply the concept of kinetics, catalysis and photochemistry to various chemical and physical processes
CO2	To characterise different molecules using spectral methods.
CO3	To understand various phase transitions and its applications
CC-X	**INORGANIC CHEMISTRY – IV**
CO1	To understand the principles behind different instrumental method
CO2	To distinguish between lanthanides and actinides.
CO3	To appreciate the importance of CFT
CO4	To understand the importance of metals in living systems
CO5	To distinguish geometries of coordination compounds
CC-XI	**ORGANIC CHEMISTRY – III**
CO1	To elucidate the structure of simple organic compounds using spectral techniques
CO2	To understand the basic structure and tests for carbohydrates
CO3	To understand the basic components and importance of DNA
CO4	To understand the basic structure and applications of alkaloids and terpenes
CO5	To distinguish different pericyclic reactions

CC-XII	PHYSICAL CHEMISTRY – III
CO1	To understand the basic concepts of electrochemistry
CO2	To understand the importance of colligative properties
CO3	To relate the properties of materials/solids to the geometrical properties and chemical compositions.
CC-XIII	**ADVANCED AND APPLIED CHEMISTRY**
CO1	To understand the importance of nanomaterials.
CO2	To appreciate the importance of green approach in chemistry.
CO3	To understand the uses and importance of computational calculations in molecular design
CO4	To understand the role of chemistry in human happiness index and life expectancy
CC-XIV	**ELECTIVE 2. POLYMER CHEMISTRY**
CO1	To understand various classification of polymers and types of polymerisation methods
CO2	To understand the important characteristics of polymers such as average molecular weight, glass transition temperature, viscoelasticity and degradation
CO3	To appreciate the importance of processing techniques.
CO4	To characterise different commercial polymers and to understand the significance of recycling.
CC-XV	**PHYSICAL CHEMISTRY PRACTICAL**
CO1	To enable the students to develop analytical skills in determining the physical properties (physical constants).
CO2	To develop skill in setting up an experimental method to determine the physical properties
CO3	To understand the principles of Refractometry, Potentiometry and Conductometry.
CC-XVI	**ORGANIC CHEMISTRY PRACTICAL**
CO1	To enable the students to develop analytical skills in organic qualitative analysis
CO2	To develop talent in organic preparations to ensure maximum yield.
CO3	To apply the concept of melting or boiling points to check the purity of compounds
CO4	To analyse and characterise simple organic functional groups
CO5	To analyse individual amino acids from a mixture using chromatography.

CC-XVII	INORGANIC CHEMISTRY PRACTCAL-II
CO1	To enable the students to develop analytical skills in inorganic quantitative analysis.
CO2	To understand the principles behind gravimetry and to apply it in quantitative analysis.
CO3	To understand the principles behind colorimetry and to apply it in quantitative analysis.
CC-XVIII	**INORGANIC CHEMISTRY PRACTCAL-III**
CO1	To enable the students to develop skills in inorganic quanlitative analysis.
CO2	To understand the principles behind inorganic mixture analysis and to apply it in quanlitative analysis
CO3	To analyse systematically mixtures containing two cations and two anions.
CC-XIX	**PROJECT WORK**
CO1	To understand the scientific methods of research project
CO2	To apply the scientific method in life situations
CO3	To analyse scientific problems systematically
CC-XX	**PHYSICAL CHEMISTRY PRACTICAL**
CO1	To enable the students to develop analytical skills in determining the physical properties (physical constants).
CO2	To develop skill in setting up an experimental method to determine the physical properties
CO3	To understand the principles of Refractometry, Potentiometry and Conductometry.
CC-XXI	**ORGANIC CHEMISTRY PRACTICAL**
CO1	To enable the students to develop analytical skills in organic qualitative analysis
CO2	To develop talent in organic preparations to ensure maximum yield.
CO3	To apply the concept of melting or boiling points to check the purity of compounds
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CO5	To analyse individual amino acids from a mixture using chromatography.

B.Sc Chemistry

Complementary paper

Course outcome

CC-XXII	GENERAL CHEMISTRY
CO1	To understand and to apply the theories of quantitative and qualitative analysis.
CO2	To understand the principles behind gravimetry and to apply it in quantitative analysis.
CO3	To understand the principles behind colorimetry and to apply it in quantitative analysis.
CC-XXIII	**PHYSICAL CHEMISTRY**
CO1	To understand the importance of free energy in defining spontaneity.
CO2	To realise the theories of different states of matter and their implication
CO3	To understand the basic principles of electrochemistry.
CC-XXIV	**ORGANIC CHEMISTRY**
CO1	To understand the basic concepts involved in reaction intermediates.
CO2	To realise the importance of optical activity and chirality.
CO3	To appreciate the importance of functional groups and aromatic stability
CO4	To understand the basic structure and importance of carbohydrates, nucleic acids, alkaloids and terpenes
CC-XXV	**PHYSICAL AND APPLIED CHEMISTRY**
CO1	To understand the basic concepts behind colloidal state and nanochemistry.
CO2	To understand the importance of green chemistry and pollution prevention
CO3	To appreciate the importance of different separation methods and spectral techniques.
CO4	To understand the extent of chemistry in daily life
CC-XXVI	**CHEMISTRY PRACTICAL**
CO1	To understand the basic concepts of inter group separation
CO2	To enable the students to develop analytical and preparation skills.

CC-XXVII	OPEN COURSE : ENVIRONMENTAL CHEMISTRY
CO1	Recall the technical/scientific terms involved in pollution
CO2	Understand the causes and effects of air pollution.
CO3	Understand the sources, types and effects of water pollution
CO4	Describe water quality parameters
CO5	Know soil, noise, thermal and radioactive pollutions and their effects.
CO7	Study various pollution control measures
CO8	Understand the basics of green chemistry

BSc Mathematics

Course Outcomes

Core courses

Semester I

COURSE CODE: MTS1B01
TITLE OF THE COURSE: BASIC LOGIC AND NUMBER THEORY

Successful completion of the course enables students to

CO1. Use logic to arrive at the correct conclusion in the midst of confusing and contradictory statements

CO2. Read and enjoy on their own a few applications of number theory in the field of art, geometry and coding theory.

CO3. Importance of pattern recognition in mathematics, the art of conjecturing and a few applications of number theory.

CO4. Think systematically, to express ideas in precise and concise mathematical terms and also to make valid arguments.

Semester II

COURSE CODE: MTS2B02
TITLE OF THE COURSE: CALCULUS OF SINGLE VARIABLE-1
Successful completion of the course enables students to

CO1. Understand fundamental ideas of limit, continuity and differentiability and also to some basic theorems of differential calculus.
CO2. Understand how these ideas can be applied in the problem of
Sketching of curves and in the solution of some optimization problems of interest in real life.

CO3. Understand close connection between the two branches of Calculus.

CO4. Solve the area problem but is useful in finding out the arc length of a plane curve, Volume and surface areas of solids and so on

Semester III

COURSE CODE: MTS3B03
Title of the Course: CALCULUS OF SINGLE VARIABLE-2
Successful completion of the course enables students to
CO1. define its inverse function namely the natural exponential function and also the general exponential function.

CO2. Understand the idea of improper integrals, their convergence and evaluation.
CO3. study a related notion of convergence of a series, which is practically
done by applying several different tests such as integral test, comparison test and so on
CO4. Understand parametrization of curves, they learn how to calculate the arc length, curvature etc. using parametrization and also the area of surface of revolution of a parametrized plane curve.

Semester IV

COURSE CODE: MTS4B04
Title of the Course: LINEAR ALGEBRA
Successful completion of the course enables students to

CO1. Learn the fundamentals of linear algebra by capturing the ideas geometrically, by justifying them algebraically and by preparing them to apply it in several different fields such as data communication, computer graphics,

CO2. Solve systems of linear equations which is a basic tool of many mathematical procedures used for solving problems in science and engineering.

CO3. Understand the modern view of a matrix as a linear transformation.

CO4. Understand the basic matrix transformations in the vector spaces and ,having interest in the field of computer graphics, engineering and physics are studied by specially pinpointing to their geometric effect.

Semester V

COURSE CODE: MTS5B05
Title of the Course: ABSTRACT ALGEBRA
Successful completion of the course enables students to

CO1. Understand the basic ideas and results of abstract algebra.

CO2. Understand the abstract notion of a group, learn several examples

CO3. Understand *Algebraic system* forms a group or not and are introduced to some fundamental results of group theory.
CO4. Understand the cyclic group, permutation group ,various examples and very fundamental results in the areas are also explored

COURSE CODE: MTS5B06
Title of the Course: BASIC ANALYSIS
Successful completion of the course enables students to

CO1. Learn and deduce rigorously many properties of real number system by assuming a few fundamental facts about it as axioms
CO2. Appreciate the beauty of logical arguments and embolden them to apply it in similar and unknown problems.
CO3. Calculate the square root of positive numbers and establishes the existence of the *transcendental* number *e (Euler constant).*
CO4. Understand some basic topological properties of real number system such as the concept of open and closed sets, their properties, their characterization and so on.

COURSE CODE: MTS5B07

Title of the Course: NUMERICAL ANALYSIS
Successful completion of the course enables students to

CO1. Learn the fundamentals of linear algebra by capturing the ideas geometrically, by justifying them algebraically and by preparing them to apply it in several different fields such as data communication, computer graphics,

CO2. Solve systems of linear equations which is a basic tool of many mathematical procedures used for solving problems in science and engineering.

CO3. Understand the modern view of a matrix as a linear transformation.

CO4. Understand the basic matrix transformations in the vector spaces and , having interest in the field of computer graphics, engineering and physics are studied by specially pinpointing to their geometric effect.

COURSE CODE: MTS5B08

Title of the Course: LINEAR PROGRAMMING
CO1. Solve linear programming problems geometrically
CO2. Solve LP problems more effectively using Simplex algorithm via. the use of condensed tableau of A.W. Tucker
CO3. Convert certain related problems, not directly solvable by simplex method, into a form that can be attacked by simplex method.
CO4. Understand duality theory, a theory that establishes relationships between linear programming problems of maximization and minimization and understand game theory

COURSE CODE: MTS5B09

Title of the Course: INTRODUCTION TO GEOMETRY AND THEORY OF EQUATIONS

Successful completion of the course enables students to

CO1. Recognize and classify conics.

CO2. Learn to solve polynomial equations upto degree four.

CO3. Understand Kleinian view of Euclidean geometry.

CO4. Get a realistic view of a three dimensional object/scene depicted on a flat surface, a right impression of height, width, depth and position in relation to each other of the objects in the scene is required. This idea is called perspective in art.

Semester VI

COURSE CODE: MTS6B010
Title of the Course: REAL ANALYSIS

Successful completion of the course enables students to

CO1. Understand several deep and fundamental results of continuous functions on intervals such as boundedness theorem, maximum minimum theorem, intermediate value theorem, preservation of interval theorem and so on.
CO2. Realise the difference between continuity and uniform continuity and equivalence of these ideas for functions on closed and bounded interval.
CO3. Understand the significance of uniform continuity in continuous extension theorem.
CO4. Develop the notion of Riemann integrability of a function using the idea of tagged partitions and calculate the integral value of some simple functions using the definition.
CO5. Understand a few basic and fundamental results of integration theory.

COURSE CODE: MTS6B011
Title of the Course: COMPLEX ANALYSIS

Successful completion of the course enables students to

CO1. Understand the difference between differentiability and analyticity of a complex function and construct examples.
CO2. Understand necessary and sufficient condition for checking analyticity.

CO3. Understand and apply Cauchy's integral formula and a few consequences of it such as Liouville's theorem, Morera's theorem and so forth in various situations.
CO4. Understand how Laurent's series expansion leads to the concept of *residue,* which in turn provide another fruitful way to evaluate complex integrals and, in some cases, even real integrals.

COURSE CODE: MTS6B012

Title of the Course: CALCULUS OF MULTI VARIABLE

Successful completion of the course enables students to

CO1. Understand several contexts of appearance of multivariable functions and their representation using graph and contour diagrams.

CO2. Find a few real life applications of Lagrange multiplier method in optimization problems.

CO3. Realize the advantage of choosing other coordinate systems such as polar, spherical, cylindrical etc. in the evaluation of double and triple integrals.

CO4. Find applications of double and triple integral in the problem of finding out surface area mass of lamina, volume, centre of mass and so on.

COURSE CODE: MTS6B013

Title of the Course: DIFFERENTIAL EQUATIONS

Successful completion of the course enables students to

CO1. Learn what an ODE is, what it means by its solution, how to classify DEs, what it means by an IVP and so on.
CO2. Learn to solve DEs that are in linear, separable and in exact forms and also to analyze the solution.
CO3. Realize the basic differences between linear and non linear DEs and also basic results that guarantees a solution in each case.
CO4. Learn a method to approximate the solution successively of a first order IVP.

COURSE CODE: MTS6B014(E01)

Title of the Course: GRAPH THEORY

Successful completion of the course enables students to

CO1. Define the basic concepts of graphs, directed graphs and weighted graphs.
CO2. Understand the matrix representation of graphs
CO3. Solve Konigsberg bridge problem
CO4. Understand Hamiltonian graphs, plane and planar graphs

COMPLEMENTARY COURSES

COURSE CODE: MTS1C01

Title of the Course: MATHEMATICS 1

Successful completion of the course enables students to

CO1. Define the basic concepts of derivatives and differentiation.
CO2. Understand the concept of chain rule, anti-derivatives.
CO3. Understand the concept of continuity, IVT and MVT.
CO4. Define the basic concepts of Integrals and fundamental theorem of calculus.

COURSE CODE: MTS2C02

Title of the Course: MATHEMATICS 2

Successful completion of the course enables students to

CO1. Define the basic concepts of polar coordinates,hyperbolic functions.
CO2. Understand improper integrals,various rules for integration.
CO3. Solve the system of linear equations.
CO4. Find inverse and power of a matrix and diagonalization.

COURSE CODE: MTS3C03

Title of the Course:MATHEMATICS 3

Successful completion of the course enables students to

CO1. Understand the concept of partial derivatives and directional derivatives.
CO2. Understand double integrals, Green's theorem, Stokes' theorem
CO3. Solve Triple integrals, Understand Complex numbers.
CO4. Understand Cauchy's integral formula.

COURSE CODE: MTS4C04

Title of the Course:MATHEMATICS 4

Successful completion of the course enables students to

CO1. Understand and solve ODE.
CO2. Understand and solve Higher Order DEs.
CO3. Apply Laplace transforms
CO4. Understand orthogonal functions, basics of Fourier series, Heat equation and Wave equation.

OPEN COURSES

COURSE CODE: MTS5 D04

Title of the Course:MATHEMATICS FOR DECISION MAKING

Successful completion of the course enables students to

CO1. Understand the basic concepts and applications of Statistics .
CO2. Understand the concept of Probability.
CO3. Understand the concept of Probability distributions.

DEPARTMENT OF SOCIAL WORK

BACHELOR OF SOCIALWORK (BSW)

COURSE OUTCOME (CO)

- **SEMESTER 1**

BSW1 B01 INTRODUCTION TO SOCIALWORK (CORE COURSE)

CO1 Outline the history of Social Work Profession in India and abroad

CO2 Explain the philosophy and principles of Social Work

CO3 Explain the basic concepts relevant to Social Work practice.

CO4 Apply the basic values and code of ethics of social work profession in practice

- **SEMESTER 2**

BSW 2B 02 FIELDS OF SOCIALWORK (CORE COURSE)

CO1 Identify the various fields and settings where Social Work profession is practiced

CO2 Explain the role of Social Workers in various fields

CO3 Acquire skills for working in different areas of Social Work

- **SEMESTER 3**

BSW 3B 03 INTRODUCTION TO SOCIAL CASE WORK (CORE COURSE)

CO1 Explain the basic concepts, process, principles of Social Case Work

CO2 Describe the tools and techniques of Social Case Work

CO3 Develop right attitude and skills to practice Social Case Work

BSW 3 B 04 INTRODUCTION TO SOCIAL GROUP WORK (CORE COURSE)

CO1 Explain the basic concepts, process, principles of Social Group Work

CO2 Describe the tools and techniques of Social Group Work

CO3 Develop skills and attitudes for Social Group Work.

- **SEMESTER 4**

BSW 4 B 05 INTRODUCTION TO COMMUNITY ORGANISATION AND SOCIAL ACTION (CORE COURSE)

CO1 Outline the process, principles and models of Community Organisation

CO2 Develop skills and attitudes for participatory community work

CO3 Explain the process, principles and models of Social Action

BSW 4 B 06 FIELD WORK - COMMUNITY (P) (CORE COURSE)

CO1 Familiarize with the geographical and socio-political structure of a community and its environment.

CO2 Identify problems in the community, its causes and resources available to deal with those problems.

CO3 Apply and integrate social science theories in analysing society and social problems.

CO4 Become familiar with the working of social work agencies in the Society.

CO5 Acquire skills in organizing and leading a community camp of seven days duration

- **SEMESTER 5**

BSW 5 B 07 INTRODUCTION TO SOCIAL WORK ADMINISTRATION (CORE COURSE)

CO1 Describe the scope and principles of Social Work Administration

CO2 Explain the process of administration in welfare institutions

CO3 Develop basic skills in the registration and management of nongovernmental Organisations

CO4 Outline the various social welfare programmes implemented by Central & State Governments

BSW 5 B 08 RURAL AND URBAN COMMUNITY DEVELOPMENT (CORE COURSE)

CO1 Explain the status and problems of rural and urban communities

CO2 Describe the concept, principles of Rural and Urban Community Development

CO3 Explain the structure and functioning of local self-government bodies

CO4 Identify the programmes for rural and urban community development

BSW 5 B 09 INTRODUCTION TO SOCIAL WORK RESEARCH AND STATISTICS (CORE COURSE)

CO1 Explain the basic concepts and theory in Social Work Research

CO2 Explain the methodology and designs of Social Work Research

CO3 Develop basic skills in formulating research proposal and conducting social work research

CO4 Develop skills in using basic statistical techniques in Social Work Research

BSW 5 B 10 GANDHIAN PHILOSOPHY AND SOCIAL WORK (CORE COURSE)

CO1 Outline the basic Gandhian concepts and his views on society, social problems and rural development

CO2 Examine the relevance of Gandhian philosophy and Gandhian model of development in dealing with social problems

BSW 5 D 01 - COMMUNITY HEALTH & HEALTH EDUCATION (OPEN COURSE)

CO1 Explain the concept of health and its various perspectives

CO2 Outline the various health problems and their impact on communities

CO3 Identify the existing health care services and facilities

CO4 Identify the role of students and educational institutions in community health services

- **SEMESTER 6**

BSW 6 B 11 PROJECT PLANNING AND MANAGEMENT FOR SOCIAL WORK (CORE COURSE)

CO1 Describe the process of project planning and management and its phases

CO2 Acquire skills in preparation, management, monitoring and evaluation of projects for social work intervention

CO3 Prepare project proposals

BSW 6 B 12 LEGAL INFORMATION FOR SOCIAL WORKERS (CORE COURSE)

CO1 Explain the basic concepts related to Social Legislation, Indian Constitution and Indian Judicial System

CO2 Outline the major legislations for the protection and care of Women, Children, Differently Abled, SC/ST and senior citizens and social security

CO3 Describe the concept of Human Rights and the institutional mechanisms for the protection of Human rights

BSW 6 B 13 COMMUNITY HEALTH AND HEALTH CARE SERVICES (CORE COURSE)

CO1 Explain the concept of health and its various perspective

CO2 Outline the various health problems and their impact on communities

CO3 Identify the existing health care services and facilities

CO4 Identify the role of social workers in community health programmes

BSW 6 B 14 FIELDWORK (AGENCY BASED CONCURRENT FIELD WORK)

CO1 Demonstrate proficiency in roles and functions of a Social Worker in concentration specific agency.

CO2 Apply theoretical learning in field work.

CO3 Equip depth knowledge relevant to their concentrations.

CO4 Design a project proposal based on the requirements of specific concentrations.

CO5 Apply the skill in documentation and reporting.

BSW 6B 15 PROJECT

CO1 Develop research attitude and aptitude in basic research process.

CO2 Develop analytical skills within the field of social work research.

CO3 Incorporate theories of social work research.

CO4 Develop a research proposal be competent and discerning consumers of social science literature.

CO5 Conceptualize, design and develop researchable problems in a systematic and scientific way

BSW 6 B 16 - GENDER AND DEVELOPMENT IN SOCIAL WORK (ELECTIVE COURSE)

CO1 Describe key concepts related to gender and development

CO2 Identify the discrepancies in the status of women in our society and their Implications

CO3 Outline the laws and programmes for the protection of women

BSW 6 B 17- SOCIAL MOVEMENTSAND SOCIAL DEVELOPMENT (ELECTIVE COURSE)

CO1 Explain the meaning, characteristics and achievements of social movements in India

CO2 Classify the types of social movements

CO3 Describe the basic concepts related to Social Development

BSW 6 B 18 - SOCIAL WORK WITH ELDERLY (ELECTIVE COURSE)

CO1 Describe the concepts of aging, geriatric care and Social Work

CO2 Outline the problems faced by aged.

CO3 Identify the role of Social Work interventions in caring for the Aged

CO4 Acquire basic skills in working with elderly

B. Sc Physics

COURSE OUTCOME (CO)

Paper number	Paper name
CC -1	Mechanics I
CO1	understand and apply the basic concepts of Newtonian Mechanics Systems
CO2	understand and apply the basic idea of work-energy theorem to physical systems
CO3	understand and apply the rotational dynamics of rigid bodies
CC- 2	Mechanics II
CO1	understand the features of non-inertial systems and fictitious forces
CO2	understand and analyze the features of central forces with respect to planetary forces
CO3	understand the basic ideas of Harmonic Oscillations
CO4	Understand the analyze the basic concepts of wave motion
CC- 3	Electrodynamics I
CO1	understand and apply the fundamentals of vector calculus
CO2	understand and analyze the electrostatic properties of physical systems
CO3	understand the mechanism of electric field in matter.
CO4	understand and analyze the magnetic properties of physical systems
CO5	understand the mechanism of magnetic field in matter.
CC- 4	Electrodynamics II
CO1	understand the basic concepts of electrodynamics
CO2	Understand and analyze the properties of electromagnetic waves
CO3	Understand the behavior of transient currents
CO4	Understand the basic aspects of ac circuits
CO5	Understand and apply electrical network theorem
CC-5	Core Course Practical V–Practical I
CO1	Apply and illustrate the concepts of properties of matter through experiments
CO2	Apply and illustrate the concepts of electricity and magnetism experiments
CO3	Apply and illustrate the concepts of optics through experiments
CO4	Apply and illustrate the principles of electronics through experiments
CC- 6	Computational Physics
CO1	Understand the Basics of Python programming

CO2	Understand the applications of Python modules
CO3	Understand the basic techniques of numerical analysis
CO4	Understand and apply computational techniques to physical problems
CC- 7	Quantum Mechanics
CO1	Understand the particle properties of electromagnetic radiation
CO2	Describe Rutherford–Bohr model of the atom
CO3	Understand the wave like properties of particles
CO4	Understand and apply the Schrodinger equation to simple physical systems
CO5	Apply the principles of wave mechanics to the Hydrogen atom
CC- 8	OPTICS
CO1	Understand the fundamentals of Fermat's principles and geometrical optics
CO2	Understand and apply the basic ideas of interference of light
CO3	Understand and apply the basic ideas of diffraction of light
CO4	Understand the basics ideas of polarization of light
CO5	Describe the basic principles of holography and fibre optics holography and fibre optics
CC- 9	ELECTRONICS (ANALOG& DIGITAL)
CO1	Understand the basic principles of rectifiers and dc power supplies
CO2	Understand the principles transistor
CO3	Understand the working and designing of transistor amplifiers and oscillators
CO4	Understand the basic operation of Op– Amp and its applications
CO5	Understand the basics of digital electronics
CC- 10	THERMODYNAMICS
CO1	Understand the zero and first laws of thermodynamics
CO2	Understand the thermodynamics description of the ideal gas
CO3	Understand the second law of thermodynamics and its applications
CO4	Understand the basic ideas of entropy
CO5	Understand the concepts of thermodynamic potentials and phase transitions
CC- 11	STATISTICAL PHYSICS, SOLID STATE PHYSICS, SPECTROSCOPY&PHOTONICS
CO1	Understand the basic principles of statistical physics and its applications
CO2	Understand the basic aspects of crystallography in solid state physics
CO3	Understand the basic elements of spectroscopy
CO4	Understand the basics ideas of microwave and infra-red spectroscopy

CC-12	NUCLEAR PHYSICS AND PARTICLE PHYSICS
CO1	Understand the basic aspects of nuclear structure and fundamentals of radioactivity
CO2	Describe the different types of nuclear reactions and their applications
CO3	Understand the principle and working of particle detectors
CO4	Describe the principle and working of particle accelerators
CO5	Understand the basic principles of elementary particle physics
CC- 13	RELATIVISTIC MECHANICS AND ASTROPHYSICS
CO1	Understand the fundamental ideas of special relativity
CO2	Understand the basic concepts of general relativity and cosmology
CO3	Understand the basic techniques used in astronomy
CO4	Describe the evolution and death of stars
CO5	Describe the structure and classification of galaxies
CC-14	MATERIALS SCIENCE
CO1	Understand the basic ideas of bonding in materials
CO2	Describe crystalline and noncrystalline materials
CO3	Understand the types of imperfections and diffusion mechanisms in solids
CO4	Describe the different properties of ceramics and polymers
CO5	Describe the different types of material analysis techniques
CC-15	Core Course Practical XV –Practical II
CO1	Apply and illustrate the concepts of properties of matter through experiments
CO2	Apply and illustrate the concepts of electricity and magnetism through experiments
CO3	Apply and illustrate the concepts of optics and spectroscopy through experiments
CO4	Apply and illustrate the principles of heat through experiments

CC-16	Core Course Practical XVI–Practical III
CO1	Apply and illustrate the principles of semiconductor diode and transistor through experiments
CO2	Apply and illustrate the principles of transistor amplifier and oscillator through experiments
CO3	Apply and illustrate the principles of digital electronics through experiments
CO4	Analyze and apply computational techniques in Python programming
CC-17	Core Course XVII Project/Research methodology
CO1	Understand research methodology
CO2	Understand and formulate a research project
CO3	Design and implement a research project
CO4	Identify and enumerate the scope and limitations of a research project

OPEN COURSE	
CC-18	NON-CONVENTIONAL ENERGY SOURCES
CO1	Understand the importance of non-conventional energy sources
CO2	Understand basic aspects of solar energy
CO3	Understand basic principles of wind energy conversion
CO4	Understand the basic ideas of geothermal and biomass energy and recognize their merits and demerits
CO5	Understand the basic ideas of oceans and chemical energy resources and recognize their merits and demerits

B.Sc Physics

Complementary courses

Course outcome

CC-19	Properties of matter & Thermodynamics
CO1	Understand the basic principles of elasticity
CO2	Understand the concepts of surface tension
CO3	Understand the aspects of viscosity
CO4	Understand the basic principles of thermodynamics
CC-20	Optics, Laser & Electronics
CO1	Understand the basic concepts of interference and diffraction
CO2	Understand the concepts of polarization
CO3	Understand the fundamentals of electronics
CO4	Understand the important principles of laser physics
CC-21	Mechanics, Relativity, Waves and Oscillations
CO1	Understand the basic ideas of frames of reference and the principles of conservation of energy and momentum

CO2	Understand the concepts of relativity
CO3	Understand the basic ideas of oscillations and waves
CO4	Understand the basic ideas of modern physics
CC-22	Electricity, Magnetism and Nuclear physics
CO1	Understand the basic ideas of static and current electricity
CO2	Understand the concepts of magnetism
CO3	Describe the fundamental concepts of nuclear physics
CO4	Understand the basic ideas of cosmic rays and elementary particles
CC-23	Complementary course-Physics Practical
CO1	Apply and illustrate the concepts of properties of matter through experiments
CO2	Apply and illustrate the concepts of electricity and magnetism through experiments
CO3	Apply and illustrate the concepts of optics through experiments
CO4	Apply and illustrate the principles of electronics through experiments

B.Sc MICROBIOLOGY

COURSE OUTCOMES(CO)

SEMESTER I

- **Core course 1: MBG1B01. GENERAL MICROBIOLOGY**

CO1 Sketch the historical events in the developments of Microbiology as a discipline emphasizing the contributions of the scientists.

CO2 Compare the difference between the basic cell types *viz,* Eukaryote,Prokaryote, Virus, Actinomycetes and Archae bacteria.

CO3 Describe the ultra structure of a bacterial cell helping to study the further biochemical and physiological reactions inside the cell.

CO4 Discuss various microscopes and compare the different types of light and electron Microscope.

CO5 Explain the various staining techniques and to distinguish their application in Microbiology.

CO6 Discuss the sterilization procedures and to implement it to maintain a hygienic environment.

Complementary course 1: **BCH1C01 BIOCHEMISTRY I**

CO1 Introduce nature and scope of biochemistry,biochemical evolution of Organisms and Miller and Urey experiment.

CO2 Describe carbohydrates like monosaccharides, disaccharides and polysaccharides.

CO3 Discuss the structure of aminoacids and proteins,protein sequencing and reactions of proteins.

CO4 Explain the structure of nucleic acids.

CO5 Compare the structure of DNA and RNA.

CO6 Discuss the structure and classification of lipids.

CO7 Differentiate the types of fatty acids.

- **Complementary course 1 practical**: **BCH1C05 BIOCHEMISTRY PRACTICAL I**

CO1 Analysis of quality of carbohydrates.

CO2 Acquaint with the specific reactions of reducing sugars.

CO3 Acquire the skills for testing proteins.

- **Complementary course 2**: **MBG1C02. BIOSTATISTICS**

CO1 Describe various approaches to probability and computation of probabilities.

CO2 Explain the applications of theoretical discrete and continuous distributions (binomial, poisson and normal distributions only).

CO3 Demonstrate various sampling distributions and related concepts.

CO4 To equip the students with the tools to summarize the experimental data in diagrammatic and graphical way, to obtain descriptive statistics and make possible appropriate interpretations.

SEMESTER II

- **Core course 2: MBG2B02. MICROBIAL PHYSIOLOGY AND TAXONOMY**

CO1 Discuss the environmental and nutritional factors affecting the microbial growth and classify them according to these.

CO2 Describe the mechanism of nutrient transportation across the bacterial membranes.

CO3 Explain the preparation of various cultural media and to distinguish them for microbial cultivation.

CO4 Differentiate various cultural methods and preservation techniques.

CO5 Illustrate the reproduction systems and the growth phases of bacteria and bacteriophages.

CO6 Examine various methods for estimation of microbial cells.

CO7 Analyze the taxonomy of microorganisms through the comparative study of various criteria used and classify them into corresponding groups.

- **Complementary course 1**: **BCH2C02 BIOCHEMISTRY II**

CO1 Discuss the importance of buffers and measurement of pH using pH meter.

CO2 Differentiate between osmosis, diffusion, active and passive transport.

CO3 Discuss the properties of blood.

CO4 Explain the principles and applications of chromatographic techniques.

CO5 Describe the techniques of electrophoresis.

CO6 Gain knowledge on absorption photometry.

- **Complementary course 1 practical**: **BCH1C05 BIOCHEMISTRY PRACTICAL II**

CO1 Preparation of standard solutions, Percentage solutions, molar solutions and normal solutions.

CO2 Demonstration of chromatography and SDS-PAGE.

CO3 Understand the principles of colorimetry.

- **Complementary course 2**: **MBG2C04. BIOSTATISTICS**

CO1 Analyze the concept of hypothesis testing.

CO2 Identify a suitable test of significance to test a given hypothesis.

CO3 Discuss the concept and perform simple, partial and multiple correlation.

CO4 Perform regression analysis for a given data.

SEMESTER III

- **Core course 3: MBG3B03. ENVIRONMENTAL AND SANITATION MICROBIOLOGY**

CO1 Describe the organisms in air with t heir sources and distribution.

CO2 Explain the methods of waste water treatment, air sampling , solid waste management, bioremediation and bioleaching.

CO3 Discuss the microbial distribution in aquatic environment with special emphasis on factors affecting them.

CO4 Compare the water purification procedures and the tests for the microbiological examination of water.

CO5 Explain air borne and water borne diseases with their mode of transmission.

CO6 Discuss the concept of xenobiotics and related environmental problems.

- **Complementary course 1**: **BCH3C03 BIOCHEMISTRY III**

CO1 Introduce enzymes and their classification.

CO2 Discuss the application of enzymes.

CO3 Describe the metabolism of carbohydrates and the pathways involved.

CO4 Explain citric acid cycle and electron transport chain.

CO5 Discuss the process of photosynthesis.

- **Complementary course 1 practical**: **BCH1C05 BIOCHEMISTRY PRACTICAL III**

CO1 Analysis of quantity of glucose.

CO2 Acquire skills for quantitative analysis of amino acids.

CO3 Acquire skills for quantitative analysis of proteins.

- **General course 1**: **A11. BIODIVERSITY – SCOPE AND RELEVANCE (THEORY)**

CO1 Introduce the concept of biodiversity.

CO2 Explain the importance of biodiversity.

CO3 Discuss the components of biodiversity.

CO4 Describe the factors responsible for loss of diversity.

CO5 Explain the ethical and aesthetic values of biodiversity.

CO6 Emphasise the need for inventorying and monitoring of biodiversity.

CO7 Discuss the importance of biodiversity conservation.

- **General course 2: A12. RESEARCH METHODOLOGY (THEORY)**

CO1 Defining objectives of research methodology.

CO2 Discuss the modes of collection of literature.

CO3 Explain the methods of data analysis.

CO4 Explain the components of thesis structure.

C05 Describe the ways of publishing of articles in newspaper/newsletter

SEMESTER IV

- **Core course 4: MBG4B04. SOIL AND AGRICULTURAL MICROBIOLOGY**

CO1 Recall different types of soils and soil properties.

CO2 Distinguish the different groups of microorganisms present in soil and t factors affecting their growth.

CO3 Describe the concept of ecosystem and its components and concept of biogeochemical cycles and N, S and P cycles.

CO4 Differentiate different types of biological interactions such as microbe-microbe, plant-microbe and animal-microbe.

CO5 Explain the symptoms, disease cycle and control measures of different bacterial,viral and fungal diseases of plants.

CO6 Discuss the potential of different microorganisms in agriculture as biofertilizers and biopesticides.

- **Core practical course 1**: **MBG4B05(P). MICROBIOLOGY PRACTICAL I**

CO1 Familiarize with parts of a microscope and apply light Microscopy in microbiological studies.

CO2 Apply the skill of the staining for microscopic visualization.

CO3 Acquaint with common methods of sterilization and to apply the sterilization procedures in a microbiology laboratory and similar places where hygiene has to be maintained.

CO4 Prepare different types of media for the cultivation of microorganisms in a microbiological lab.

CO5 Determine the effect of various factors influencing the growth of microorganisms.

CO6 Demonstrate techniques for isolation and enumeration of microbes from various .samples.

- **<u>Complementary course 1</u>: BCH4C04 BIOCHEMISTRY IV**

CO1 Describe the pathways of lipid metabolism.

CO2 Discuss the metabolism of aminoacids and proteins.

CO3 Explain the biochemical basis of inheritance.

CO4 Differentiate between replication, transcription and translation.

CO5 Describe the classification of hormones.

- **<u>Complementary course 1 practical</u>: BCH1C05 BIOCHEMISTRY PRACTICAL IV**

CO1 Acquires skills on estimation of DNA and RNA.

CO2 Demonstrate the digestion of starch.

- **<u>General course 3</u>: A13. NATURAL RESOURCE MANAGEMENT (THEORY)**

CO1 Define natural resources.

CO2 Explain the types of natural resources.

CO3 Discuss the concept of sustainable utilization.

CO4 Discuss the utilization of land.

C05 Explain the sources of fresh water.

C06 Discuss the types of forests and forest management.

CO7 Describe the sources of energy.

CO8 Acquaint with the practices in natural resource management.

- **<u>General course 4</u>: A14. INTELLECTUAL PROPERTY RIGHTS (THEORY)**

CO1 Acquire an overview of intellectual property rights.

CO2 Describe the patent system.

CO3 Explain copyright and related rights.

CO4 Define trademarks .

C05 Discuss the types of trademarks.

CO6 Explain geographical indication.

CO7 Define industrial design.

CO8 Describe the rationale for Intellectual Property Protection in biotechnology.

SEMESTER V

- **Core course 5: MBG5B06. INDUSTRIAL MICROBIOLOGY**

CO1 Describe basic concepts of a fermentation process with various types.

CO2 Discuss the media formulations and their significance in fermentation process.

CO3 Explain different methods for screening, isolation, improvement of strain, upstream processing and downstream processing of industrially important microorganisms and products.

CO4 Compare various techniques used for the recovery of fermentation products.

CO5 Demonstrate industrial production of microbial metabolites.

CO6 Discuss different intellectual property rights related to microbial products.

- **Core course 6: MBG5B07. FOOD AND DAIRY MICROBIOLOGY**

CO1 Memorize the types and importance of microbes that exist in different food items and understand different parameters affecting their growth in food.

CO2 Explain major methods to detect microbes in food, with special importance to Contaminants.

CO3 Illustrate the physical and chemical properties of milk and types of microorganisms present in milk.

CO4 Differentiate different methods used for the microbiological examination of milk.

CO5 Acquire in-depth knowledge about microbial production of fermented dairy and non-dairy food products and understand the health benefits of SCP, probiotics and prebiotics.

CO6 Gain an insight to the microbial spoilage of different kinds of foods.

- **Core course 7:MBG5B08. IMMUNOLOGY**

CO1 Explain the biological functions of various immune cells and organs.

CO2 Recognize the cellular coordination in the generation of immune responses.

CO3 Illustrate the types, structure and basic features of antigen and antibody.

CO4 Demonstrate the significance of MHC, C system and immunological tolerance.
CO5 Classify antigen-antibody reactions involved in diagnosis of infections.

CO6 Describe the types and mechanisms of hypersensitivity, autoimmunity and graft rejection reactions.

CO7 Discuss the causes, molecular mechanisms, immunological responses and treatment options of tumor development.

- **Core course 8: MBG5B09. MEDICAL MICROBIOLOGY I**

CO1 Explain the concept of infection, its types, sources and the mode of transmission of various diseases.

CO2 Discuss the methods for collection and transportation of clinical samples.

CO3 Compare the morphology, cultural and biochemical characteristics, pathogenesis, laboratory diagnosis, treatment and prophylaxis of various bacterial diseases.

- **Open course 1**: **MBG5D01. PUBLIC HEALTH AND EMERGING MICROBIAL DISEASES**

CO1 Discuss the basic concepts in public health parameters from state,national and international perspective.

CO2 Describe the types, epidemiology and symptomatology of various diseases of public health concern.

CO3 Explain the sources and transmission of diseases.

- **Open course 2: MBG5D02. ENVIRONMENTAL MICROBIOLOGY**

CO1 Explain the role of microorganisms in nitrogen cycle, vermicomposting and biogas production.

CO2 Describe the methods used for microbiological examination of water, purification of water and sewage treatment.

CO3 Discuss the problems associated with environmental protection.

CO4 Discuss the diseases spreading through air.

SEMESTER V1

- **<u>Core course 9:</u> MBG6B10. GENETICS AND GENETIC ENGINEERING**

CO1 Summarize the mendelian and non mendelian concepts inheritance.

CO2 Explain the concepts of linkage, crossing over and recombination.

CO3 Illustrate the cell cycle events and its regulation mechanisms in eukaryotes.

CO4 Demonstrate the recombination frequency as a tool of gene mapping in eukaryotes and gene transfer techniques as a tool in prokaryotes.

CO5 Describe the pathways of cell cycle and their regulation strategies adopted by eukaryotic cells.

CO6 Discuss the molecular mechanisms behind the programmed cell death and the inter-relation of death pathway with the cell cycle and immune response.

CO7 Explain the principle behind rDNA technology, DNA sequencing, PCR and their applications in biological sciences.

CO8 Discuss the development of GMOs and its potential risks and benefits on the Environment.

CO9 Critical & ethical analysis of application r DNA technology in our society.

- **<u>Core course 10</u>: MBG6B11. MEDICAL MICROBIOLOGY II**

CO1 Discuss the important viral diseases including emerging viral diseases, with special emphasis on symptoms, pathogenesis, transmission and prophylaxis.

CO2 Analyze symptoms, pathogenesis, transmission, prophylaxis and control of important fungal diseases of humans including emerging fungal diseases.

CO3 Explain important protozoan diseases of humans such as malaria ,amoebiasis and helminth infections and infections caused by flagellates.

CO4 Compare different types of vaccines and their routes of administration.

CO5 Distinguish antibiotics classes, their mode of action and mechanism of antibiotic resistance.

- **Core practical course 2**: **MBG6B12 (P). MICROBIOLOGY PRACTICAL II**

CO1 Apply the biochemical, microscopic and physiological properties of bacteria for the identification of unknown bacteria or clinically relevant bacteria in a patient sample.

CO2 Report variations observed in the blood cell count majorly for clinical or diagnostic purpose.

CO3 Perform various serological techniques routinely executed in clinical laboratories.

- **Core practical course 3: MBG6B13 (P). MICROBIOLOGY PRACTICAL III**

CO1 Apply the knowledge of the learner for the preparation of various solutions and reagents in laboratories with their specific features.

CO2 To demonstrate various stages of mitosis in onion root tip.

CO3 Execute the extraction of DNA and RNA and confirm by performing.

CO4 Estimate the amount DNA and RNA in a solution CO5 Demonstrate the gene transfer experiments like conjugation and transformation.

CO5 Demonstrate the gene transfer experiments like conjugation and transformation.

CO6 Perform procedure for induction of beta galactosidase enzyme by means of artificial transformation.

CO7 Demonstrate the Restriction digestion reaction of various enzymes widely employed in rDNA technology.

- **Core practical course 4:MBG6B14 (P). MICROBIOLOGY PRACTICAL IV**

CO1 Perform isolation and screening of industrially important microorganisms from soil.

CO2 Demonstrate the different fermentation processes-citric acid production, alcohol production and wine production.

CO3 Identify sterilization problems with suspended solids in media.

CO4 Compare various cell disruption techniques.

CO5 Perform cell disruption and salting out.

CO6 Perform enrichment of coir pith degraders, pellicle formation, and penicillin assay.

CO7 Analyze the aerobic mesophilic count of milk and microbial flora of fermented milk.

CO8 Evaluate the microbiological quality of milk by Methylene Blue Reductase test.

- **Elective course 1: MBG6B15 (E1). CELL AND TISSUE CULTURE**

CO1 Describe how a plant & animal cell culture lab should be designed and maintained.

CO2 Demonstrate the concept of tissue culture technique for plant regeneration and its application in developing plantlets of specific characteristics.

CO3 Describe methods to determine cell cytotoxicity which in turn can be used to validate drugs and cosmetics for their side effects (toxicity).

CO4 Discuss the basics of stem cells, their characterization and applications.

- **Elective course 2: MBG6B15 (E2). MOLECULAR BIOLOGY**

CO1 Demonstrate the structure, function and other basic features of DNA and RNA.

CO2 Analyze the organization of genetic material by means of proteins and topological properties.

CO3 Conceptualize the theme of central dogma of molecular biology by discussing the events, enzymes and mechanisms of replication, transcription and translation.

CO4 Illustrate the gene expression regulation mechanisms in prokaryotes by means of lac and trp operons.

- **Elective course 3: MBG6B15 (E3). BIOINSTRUMENTATION**

CO1 Describe the principles and applications of various techniques in life sciences such as Spectrophotometer, pH Meter, Electrophoresis, NMR, Biosensors, Centrifugation, Chromatography and Radio Isotope techniques used in the isolation, purification and analysis of biomolecules.

CO2 Describe various Spectroscopic and Chromatographic techniques.

CO3 Characterize the given sample using bioanalytical techniques.

CO4 Apply the concepts of modern analytical and instrumental techniques relevant to quantitative measurements in life sciences.

BACHELOR OF BUSINESS ADMINISTRATION

COURSE OUTCOME

SEMESTER 1

1.1. MANAGEMENT THEORY AND PRACTICES

CO1 To evaluate conceptual knowledge of management.
CO2 To understand the different levels of management.
CO3 To create an idea about planning process.
CO4 To analyse value of staffing in a business.
CO5 To apply modern practices in management.
CO6 To understand about ethics and social responsibility.

1.2. MANAGERIAL ECONOMICS

CO1 To apply economic principles and concepts.
CO2 To create knowledge about market forces.
CO3 To evaluate the importance of economics in decision making.
CO4 To create knowledge about business cycle.
CO5 To understand the importance of forecasting.

SEMESTER 2

2.1. FINANCIAL ACCOUNTING

CO1 To understand basic knowledge about accounting.
CO2 To create ability to make financial statement.
CO3 To analyse knowledge about hire purchase and installment system.
CO4 To apply skill to deals with branch accounts.
CO5 To evaluate the difference of shares and debentures.

2.2. MARKETING MANAGEMENT

CO1 To create an idea about marketing principles.
CO2 To understand knowledge about consumer behavior.
CO3 To evaluate the process of marketing and the importance of marketing in modern business.
CO4 Apply the knowledge about marketing concepts.

SEMESTER 3

3.1. PROFESSIONAL BUSINESS SKILLS

CO1 To understand both the internal and external factors that impacts an organization's success.
CO2 To analyse how business knowledge can help you make an impact on your organization.
CO3 An evaluation of professional business. Baseline knowledge of professionals & professionalism and they can be a valuable asset in an organization.

3.2. BASIC NUMERICAL METHODS:

CO1 To apply knowledge of numerical equations.
CO2 To create the students about the practices of matrices.
CO3 To analyse about arithmetic progression and Geometric progression.
CO4 To evaluate financial mathematics and its applications.
CO5 To understand descriptive statistics and its applications.

3.3. CORPORATE ACCOUNTING

CO1 Understand and apply fundamental Ind AS on inventories, borrowing cost, PPE, intangible assets etc.
CO2 To apply skills to prepare financial statements for joint stock companies and compute accounting ratios
CO3 To evaluate recording accounting transactions in respect of redemption of preference shares and debenture.
CO4 To analyze the different receipts and disbursement sources of fund and cash elements in the business and how it shows in the records.

3.4 FINANCIAL MANAGEMENT

CO1 To evaluate the basics of financial management.
CO2 To understand the aspects of investments.
CO3 To create the students to take proper managerial decisions
CO4 To apply skills of students in finance decisions.
CO5 To analyse knowledge about working capital management.

3.5. BUSINESS REGULATIONS.

CO1	To create awareness of rights and responsibilities of consumers
CO2	To evaluate the critical thinking ability
CO3	To understand about consumer protection Act.
CO4	To apply Public speaking skills in various occasions
CO5	To analyse existing commercial laws and regulation.

SEMESTER 4

4.1. BANKING & INSURANCE

CO1	To understand the basic concepts of banking and functions of banking & understand the risks faced by banks and ways to overcome them.
CO2	To analyse the basic concepts of insurance and elaborate the kinds of business risks.
CO3	To evaluate the insurance business environment in India.
CO4	To apply the theoretical knowledge of banking and insurance services in real life.
CO5	To create awareness how to choose life insurance policies based on needs.

4.2. QUANTITATIVE TECHNIQUES FOR BUSINESS

CO1	To analyse use of quantitative techniques in managerial decision making.
CO2	To apply the quantitative techniques in the decision making situations
CO3	To evaluate the skills needed for applying quantitative techniques in decision making.
CO4	To understand time series analysis, index numbers, correlation, regression, and probability distribution.
CO5	To create numerical ability among students.

4.3. CORPORATE REGULATIONS

CO1	To make understand the students with corporate law.
CO2	To create an awareness of the applications of company law in the management of organizations.
CO3	To analyse features and different types of companies.
CO4	To evaluate the formation of companies and different documents of companies.
CO5	To understand the share capital and other relevant provisions of the same.
CO6	To understand the management, corporate governance, CSR, and some basic aspects of SEBI.

CO7	To apply the provisions of conducting meetings and winding up procedures of companies.**4.4. COST AND MANAGEMENT ACCOUNTING**.

CO1	To understand cost and management accounting concepts and its application for decision making
CO2	To create awareness about costs and various methods and techniques of costing
CO3	Ta analyse adoption, calculation, recording, analysis and controlling of cost elements
CO4	To apply the techniques of costing in different form of business.

4.5. ENTREPRENEURSHIP DEVELOPMENT.

CO1	To understand the basic concepts, definitions and terms related to entrepreneurship.
CO2	To create knowledge about the institutional support and incentives to entrepreneurs.
CO3	To evaluate the knowledge of students in the setting up an industrial unit
CO4	To analyse the students about the setting up of industrial unit (only basic study).
CO5	To apply basic knowledge in the preparation of project report.

SEMESTER 5

5.1. OPERATIONS MANAGEMENT

After completing the course, students shall be able to;

CO1	To understand the concept of Operations management
CO2	To evaluate the factors determining Industrial facility planning
CO3	To analyze capacity planning of an industrial unit
CO4	To create an awareness of material handling and quality control
CO5	To apply quality control techniques in the real life situations

5.2. HUMAN RESOURCE MANAGEMENT

After completing the course, students shall be able to;

CO1	To analyse HRM and its importance in various organizations.
CO2	To create awareness about various selection processes in an organization.
CO3	To evaluate various training and development process.
CO4	To apply the procedure of staffing in the company recruitment practices
CO5	To understand about strategic HRM and recent trends in HRM.

5.3. FINANCIAL MARKETS AND INSTITUTIONS

CO1	To understand the concepts, structure and functioning related to financial markets, institutions and services.
CO2	To analyze the different types of financial market instruments.
CO3	To evaluate current structure and functioning of the financial markets, institutions and service sectors.
CO4	To create awareness of the regulators in financial system and understanding the role of various intermediaries in the system.

5.4. BUSINESS RESEARCH METHODS

CO1	To analyse the fundamentals of business research.
CO2	To apply practical knowledge and skills in procedure of a research
CO3	To create insights and knowledge base of various concepts in research.
CO4	To evaluate knowledge of different types of business research.
CO5	To understand and familiarize with data processing and different data analysis tools.
CO6	To create project report writing and presentation skills among students.

5.5. INCOME TAX

CO1	To make understand knowledge and skills in the theory and practice of income tax.
CO2	To create problem solving skill relating to different heads.
CO3	To evaluate the students knowledge in the five heads of income tax.
CO4	To apply basic knowledge and equip students with application of principles and provisions of income tax act 1961.
CO5	To analyse students with basic concepts of income tax.

SEMESTER 6

6.1. INVESTMENT MANAGEMENT

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

CO1	To understand about investment environment
CO2	To analyse the concepts of Risk & return
CO3	To evaluate the various approaches to investment valuation
CO4	To create basic knowledge of investment and its related concepts
CO5	To apply the skills in the planning of investment portfolio

6.2. FINANCIAL SERVICES

CO1	To understand the various financial services and investment opportunities available in the country.
CO2	To evaluate the role of merchant bankers.
CO3	To create awareness of *financial services* and its classification.
CO4	To familiarize with the concepts of pricing, distribution and promotion of financial services.
CO5	To apply the skills and knowledge in marketing of Mutual funds, credit cards, housing finance, personal loans and factoring services.

6.3. MANAGEMENT SCIENCE:

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

CO1	To understand the basic knowledge about operations research.
CO2	To evaluate the various research tools used in operations research.
CO3	To apply the concepts of network analysis techniques in the project scheduling
CO4	To create capacity to take various business decisions.
CO5	To analyse various transportation models to takes appropriate decisions.

6.4. ORGANISATIONAL BEHAVIOUR:

CO1	To analyze and compare different models used to explain individual behavior related to motivation and rewards.
CO2	To understand group dynamics and demonstrate skills required for working in group or team building.
CO3	To evaluate organizational culture and describe its dimensions and to examine various organizational designs.
CO4	To create an insight on how employees behave and performs in the work place.

6.5. PROJECT MANAGEMENT

On learning the course the students will be able

CO1	To understand the different concepts of managing a project.
CO2	To analyze the viability of a project.
CO3	To create an idea about project implementation and controlling

DEPARTMENT OF ENGLISH

COURSE OUTCOMES – CORE COURSES

Semester 1

ENG1B01 Introducing Literature

Course Outcome

CO1: Able to locate various elements of literary language, including plot, symbols, characters and other tropes.

CO2: Evaluate and interpret different point of views within a given text and locate the underlying polyphony, illustration etc.

CO3: Identifying the marginalized voices, particularly those of children, transgenders, dalits and females and exhibit their abilities.

CO4: Discover and interpret the linguistic structures in poetic texts.

CO5: Enable the students read and interpret literary text closely and identify the dominant voices within and the agenda behind it.

Semester 2

ENG2BO2 Appreciating Poetry

Course Outcome

CO1: Identify the fundamental elements of poetry, stylistic variations, rhetorical devices and different genres of poetry.

CO2: Examine and identify the changing trends in poetry and linguistic structures employed in poetic texts.

CO3: Identify the different perspectives employed in poetry texts like gender, race, caste, ethnicity, religion, region, environment and nation.

CO4: Categorize different forms of poetry available in British and American literature and identify recurring themes in poetry throughout the history of literature.

CO5: Personal appreciation of poetry as an art form considering its aesthetic quality.

Semester 3

ENG3B03 Appreciating Prose

Course Outcome

CO1: Analyze the key elements of prose including the structure of the plot, characters employed and literary devices.

CO2: Interpret different prose pieces and explain the meaning of complex passages.

CO3: Enable the ability of critical thinking that supports creative writing skills.

CO4: Identify different prose writings and interpret the literary devices and elements.

CO5: To develop and compose original prose works enabling the students to understand the elements of prose writings.

Semester 3

ENG3B04 English Grammar and Usage

Course Outcome

CO1: Identify the key concepts of English grammar, including sentence patterns and structures and basic language rules in order to apply them for developing communication skills.

CO2: Enable the ability to express themselves in both formal and informal situations.

CO3: Analyze and understand English grammar, idioms, collocations, syntax and semantics.

CO4. Identify and deconstruct sentences to increase the logical and analytical skills in using language.

CO5: Creation and articulation of communication relevant to context considering the knowledge of contemporary usage.

Semester 4

ENG4B05 Appreciating Fiction

Course Outcome

CO1: Differentiate long and short fiction and identify the key elements in it.

CO2: Analysis of cultural diversity by identifying varied fictional samples.

CO3: Appraise human conditions and its complexities in various fictions.

CO4: Division of different fiction types for better analysis and deep insights.

CO5: Recognize different types of fictional narratives and analyze diverse techniques employed.

Semester 4

ENG4B06 Literary Criticism

Course Outcome

CO1: To identify key literary terms, various movements, concepts and schools of thought within literary criticism.

CO2: Analysis of major literary theories and identify the ability to comprehend the underlying principles of various critical approaches.

CO3: Demonstrate how literary criticism shapes literature and culture throughout the centuries.

CO4: To analyze the structure, themes and stylistic elements of literary works through the perspective of different critical theories.

CO5: Critique different plays, passages and poems of literature.

Semester 5

ENG5B07 Appreciating Drama and Theatre

Course Outcome

CO1: Identify the basic elements of drama including its historical progress in different continents.

CO2: Analyze different drama genres and identify masters of each genre.

CO3: Assess the texts and theatrical performances and critically evaluate them from different perspectives.

CO4: Evaluate the portrayal of human life experiences in dramas.

CO5: Develop an original theatrical performance which embodies various life experiences.

Semester 5

ENG5B08 Literary Theory

Course Outcome

CO1: To recall and identify major concepts and terminologies in literary theory.

CO2: Construct a pluralistic perspective of culture and literature in a multicultural society

CO3: Apply various literary theories to analyze and interpret literary works.

CO4: Identify and analyze the critical ideas, values and themes that appear in literary and cultural texts.

CO5: Analyze and evaluate the strengths and limitations of literary theories providing insightful interpretations.

Semester 5

ENG5B09 Language and Linguistics

Course Outcome

CO1: Recognize the key concepts of linguistics, pronunciation in English sticking on to general standards in every day conversation.

CO2: Construct an understanding of syntax, morphology and other components of language and their contribution to effective communication.

CO3: Apply the pronunciation features to improve personal spoken communication skill in real life situations.

CO4: Evaluate the relationship between language and human mind and identify the process involved in language acquisition, production and transmission.

CO5: Develop new communication strategies by integrating knowledge from phonetics, semantics, syntax, morphology and linguistics to address challenges in communication.

Semester 5

ENG5B10 Indian Writing in English

Course Outcome

CO1: Analysis of the historical forces that shaped Indian English literatures from its beginning to the contemporary period.

CO2: Enable the students to analyze and critically evaluate the thematic concerns and trends within Indian English literatures.

C03: Identify various genres employed by Indian English writers including novels, dramas, poems, short stories and essays.

CO4: Depict the writers' response to the societal changes, cultural issues and evolving literary forms over different periods.

CO5: Interpret the works of great writers of Indian Literatures in English.

Semester 6

ENG6B11 Voices of Women

Course Outcome

CO1: Analyze and interpret text written by women writers across diverse cultures.

CO2: Identify and understand the historical and cultural contexts that have shaped women's voices in literature.

CO3: Equip students with the skills to critically evaluate and analyze the thematic concerns presented in women's writings.

CO4: Analyze the omissions and misconceptions regarding women and develop a positive attitude towards them.

CO5: Understand and identify the different genres employed by women writers.

Semester 6

ENG6B12 Classics of World Literature

Course Outcome

CO1: Recognize classical literature and identify and composite literatures of the world.

C02: Identify cross cultural perspectives.

CO3: Categorize English literary texts on the basis of stylistics and thematic features.

CO4: Identify some of the theoretical issues in reading and interpreting world literature

CO5: Delineate the social, historical, literary and cultural aspects of classical literatures.

Semester 6

ENG6B13 Film Studies

Course Outcome

CO1: Demonstrate a basic understanding of film terminologies, genres and historical movements.

CO2: Consider film as an art form based on aesthetic value.

CO3: To identify the significant role of film in depicting the history, politics, technology and varied performances

CO4: Appraisal of theatrical representation of class, race, ethnicity and sexuality through this medium.

CO5: Analyze and interpret the significant film movements, its language and terminology and key concepts.

Semester 6

ENG6B14 New Literatures in English

Course Outcome

CO1: Identify the key concepts of literatures related to postcolonial period.

CO2: Differentiate diverse cultures and their modes of expression.

CO3: Identify the postcolonial literary texts and inter-relate the issues regarding colonization and decolonization.

CO4: Analyze and interpret how issues of cultural plurality and hybridity is being addressed by postcolonial literature.

CO5: Critically evaluate the social, political and cultural inferences portrayed postcolonial literature.

Semester 6 (Electives)

ENG6B15 Literature of the Marginalized

Course Outcome

CO1: Identify how literature portray the issues of marginalized.

CO2: Analyze the term subaltern and subaltern perspectives depicted in literature.

CO3: Critique marginalization as a contextual factor in relation to socio-cultural context.

CO4: Evaluate the formation and evolution of marginality and the emergence of stereotypes.

CO5: Identify the general and other possibilities used by the marginalized to represent their predicament.

Semester 6

ENG6B21/22 (Project/Research Methodology)

Course Outcome

CO1: Develop advanced research skills including gathering and evaluation of relevant literature and employ appropriate methodologies.

CO2: Increase students' critical thinking by enabling them to critically analyze information and construct arguments based on their project work.

CO3: Enhance the communication skills and ensure the availability of the students' project work to diverse audience.

CO4: Enable the students with management skills including planning, organizing and implementation in relation to their project.

CO5: Employ innovative ways and methods like multimedia presentations and artistic expressions that reaches far beyond the traditional ways that inculcate the students' knowledge and creativity.

BSc FOOD TECHNOLOGY

SEMESTER	COURSE	COURSE OUTCOME
1	**FTL 1 B 01 PERSPECTIVES OF FOOD SCIENCE & TECHNOLOGY**	**CO1.** Recall key concept and terminology related to nutrients, food composition and the nutritive value of food. **CO2.** Create educational materials or outreach programs to communicate food science and technology updates to consumers and industry stakeholders. **CO3.** Explain the role of food additives in food processing. **CO4.** An idea about journals, research centers and leading industries.
2	**FTL 2 B03 FOOD MICROBIOLOGY**	**CO1.** Recall basic microbiological terminology, concepts, and the historical development of microbiology as a science. **CO2.** Describe basic microbiological techniques such as staining, culturing, and microscopy to observe and identify the microorganisms. **CO3.** Analyses the growth pattern of microorganisms and the factors influencing microbial growth and reproduction. **CO4.** Understand the basic microbial structure, function and study the comparative characteristics of prokaryotes and eukaryotes and structural similarities and differences among them.
3	**FTL 3B 05 FOOD ENGINEERING**	**CO1.** Describe the operation of common food processing equipments and systems. **CO2.** Identify the mechanisms by which various unit operations in food Processing optimize food quality and extend shelf life of foods. **CO3.** Understand principles of heat and mass transfer phenomena. **CO4.** Understand rheological

		characteristics of foods.
4	**FTL 4 B 07** **FOOD CHEMISTRY & ANALYTICAL INSTRUMENTATION**	**CO1.** Utilize knowledge of analytical instrumentation to conduct chemical analysis of food samples **CO2.** Understand the constituents of foods which are always amenable during processing. **CO3.** Evaluate the impact of chemical reactions, processing conditions and storage environments on food quality and safety. **CO4.** Explain the chemical reactions and transformations that occur during food processing, storage and preparation.
	FTL 4 B 08 P **FOOD CHEMISTRY & ANALYTICAL INSTRUMENTATION**	**CO1.** Demonstrate the presence of protein, lipid, carbohydrate and water in food using chemical methods. **CO2.** Evaluate proper selection and application of appropriate methods of analysis. **CO3.** Aware of how analytical techniques may be used determine food composition and quality. **CO4.** Apply their knowledge in food biochemistry and nutrition in designing new range of products with improved nutritional characteristics

5	**FTL 5 B 09** **FOOD MICROBIOLOGY II**	**CO1.** Identify key pathogens, spoilage organisms and beneficial microbes in food systems **CO2.** To perform and analyze the microbiological safety of milk and water. **CO3.** Evaluate microbiological data to determine potential risks and identify sources of contamination in food production environments. **CO4.** To implement the effect of fermentation techniques in food production
5	**FTL 5 B 10** **CEREALS, PULSES AND OIL SEEDS TECHNOLOGY**	**CO1.** Utilize knowledge of processing technologies to operate and manage equipment used in the milling, grinding and oil extraction of cereals, pulses and oilseeds **CO2.** Knowledge on baking technologies of bread, cake, biscuit and confectionary. **CO3.** Develop innovative processing methods or products that add value to cereals, pulses and oilseeds, such as fortified foods or functional foods **CO4.** To familiarize students with major agricultural crops of India and their processing techniques
5	**FTL 5 B 11** **FOOD PRESERVATION & PACKAGING TECHNOLOGY**	**CO1.** Identify major types of food processing methods, preservation techniques and packaging materials. **CO2.** Implement preservation technique such as freezing, canning, drying and irradiation to maintain food quality and safety. **CO3.** To understand on ancient fermentation method and its application. **CO4.** Evaluate the suitability of packaging materials and design in preserving food quality and enhancing consumer appeal.

5	**FTL 5 B 12 P** **CEREALS, PULSES & OIL SEEDS TECHNOLOGY**	**CO1.** Understand the quality parameters of different types of food products Classify food products based on their quality. **CO2.** Interpret results and decide on the quality. **CO3.** Compare two brands of the same product and decide the best one based on the quality. **CO4.** Design and develop newer and better methods of analysis for improving the quality of a Food Product
	FTL 5B 13 P **FOOD MICROBIOLOGY II**	**CO1.** Use aseptic technique to properly handle microorganisms to avoid contamination. **CO2.** Understand and apply the knowledge to handle microscopes to observe stained microorganisms. **CO3.** Enumerate the microorganisms to check the quality characteristics of food. **CO4.** Isolate the pure culture from mixed population found in contaminated foods
	FT 5 B 14 P **ANALYSIS OF FOODS**	**CO1.** Gain knowledge in the terminology used in food analysis. **CO2.** Learn relevant procedures and equipment. **CO3.** Gain experience with proximate analysis of foods. **CO4.** Familiar with precision and accuracy through experiences with components of analysis and reporting results.
	FT5D03 **FOOD AND HEALTH OPEN COURSE**	**CO1.** Discuss basic knowledge of foods includes nutritional composition. **CO2.** Knowledge about life style diseases and food related diseases. **CO3.** Acquire knowledge about various food additives and food adulteration. **CO4.** Understand food allergens and food poisons

6	**FTL 6 B 15** **DAIRY TECHNOLOGY**	**CO1.** Describe the various step involved in the production , processing and preservation of dairy products. **CO2.** Implement quality control measures to ensure safety and quality of dairy products. **CO3.** Analyses the impact of different processing technique on the nutritional and sensory properties of dairy products **CO4.** Develop innovative dairy products or processing methods to improve quality shelf life and consumer appeal.
	FTL 6 B 16 **TECHNOLOGY OF ANIMAL FOODS**	**CO1.** Explain the principles of composition microbiology and biochemistry of animal food. **CO2.** Analysis the effect of various processing technique on the nutritional sensory and functional properties of animal food. **CO3.** Develop innovative processing techniques or products to enhance quality safety and shelf life of animal foods. **CO4.** Explain innovative idea on the production of various value added products.
	FTL 6 B 17 **FOOD SAFETY, FOOD LAWS &REGULATIONS**	**CO1.** Understand the importance of food safety and hygiene can apply it at industrial level. **CO2.** Evaluate the effectiveness of different food safety management system such as HACCP. **CO3.** Describe the structure and components of major food laws and regulations. **CO4.** Understand new concept of food plant sanitation apply them to another situation.
	FTL 6 B18 **TECHNOLOGY OF**	**CO1** vegetables during processing and Understand the physiological changes occurring to fruit vegetables vegetable behind fruit,

	FRUITS, VEGETABLES, SPICES & PLANTATION CROPS	vegetable, spices and plantation products processing. **CO2** Knowledge on post-harvest handling, specific processing technologies, preparing, quality analysis and stabilizing shelf life of fruit, vegetable, spices and plantation based products
	FTL 6 B TECHNOLOGY OF FRUITS, VEGETABLES, SPICES & PLANTATION CROPS	**CO1** Understand the physiological changes occurring to fruit and vegetables during processing and storage. **CO2** Analysis the effect of various processing and preservation technique on sensory , nutritional and functional properties of these crops. **CO3** Evaluate the regulatory standards and guidelines related to the processing safety and quality of these crops and their products.\ **CO4** Develop innovative processing methods or products that enhance the quality shelf life and marketability of fruits vegetables spices and plantation crops.
	FTL 6 B 19 P TECHNOLOGY OF FRUITS, VEGETABLES, SPICES & PLANTATION CROPS	**CO1.** Gain knowledge about the manufacturing technology of food products. **CO2.** Understand the importance of various ingredients required for preparation of products. **CO3.** Calculate the quantity requirement of each constituent. **CO4.** Understand the quality parameters of different types of food products.

	FTL 6 B 20 P **TECHNOLOGY OF ANIMAL FOODS**	**CO1.** To determine the acidity of milk , curd , butter. **CO2.** By using Gerber method we can check the fat of milk. **CO3.** By using lactometer we can check the purity of cow's milk. **CO4.** Different kinds of tests are performing to determine the adulteration of milk.

M Sc Food Science and Technology

COURSE OUT COME

SUBJECT CODE	SUBJECT NAME	COURSE OUTCOME
SEMESTER I		
FST 1 C01	FOOD MICROBIOLOGY	**CO1.** To provide the basics of microbiology to build a foundation for more advanced studies in microbiology. **CO2.** Better understanding on the general morphology, cytology, classification of microorganisms and importance of bacteria, fungi, virus and algae. **CO3.** Understanding the food borne illness and also about the beneficial aspect of microorganisms giving special importance to fermentation process **CO4.** Information regarding culture media and different culturing techniques and brief study on foodborne viral diseases, their control and preventive measures. **CO5.** Study about the microbiology of food, water, animal and plant food products, better understanding of microbes in food spoilage and food preservation techniques.
	FOOD MICROBIOLOGY PRACTICAL	**CO1.** Expertise in basic techniques of microbiology. **CO2.** Knowledge on pure culture techniques, microbial growth, culture media, staining techniques, culturing methods and conditions affecting it. **CO3.** Understanding on microbial analysis of food and utensils. **CO4.** Knowledge in relationship between food and microbes, techniques used in food processing.
		CO1. Understand and describe the chemical structure, classification, processing& properties of food components. **CO2.** Illustrate the principle mechanism of

FST1C02	FOOD CHEMISTRY AND ANALYSIS	analytical instruments. **CO3.** Understand about food emulsion, food pigments& flavours. **CO4.** Understand the constituents of food which are always amenable during processing. **CO5.** Evaluate the impact of chemical reactions,transformation,processing conditions,and storage environment s on food quality and safety. .
	FOOD CHEMISTRY P	**CO1.** Describe bio- chemical analysis of food components. **CO2.** Developing practical skills of proximate & basic food compositions including carbohydrates, proteins fats and minerals.
FST1CT03	RESEARCH METHODOLOGY AND STATISTICS	**CO1.** Develop basic skills in critical review writing and research **CO2.** To know about different types of documentation carried out for a research and various aspects of research. **CO3.** Desire to face the challenge in solving the unsolved problems, i.e., concern over practical problems initiates research **CO4.** Explain, Calculate and interpret descriptive statistics including scales of measurement, Frequency distribution, Measures of central tendency, Measures of dispersion, Standard scores and the normal curve. **CO5.** Understand the basic concepts of probability, confidence intervals, and hypothesis test
FST1C04	BASIC PRINCIPLES OF ENGINEERING	**CO1.** Learn the basic engineering units **CO2.** Describes the working, principles of and its application of different power transmission system. **CO3.** Learn the principle, methods, mode of working of different heat exchangers and boilers used in food industries. **CO4.** Learn the principle behind steam generation system and refrigeration unit along with the basics of psychrometry.

		CO5. To understand about various types of metals, types of corrosion and prevention method used in food industry and its grades.
	BASIC PRINCIPLES OF ENGINEERING P	**CO1.** Familiarize with different drawing equipment, technical standards and procedures for construction of geometric figures **CO2.** Develop imagination and ability to represent the shape, size and specifications of physical objects **CO3.** Construct and Interpret appropriate drawing scale as per the situation **CO4.** Improving technical communication skill in the form of communicative drawings.
FST1A01	IN-PLANT TRAINING	**CO1.** Knack to be a multi-skilled engineer with good technical knowledge, management, leadership and entrepreneurship skills. **CO2.** Ability to identify, formulate and model problems and find engineering solution based on a systems approach. **CO3.** Capability and enthusiasm for self-improvement through continuous professional development and life-long learning **CO4.** Awareness of the social, cultural, global and environmental responsibility
SEMESTER II		
	BIOCHEMISTRY AND NUTRITION PRACTICAL	**CO1.** Knowledge on the quantification and estimation of biological macro and micro molecules in different samples **CO2.** Demonstration and understanding of separation techniques in biochemistry.
FT2C06	FOOD STORAGE AND INFESTATION CONTROL	**CO1.** Understand the storage infestations which include different types of microbial, physical chemical, mechanical and enzymatic spoilage **CO2.** Describe about the factors affecting the storage commodity and different sources of infestation. **CO3.** Able to understand the physical, chemical and biological control of pest

		CO4. Acquire the knowledge about sanitation and safety measures in food storage premises **CO5.** Know about state ware house corporation, food corporation of India and will be able to design a ware house
FST2C07	INDUSTRIAL MICROBIOLOGY & BIOCHEMICAL ENGINEERING	**CO1.** Detailed study on fermentation process, microbial growth kinetics and types of fermentation processes. **CO2.** Knowledge on upstream downstream processes &application of immobilization technology in fermentation. **CO3.** Understanding the application of r dna technology in fermentation process. **CO4.** Awareness about the microbial production of substances for food application including amino acids, enzymes, organic acids, polysaccharides, vitamins etc. **CO5.** Study of bioreactors, operations of bioreactors and scale-up o bioprocess and equipments and effluent treatment methods.
	INDUSTRIAL MICROBIOLOGY & BIOCHEMICAL ENGINEERING	**CO1.** Study of bacterial growth kinetics. **CO2.** Understanding of enzyme immobilization technique. **CO3.** Production of fermented food products **CO4.** Knowledge on the testing of BOD and COD.
FST2C08	FOOD ENGINEERING	**CO1.** Describes physical, mechanical, rheological, frictional and aerodynamic properties of solid food materials. **CO2.** Learn about the performance of the heat and mass transfer operations in food processing and problems related to area of heat transfer **CO3.** Evaluate the different operations in food processing. **CO4.** Deliver ideas regarding different unit operations and its equipments involved in milling **CO5.** Use details of Material composition for effective construction of machines depending on food product

	FOOD ENGINEERING PRACTICAL	**CO1.** Understand various physical properties of solid foods like angle of repose of grains, bulk density, true density, and porosity. **CO2.** Analysis of drying characteristics of foods and plotting of drying curve **CO3.** Clear idea about determination of average size of the particle in ground food grains by sieve analysis or screen analysis.
FST2A02	COMPUTER SOFTWARE PACKAGES IN FOOD INDUSTRY	**CO1.** Provide the student with a good understanding of computer aided design principles and practice. **CO2.** Learn effective approaches to building up knowledge about a process through simulation.
SEMESTER III		
FST3CT12	TECHNOLOGY OF FRUITS, VEGETABLES, SPICES AND PLANTATION PRODUCTS	**CO1.** Equip students with advanced knowledge of processing and preservation of fruits and vegetables **CO2.** Familiarize different aspects of post-harvest technology along with storage practices & Storage disorders **CO3.** Understand the preparation and FSSAI specifications of Beverages, Tomato products & other fruit products.. **CO4.** Understand the possible preventive measure to control or even enhance the stability and shelf life of the processed foods. **CO5.** Understand different water treatment
	TECHNOLOGY OF FRUITS, VEGETABLES, SPICES AND PLANTATION PRODUCTS P	**CO1.** Prepare and package fruit beverages such as Squashes, RTS, Crush and Syrup by using appropriate machines such as pulper, juice extractor, autoclave, and corking machine with safety precautions, determine the acidity and TSS content. **CO2.** Prepare and preserve Tomato products by using appropriate machines such as pulper, autoclave, and corking machine with safety precautions, determine acidity and TSS content **CO3.** Prepare, dry and storage fruits and

		vegetables with appropriate methods such as drying, cabinet drying and solar drying with safety precautions and determine the moisture **CO4.** Prepare, preserve and store jam, jelly by using appropriate machines such as pulper, autoclave & sealer with safety precautions, determine acidity and TSS content, pectin test
FST3C13	PRINCIPLES OF FOOD PROCESSING AND PRESERVATION	**CO1.** Identify the different causes of food spoilage **CO2.** Understand the basic principles & types of food preservation **CO3.** Detailed understanding about the process of canning, heat penetration of microorganisms in containers and process time evaluation for canned products. **CO4.** Describe the recent trends in food preservation& Importance of hurdle technology **CO5.** Detailed understanding about sensory evaluation of food and new product development
	FOOD PROCESSING AND PRESERVATION PRACTICAL	**CO1.** Describe the process of can fabrication and seam technology **CO2.** Demonstrate primary processing of foods **CO3.** Determine the acidity, Ph and salt content of food samples **CO4.** Carryout water quality analysis **CO5.** Conduct sensory evaluation of food
FST3C14	TECHNOLOGY OF CEREALS, LEGUMES AND OIL SEEDS	**CO1.** Learn to appreciate the complex nature of flour and the complexity of modern baking technology Familiarize on milling technologies of rice & wheat. **CO2.** Develop competency to critically evaluate quality of product formulation and processing. **CO3.** Analyse the processing methods of pulses and legumes, nuts and oilseeds including coconut **CO4.** To familiarize students with major agricultural crops of India and their processing techniques **CO5.** To familiarize students with processing techniques, quality parameters, and nutritional

		comparisons of baked products
	TECHNOLOGY OF CEREALS, LEGUMES AND OILSEEDS PRACTICAL	**CO1.** Evaluation of properties of wheat and rice – physical, chemical and rheological. **CO2.** Processing and evaluation of bread, biscuit and cake **CO3.** Experimental milling of wheat and rice.
FST3C15	PACKAGING TECHNOLOGY	**CO1.** Understand food packaging: Principles of flexible and rigid packaging of foods, packaging materials, Investigation of packaging types related to use with various food systems and packaging permeability. **CO2.** Clear idea about Passive and active packaging including modified atmosphere packaging and controlled atmosphere storage of foods, Reuse, disposability and printing of packaging, Labeling techniques and legislative requirements for labeling food and beverage products. **CO3.** Outline the purpose and principles of food packaging and examine the operations involved in packaging material manufacture. **CO4.** Critique environmental issues, regulations and quality control associated with food packaging. **CO5.** Identify and evaluate the suitability of processing and packaging techniques for various foods.
	PACKAGINGTECHNOLOGY PRACTICAL	**CO1.** Apply and examine the knowledge of properties for selection of packaging materials for food products. **CO2.** Understand various properties of packaging materials and determination of properties like bursting strength, tearing resistance, puncture resistance, impact strength, and tear strength of packaging materials by various packaging testing equipments. **CO3.** Identification of packaging materials and knowledge on Chemical and physical tests of packaging materials.

SEMESTER IV		
FST4E16	FOOD PLANT AND QUALITY MANAGEMENT	**CO1.** Be able to critically evaluate the recent developments in the control of food safety. **CO2.** Demonstrate detailed knowledge of the requirements for compliance with national and international food safety legislation. **CO3.** Be able to explore the history and basic ideas underlying quality management and have a detailed knowledge of the role of Quality Management (QM) in modern management. **CO4.** Demonstrate knowledge of quality management systems, their implementation and the practical steps needed for implementation. **CO5.** Have knowledge and insight of different quality management systems i.e. Product quality management, safety and environmental management
FST4E17	TECHNOLOGY OF MEAT, FISH AND POULTRY PRODUCTS	**CO1.** Understand the importance of safe slaughtering methods and its significance in food safety. **CO2.** Demonstrate Innovative ideas on the production of various products **CO3.** Describe the methods of preservation of different animal products based on their shelf life **CO4.** Quality parameters of egg and the preservation methods from ancient to modern technologies **CO5.** A clear idea about fish processing technology.
	TECHNOLOGY OF MEAT, FISH AND POULTRY PRODUCTS PRACTICAL	**CO1.** To determine the acidity of milk, curd, butter **CO2.** Quality analysis of egg **CO3.** Proximate composition of meat and fish
		CO1. Define milk and compare different types of milk

FST4E18	DAIRY TECHNOLOGY	**CO2.** Understand about the platform quality test conducted for milk **CO3.** Describe in detail, the dairy plant operations including pasteurization, standardization, homogenization and sterilization. **CO4.** Understand in detail about special milk different milk products and fermented dairy products. **CO5.** Understanding about dairy plant sanitation and hygiene
	DAIRY TECHNOLOGY PRACTICAL	**CO1.** Conduct platform tests for milk **CO2.** Evaluate the quality of milk by analysis of fat, SNF, TS, specific gravity and acidity **CO3.** Detect adulteration in milk **CO4.** Examine microbiological quality of milk
FST4P20	PROJECT WORK	**CO1.**As the name implies, project-based learning is simply learning through projects. What is being learned and how that learning is being measured'

M.Com

COURSE OUTCOMES

Semester 01

BUSINESS ENVIRONMENT AND POLICY

CO1: Analyse the business environment from internal and external perspectives.

CO2: Evaluate how economic environments influence business decision making.

CO3: Apply New Economic Policy and Economic reforms to business perspectives.

CO4: Understand policies related to FDI & Multi-National Corporations.

CO5: Explain recent Government policies on Environment management.

CORPORATE GOVERNANCE AND BUSINESS ETHICS

CO1: Understand Corporate Governance concepts and mechanisms.

CO2: Apply Theories and Models of Corporate Governance.

CO3: Understand committees on Corporate Governance and Legal framework.

CO4: Evaluate stakeholders' roles, whistle blowing, and recent developments.

CO5: Discuss ethical principles in Business within cultural diversity.

QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

CO1: Understand properties of probability distribution.

CO2: Apply hypothesis testing for validation and interpretation.

CO3: Evaluate application of non-parametric tests.

CO4: Understand tools for finding relationships between variables.

CO5: Apply technology for data analysis in soft skills.

MANAGEMENT THEORY AND ORGANIZATIONAL BEHAVIOUR

CO1: Understand concepts and theories in management and organizational behaviour.

CO2: Understand psychological processes and motivation theories.

CO3: Evaluate personality traits and ethical issues in Organizational Behaviour.

CO4: Understand group dynamics, work-life balance, and managing change.

CO5: Apply terms related to organizational culture and management techniques.

ADVANCED MANAGEMENT ACCOUNTING

CO1: Understand methods for measuring financial and non-financial performance.

CO2: Apply methods to solve performance-based business problems.

CO3: Apply comprehensive performance management initiatives.

CO4: Understand the significance of risk and uncertainty in decision making.

CO5: Apply techniques for interpreting variances.

Semester 02

ADVANCED CORPORATE ACCOUNTING

CO1: Understand the theory and practice of Corporate Financial Accounting.

CO2: Develop problem-solving skills in corporate restructuring and liquidation.

CO3: Apply skills in recognizing, measuring, and presenting deferred tax.

CO4: Gain insights into accounting standards such as IFRS, Ind AS, and Lease accounting.

CO5: Evaluate various types of accounting methods.

ADVANCED STRATEGIC MANAGEMENT

CO1: Understand the Strategic Management Process and its ethical implications.

CO2: Analyse the Environment through SWOC analysis.

CO3: Evaluate strategic options at the corporate level and different growth strategies.

CO4: Understand Strategy implementation and resource allocation approaches.

CO5: Apply and assess Strategy evaluation tools and techniques through case studies.

MANAGEMENT SCIENCE

CO1: Explain management science concepts and techniques to students.

CO2: Assess the use of decision-making support tools.

CO3: Apply inventory management and queue management in service sectors.

CO4: Evaluate and develop techniques for project planning, scheduling, and controlling.

CO5: Implement game theory strategies effectively.

STRATEGIC COST ACCOUNTING

CO1: Understand the conceptual framework of Cost Accounting and its distinctions from other branches.

CO2: Introduce the terminology and types of costs in Cost Accounting.

CO3: Apply process costing and handle Joint products and By-products.

CO4: Evaluate practical applications of Absorption Costing, Throughput Accounting, ABC Analysis, and Transfer Pricing.

CO5: Assess the application of Productivity Management techniques.

INTERNATIONAL BUSINESS

CO1: Study Theories of International Trade and motives for internationalization.

CO2. Evaluate opportunities and threats in the International Business Environment for Indian Companies.

CO3. Understand Strategy development in International Business and various entry strategies.

CO4: Analyse the impact of International economic situations on business development.

CO5: Examine internationalization strategies and their contributions to the Indian economy.

Semester 03

FINANCIAL MANAGEMENT

CO1: Comprehend the role of finance and finance managers within organizational contexts.

CO2: Evaluate and apply various funding sources and their associated costs of capital.

CO3: Analyse and make decisions concerning working capital management.

CO4: Grasp and apply principles of Capital structure and conduct leverage analysis.

CO5: Understand dividend theories and make informed decisions regarding dividends.

INCOME TAX: LAW, PRACTICE AND TAX PLANNING I

CO1: Comprehend tax planning strategies tailored to individuals based on their residential status.

CO2: Analyse and apply tax calculation methods across five income categories, integrating tax planning strategies for each.

CO3: Implement tax planning techniques for Hindu Undivided Families (HUFs), grasp provisions for set-off and carry-forward, and apply tax strategies for individual taxpayers.

CO4: Recall and interpret the authorities' powers in income tax matters, compute advanced tax liabilities, and determine individual Tax Deducted at Source (TDS) obligations.

CO5: Demonstrate proficiency in preparing and filing individuals' income tax returns, and demonstrate understanding of various assessment procedures

RESEARCH METHODOLOGY

CO1: Grasp and utilize diverse research approaches and methodologies.

CO2: Evaluate and apply theories and techniques of Population and Sample surveys.

CO3: Utilize methods for comprehensive data collection in research settings.

CO4: Assess Measurement and scaling techniques, and verify data reliability and validity.

CO5: Understand and evaluate Data processing, analysis, interpretation, and report writing while adhering to ethical guidelines.

INVESTMENT MANAGEMENT

CO1: Understand concepts of risk, return, diversification, and risk mitigation.

CO2: Comprehend and apply various bond types and methods for bond valuation.

CO3: Gain a thorough understanding and evaluate fundamental analysis and technical analysis.

CO4: Evaluate portfolio risk measurement, optimal portfolio construction, and portfolio selection models.

CO5: Develop strategies for portfolio management, evaluation, and adjustment.

FINANCIAL MARKETS AND INSTITUTIONS

CO1: Provide comprehensive knowledge of financial markets and institutional frameworks.

CO2: Acquire knowledge of domestic and global commodity markets.

CO3: Understand various financial instruments and their trading mechanisms.

CO4: Gain insight into the operations and functions of major financial institutions.

CO5: Understand the various types of foreign capital inflows and their impact on the Indian financial system

Semester 04

FINANCIAL DERIVATIVES AND RISK MANAGEMENT

CO1: Comprehend and apply fundamental terms and concepts in underlying risk management.

CO2: Analyse the historical growth and development of futures markets.

CO3: Apply understanding of option trading and employ various associated strategies.

CO4: Examine the principles governing the pricing of options, including call and put options.

CO5: Evaluate and apply SWAP contracts, along with pricing various instruments involved in SWAP transactions.

INCOME TAX: LAW, PRACTICE AND TAX PLANNING II

CO1: Apply tax planning strategies tailored for partnership firms, AOPs, and BOIs in India.

CO2: Evaluate tax liabilities applicable to cooperative societies and trusts, and provide strategic tax planning advice.

CO3: Analyse and assess tax liabilities for Companies, including specialized entities like shipping companies.

CO4: Evaluate the impact of tax implications on managerial decision-making processes.

CO5: Assess tax liabilities associated with business units and recommend strategies for optimization.

INTERNATIONAL FINANCE

CO1: Understand the concept and significance of international finance.

CO2: Explain international financial markets and exchange theories.

CO3: Identify foreign exchange exposure and methods for risk management.

CO4: Apply knowledge of international capital budgeting, asset liability management, and foreign portfolio management.

CO5: Analyse working capital management, international cash and inventory management, and international monetary investment.

ADVANCED STRATEGIC FINANCIAL MANAGEMENT

CO1: Develop a comprehensive understanding of concepts, essential tools, and techniques essential for making strategic financial decisions.

CO2: Analyse capital structure planning, policies, and determine firm valuation methodologies.

CO3: Familiarize with lease financing concepts and various methods utilized in lease financing arrangements.

CO4: Evaluate merger theories, different merger types, and the financial implications of mergers.

CO5: Understand takeover strategies, procedural aspects, and regulatory considerations in corporate takeovers.