



DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous)

College with Potential for Excellence, Linguistic Minority Institution

Affiliated to University to Madras

Arumbakkam, Chennai-106

UNDERGRADUATE SYLLABUS

PROGRAMME OUTCOME FOR THE UNDERGRADUATE PROGRAM (POs)

At the end of the program student will be able to:-

- PO1 To participate in various types of employment, development activities and public discourses particularly in response to the needs of the community one serves
- PO2 To understand the need and have the competencies to support local, regional and national development
- PO3 To develop critical and analytical thinking
- PO4 To develop conceptual understanding , problem solving and application of skills
- PO5 To provoke entrepreneurship among the students along with strong ethics and communication skills
- PO6 To develop a questioning mind in diverse environments for better outcomes
- PO7 To engage in lifelong learning and enduring proficient progress

PRINCIPAL

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Arumbakkam, Chennai - 600106.**

DEPARTMENT OF ECONOMICS shift I

Programme Specific Outcomes for the Under Graduate Programme in Economics(PSOs)

On successful completion of the programme the students will be able

PSO1 - To identify, understand and describe the various economic issues internally and internationally.

PSO2 - To explain and apply the underlying principles for economic decisions and policies at the micro and macro level.

PSO3 - To synthesize the functioning of the economic ecosystem.

PSO4 - To compare theories of various economic schools of thought and apprise their application to real world phenomenon.

PSO5 - To understand and analyze the potential and limits of various economic policies.

PSO6- To pursue a master's programme in Economics or a master's in an interdisciplinary subject like management or a professional programme like CA,ACS.


PSO7- To obtain employment in the banking,financial services,insurance and HRM sectors.

MICRO ECONOMICS – I **Course Outcomes**

CO1	To describe the various ideas on Economic and its related concept
CO2	To evaluate and discuss the law of demand and supply
CO3	To understand and analyse the consumer behaviour pattern
CO4	To impart Knowledge on production function
CO5	To identify the various concepts of cost and revenue

STATISTICS – 1 **Course Outcomes**

CO1	To understand the nature, importance and limitations of statistics.
CO2	To distinguish between the various methods of collection and representation of data.
CO3	To explain the meaning of a measure of central tendency, recall formulae ,solve problems on measures of central tendency and estimate the merits and demerits of the various measures.
CO4	To illustrate the need for a measure of dispersion, recall formulae, solve problems on measures of dispersion and estimate the merits and demerits of the various measures.
CO5	To classify the various forms of skewness recall formulae, solve problems on measures of skewness and estimate the merits and demerits of the various measures.,


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ENTREPRENEURIAL DEVELOPMENT

Course Outcomes

CO1	To explain the meaning, functions of entrepreneurs and classify their types..
CO2	To demonstrate the evolution of entrepreneurs and explain their role in economic development..
CO3	To evaluate the policies and programmes of government and non-government organizations in entrepreneurial development.
CO4	To examine the role of small scale enterprises in economic development in the light of incentives given by the government.
CO5	To be able to conceive a business idea and prepare a project report.

PRINCIPLES OF MANAGEMENT

Course Outcomes

CO1	Discusses the role, functions, levels and evolution of management.
CO2	Explains the importance, features and process of planning & decision making.
CO3	Helps to identify the nature, importance & types of organisation.
CO4	Differentiates between authority & power. Explains the process of recruitment, selection & training.
CO5	To understand the nature, importance & determinants of coordination.

MICRO ECONOMICS – II

Course Outcomes

CO1	To understand short run and long run production function, law returns and returns to scale.
CO2	Familiar about cost function, revenue function, time element and market equilibrium.
CO3	To enable the student to understand difference between perfect competition of monopoly market.
CO4	To gain knowledge on monopolistic and oligopoly market
CO5	To Comprehend factor pricing, theories of rent, interest theories and profit theories

STATISTICS -II

Course Outcomes

CO1	To distinguish between the census and different methods of sampling and its application and merits.
CO2	To understand, recall formulae and solve problems on estimating correlation through different methods.
CO3	To demonstrate the need for regression analysis, recall formulae and solve problems on regression through different methods..
CO4	To distinguish between the various components of time series and solve problems on measurement of secular trend through different methods.
CO5	To outline the uses of index numbers recall formulae and solve problems on determining index numbers through different methods.

MARKETING

Course Outcomes

CO1	To explain the marketing concepts
CO2	To outline the stages involved in a product life cycle.
CO3	To illustrate the objectives of pricing, classify and analyse the pricing strategies.
CO4	To summarise the marketing structure and its functions
CO5	To explain the promotional programmes and examine its effects.

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BASICS OF CAPITAL MARKET

Course Outcomes

CO1	Understand the functions, features, structure of money market & capital market.
CO2	Identify the sources of long term finance.
CO3	Explain the defects and suggestions for improvement of Indian capital market.
CO4	Understand the functions and role of SEBI.
CO5	Analyse the role and functions of Financial Intermediaries.

INDIAN ECONOMIC DEVELOPMENT AND POLICY – I

Course Outcomes

CO1	Understand the basics of economic growth and development
CO2	Evaluate the importance of Capital Formation and Human Resource development
CO3	Analyse the population growth and employability status in India
CO4	Understand the relevance of agricultural Research and development in India

MONETARY ECONOMICS – I

Course Outcomes

CO1	To define money and understand its classifications, functions and role.
CO2	To compare and contrast the determination of the value of money under different schools of thought.
CO3	To identify and evaluate the various monetary standards and systems of note issue prevalent.
CO4	To assess the role of money supply in the economy.
CO5	To understand the concepts of inflation, identify its causes, evaluate its effects and suggest solutions.

WOMEN AND ECONOMIC DEVELOPMENT

TOURISM AND ECONOMIC DEVELOPMENT (2018 Batch onwards)

Course Outcomes

CO1	Paraphrase concepts related to tourism in general
CO2	Enumerate various types of tourism with special reference to medical tourism
CO3	To appraise the various policies and principles adopted with respect to tourism
CO4	Analyze the role of tourism with respect to economic growth and development of our country
CO5	Elaborate the importance and significance of various tourists spots in Tamil Nadu

INDIAN ECONOMIC DEVELOPMENT AND POLICY – II

Course Outcomes

CO1	Understand Industrial development and the working of large scale, small scale and cottage industries.
CO2	Analyse various aspects of privatization and Industrial policy resolution
CO3	Understand the working of various five-year plans and transformation to NITI Aayog
CO4	Analyse patterns of foreign trade of India with the global economy.
CO5	Analyse the working of the Tamil Nadu Government w.r.t India

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MONETARY ECONOMICS – II

Course Outcomes

CO1	To explain the functions and role of commercial banks and central banks.
CO2	To evaluate the progress made by commercial banks in India since nationalization.
CO3	To compare the functioning of money markets and capital markets.
CO4	To apprise the role of international financial institutions in the Indian context.
CO5	To explain the functioning of monetary policy and evaluate its potential and burden.

ELEMENTS OF INSURANCE

Course Outcomes

CO1	Demonstrate comprehensive knowledge and understanding of Basic elements of Types, Principles in Insurance.
CO2	Analyze, interpret and evaluate Administration and salient features of IRDA and its regulatory functions.
CO3	To critically evaluate and analyse Life Insurance and its various Products, Term, Whole life, Endowment. And understand its long term benefits to individuals in the economy.
CO4	To understand the benefits, and impact of General Insurance, Fire, Marine, and Motor insurance, on reducing risk and providing cover.
CO5	To evaluate government insurance companies, LIC, and Private Players, in Insurance industry.

MACRO ECONOMICS – I


Course Outcomes

CO1	To explain the concepts relating to macro economics
CO2	To define the concepts relating to National Income, compare the methods involved in the measurement of National Income and evaluate the difficulties.
CO3	To classify and analyse the macro economic theories of the various schools of economic thought.
CO4	To identify the factors influencing consumption and compare the theories of consumption function.
CO5	To categorize the determinants of investment and evaluate the Keynesian model of income and employment determination..

FISCAL ECONOMICS – I

Course Outcomes

CO1	Understand and analyse the concept of public finance
CO2	Understand the concept of public expenditure
CO3	Evaluate public revenue and taxation
CO4	Understand the theories of taxation
CO5	Analyse the concept of taxable capacity and its applicability


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INTERNATIONAL ECONOMICS - I

Course Outcomes

CO1	To understand the need for international trade through different theories.
CO2	To explain the different concepts of terms of trade
CO3	To explain the different concepts of gains from trade.
CO4	To understand the meaning, types and effects of tariffs and quotas.
CO5	To understand the concept, meaning, structure and equilibrium in the Balance of payments.

HISTORY OF ECONOMIC THOUGHT

Course Outcomes

CO1	Create an understanding of development of Economic Theory of Mercantilism, physiocracy, Adam Smith, T.R. Malthus and David Richardo
CO2	Students will be able to understand the ideas of Alfred Marshall and J.A. Schumpeter
CO3	To examine about the ideas of Karl Marx and Veblen
CO4	To understand the contribution of Nobel laureates
CO5	To give knowledge on the perception of Indian economic Thought

MANAGERIAL ECONOMICS

Course Outcomes

CO1	Demonstrate comprehensive knowledge and understanding of managerial economics.
CO2	Analyze, interpret and evaluate cost and output and production functions of business firms in short run and long run
CO3	Apply market structures in real life, under perfect and imperfect market conditions
CO4	Process knowledge on pricing methods, and profit management
CO5	Understand capital budgeting and evaluate its impact in capital structuring, investment decisions, and project profitability

MACRO ECONOMICS - II


Course Outcomes

CO1	To explain the concepts of multiplier, accelerator, classify its types and evaluate them.
CO2	To outline the demand for money in the Keynesian model and demonstrate its application to less developed countries..
CO3	To examine the role of money under conditions of underemployment and full employment and show its integration.
CO4	To illustrate the contributions of Hicks & Hansen to macro economics.
CO5	To explain the objectives and importance of macro economic policy and evaluate it.

FISCAL ECONOMICS - II

Course Outcomes

CO1	Summarize the various aspects of public debt
CO2	Understand the meaning and objectives of deficit financing
CO3	Evaluate the imbalances in the financial resources
CO4	Analyse the role of fiscal policy in a developed economy
CO5	Evaluate the role of local bodies with respect to India


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INTERNATIONAL ECONOMICS – II

Course Outcomes

CO1	To explain the determination of exchange rate..
CO2	To explain the theories showing how exchange rate is determined.
CO3	To outline the role of foreign capital in economic development.
CO4	To analyze the present international monetary system.
CO5	To outline the meaning and types of economic integration.

HUMAN RESOURCE MANAGEMENT

Course Outcomes

CO1	To understand evaluation & function of human resource management
CO2	They can aware about job analysis , job description, job design, job speciation & job evaluation
CO3	They can have clear idea about recruitment, selection, training & development process
CO4	They can able to gain ample of skills such has career planning & criteria of promotion
CO5	They can equip them self through motivation

ENVIRONMENTAL ECONOMICS

Course Outcomes

CO1	Demonstrate comprehensive knowledge and understanding of environmental economics
CO2	Apply the principles, and identify environmental resources that are vital for economic development.
CO3	Ability to Analyze, interpret, and draw conclusions of environmental policy in India.
CO4	Capability to set up vision and mapping of tasks for pollution control, to prevent environmental degradation.
CO5	To understand the impact of economic policies in society and international environment in context to sustainable development,

HOME ECONOMICS

Course Outcomes

CO1	To understand the basic concept of Home Economics
CO2	To assess the role of home and family in national development
CO3	To outline the role of parents and assert the role of immunization
CO4	To emphasize the need for joint family system
CO5	To understand and appreciate various human values and family systems

INDIAN ECONOMIC DEVELOPMENT AND POLICY

Course Outcomes

CO1	To understand the various theories related to demography
CO2	To assess the role of agriculture and irrigation in Indian economy
CO3	To outline the role of industrial sector and assess its performance
CO4	To analyze the role and effectiveness of infrastructure with special reference to transport and health
CO5	To understand the various concepts related to Economic planning with special reference to NITI Ayog



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SHIFT I/II

1.DEPARTMENT OF COMMERCE

PROGRAM SPECIFIC OUTCOMES

PSO-1	Equip the Graduates to meet the industry expectations in the field of Accounting, Auditing, Legal Compliance, Marketing, Taxation, Banking and Financial Services
PSO-2	Students are being trained to adapt to Entrepreneurship and Engage in Entrepreneurial Ventures.
PSO-3	Graduates are skillfully trained in association with professional training institutions.
PSO-4	Students are inspired to pursue professional courses- CA, CMA, ACS, Law and Management Courses.

CORE-I FINANCIAL ACCOUNTING-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Explain basic accounting concepts and conventions• Prepare final accounts of Trading & Non- Trading Organizations	K1&K2
CO2	<ul style="list-style-type: none">• Identify, classify and rectify errors in the process of recording transactions and to prepare Suspense accounts• Analyze bank book (Cash Book) and pass book and prepare bank reconciliation statement	K4&K5
CO3	<ul style="list-style-type: none">• Discuss the Need, Importance and Causes of Depreciation• Prepare Asset Accounts by applying various methods of Depreciation.	K2
CO4	<ul style="list-style-type: none">• Compute the insurance claims for Loss of Stock & Consequential Loss• Apply Average Clause to compute the Amount of Claim	K3
CO5	<ul style="list-style-type: none">• Identify and apply single entry and double entry system of accounting according to the nature of business.	K5
CO6	<ul style="list-style-type: none">• Compute Average Due date and prepare account current for account settlement	K3&K4


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CORE-II**Course Title: BUSINESS ECONOMICS**

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Develop an understanding on the nature of economics, and explain the wealth, welfare and scarcity definition of economics.	K2&K4
CO2	<ul style="list-style-type: none">Categorize and explain various types of cost and different principles in economics.	K2
CO3	<ul style="list-style-type: none">Get a good insight into law of demand, determinants of demand and various methods in forecasting the demand.	K3&K4
CO4	<ul style="list-style-type: none">Learn the fundamentals of law of supply and the behavior of consumers through various theories like Law of diminishing marginal utility, Law of Equi-marginal utility.	K1&K2
CO5	<ul style="list-style-type: none">Develop an understanding about the production function through the law of variable proportion and law of returns to scale and explain the economies and diseconomies of scale	K5&K2
CO6	<ul style="list-style-type: none">Analyze the performance of firms under different market conditions like perfect competition, monopoly, monopolistic competition and oligopoly.	K4

CORE - III FINANCIAL ACCOUNTING - II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Prepare branch trading and P/L account for independent and wholesale branch	K1& K2
CO2	<ul style="list-style-type: none">List out the basis of Allocation of Departmental Expenses.Equip the students to prepare Department Account with Transfers at Cost Price and Invoice Price	K2
CO3	<ul style="list-style-type: none">Differentiate Hire Purchase from InstallmentRecord Hire Purchase Agreement & Calculate Interest & Prepare Hire Purchase Trading a/c , Stock and Debtors System	K1& K3
CO4	<ul style="list-style-type: none">Understand the importance of Investments and prepare Investment Accounts from an Organisation.	K2
CO5	<ul style="list-style-type: none">Record Journal Entries in the Books of the Consignor & Consignee & Prepare relevant Ledger Accounts to record transactions relating to consignmentPrepare Journal Entries for Joint Ventures & Ascertain Profit or Loss from the transaction	K5
CO6	<ul style="list-style-type: none">Prepare accounting treatment relating to Admission, Dissolution and Insolvency of partnership.	K2& K4



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CORE- IV BUSINESSLAWS**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none"> Enumerate the essential elements of a valid contract Classify contracts Discuss the Rules relating to Offer, Acceptance & Consideration in contract 	K2, K3, K4
CO2	<ul style="list-style-type: none"> Analyze the capacity of a person to into a valid contract Differentiate Misrepresentation from Undue Influence, Fraud & Coercion 	K3
CO3	<ul style="list-style-type: none"> Describe the Importance of Legality of object in a contract List out the business purposes that are opposed to public policy 	K3, K5
CO4	<ul style="list-style-type: none"> Define Quasi Contract & Contingent Agreements Analyze the remedies for breach of contract and termination of agency List the rights and duties of a bailor&Pawnor 	K2, K4
CO5	<ul style="list-style-type: none"> Demonstrate the rules for performance of a contract & reciprocal promises 	K2, K5
CO6	<ul style="list-style-type: none"> State the provisions relating to Sale of Goods Differentiate sale from agreement to sell Discuss the conditions & Warranties Discuss the Doctrine of caveat emptor & Rights of an unpaid seller 	K1, K4, K5

Non Major Elective – I (For Non Commerce Students)**FUNDAMENTALS OF BANKING LAW AND PRACTICE****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none"> Develop an understanding on the Structure of Indian Banking and Financial System Identify the Role & Functions of Central bank and Commercial banks in Economic Development 	K1
CO2	<ul style="list-style-type: none"> Discuss the procedure for opening a bank account and the KYC Norms Describe Negotiable Instruments & the procedure relating to Crossing & Dishonour of Negotiable Instruments 	K2
CO3	<ul style="list-style-type: none"> Classify the Banks based on the nature of services Illustrate the services offered by various banks 	K3
CO4	<ul style="list-style-type: none"> List the Factors determining credit score of individuals and the Procedure for applying Loans in commercial banks. Recall the RBI guidelines for disclosure of credit score 	K3
CO5	<ul style="list-style-type: none"> Use electronic banking services effectively Discuss the impact of Demonetization on Digital Payment Methods 	K3
CO6	<ul style="list-style-type: none"> Analyze the grievances and rights of the customers Describe the role of banking ombudsman in the grievance redressal mechanism 	K2


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Non Major Elective –II (For Non Commerce Students)

PERSONAL INVESTMENT PLANNING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the terminologies in Savings and Investment Options for Individual Investors	K1
CO2	<ul style="list-style-type: none">Classify the Long Term and Short Term Financial GoalsPrepare Cash Budgets to plan for Short term and Long Term Cash requirements	K2
CO3	<ul style="list-style-type: none">Enumerate the Importance of Risk Coverage & Sketch Insurance plans (both Life and General)Describe Social Security measures available for Individuals based on their social class	K3
CO4	<ul style="list-style-type: none">Plan for Retirement and old age needs and healthcare insurance	K2& K3
CO5	<ul style="list-style-type: none">List out various sources of generating Income	K1 & K2
CO6	<ul style="list-style-type: none">Prepare Form16 and File Returns of Individuals	K3

CORE - V CORPORATE ACCOUNTING - I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define a company and State the various types of shares and debentures. Identify the role of underwriters. List out the types of underwriting.	K-1
CO2	<ul style="list-style-type: none">Discuss the provisions of redemption of preference shares and redemption of debentures. Explain the different types of redemption of preference shares.Give examples of ex-interest and cum-interest quotationsDescribe the significance of profits prior to incorporation.	K-2
CO3	<ul style="list-style-type: none">Preparation of company final accounts.Demonstrate the role of managers and prepare the computation of managerial remuneration.	K-3
CO4	<ul style="list-style-type: none">Construct the revised balance sheets after alteration of share capital and internal reconstruction.Analyze the factors affecting goodwill.Categorize the various methods of valuation of shares and valuation of goodwill.	K-4
CO5	<ul style="list-style-type: none">Differentiate amalgamation, absorption and external reconstruction.Outline the various methods of purchase consideration calculation.Compare the types of amalgamation.	K-4 &K5
CO6	<ul style="list-style-type: none">Discuss the provisions of the Certificate of Incorporation & minimum subscription.Develop the ability to prepare Consolidated Accounts for a Corporate Group	K-2



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CORE - VI
BANKING & FINANCIAL SERVICES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Classify various kinds of banks with their functions and identify the services provided by them Explain the Role of Central Bank in Administering, Controlling and Directing the Monetary Activities Apply the traditional services provided by banks in real life by visiting the banks 	K1
CO2	<ul style="list-style-type: none"> Discuss the Features of Various Negotiable Instruments Explain the need for Endorsement and various types of Endorsement 	K4
CO3	<ul style="list-style-type: none"> Describe the basic concepts of financial system and its role in economic environment Apply E-banking, internet banking and mobile banking for fund transfer 	K3
CO4	<ul style="list-style-type: none"> Identify various financial services that can be used as an alternative measure for short term and long term financial needs 	K1
CO5	<ul style="list-style-type: none"> Explain and Relate the importance of financial services like Factoring and Leasing 	K4,K1
CO6	<ul style="list-style-type: none"> Evaluate various types of Mutual Funds and the working mechanism 	K-6

CORE - VII PRINCIPLES OF MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the basic concepts of Management and Identify various contributions made towards Management Thought.	K2,K1
CO2	Propose, Design all the procedures involved in planning and Construct good decisions in business Scenario.	K6
CO3	Categorize various types of Organisation and Demonstrate allocation of employee's workload.	K4,K5
CO4	Apply different leadership styles and provide Solutions for the obstacles faced in delegating the authority in the business.	K3,K6
CO5	Explain and Relate the techniques of Control and importance of Co-ordination in strengthening human efforts.	K2,K3
CO6	Develop overall managerial skills & leadership skills among students	K6



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CORE - VIII BUSINESS COMMUNICATION


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Demonstrate the principles of effective communication.	K3
CO2	<ul style="list-style-type: none">Identify the barriers involved in Business communication and the way to resolve the same.	K1,k3
CO3	<ul style="list-style-type: none">Assess the structural and contextual difference among different kinds of business letters.	K4,k3
CO4	<ul style="list-style-type: none">Compare and contrast the forms of communication involving traditional and modern methods of communication.	K4
CO5	<ul style="list-style-type: none">Demonstrate the ability to generate different kinds of report based on the requirement.	K2
CO6	<ul style="list-style-type: none">To develop overall communication skill & ability of the students.To stimulate their critical thinking by designing and developing clean & lucid writing skills.	K-6

CORE - IX CORPORATE ACCOUNTING II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the mandatory accounting standards issued by the ICAI and other financial reporting statements related to Corporate Accounting. Explain Inflation Accounting.	K1,k2
CO2	<ul style="list-style-type: none">Know the preparation of consolidated balance sheet of Holding subsidiary companies, profit calculation and treatment of dividend.	K3
CO3	<ul style="list-style-type: none">Analyze the final statements of banking companies (New Provisions) and by visiting into banks to know how they prepared their books of accounts in real life.	K4
CO4	<ul style="list-style-type: none">Classify the accounts of Insurance companies and to know their final statements as per IRDA regulation 2002.	K4
CO5	<ul style="list-style-type: none">Classify and compare the various modes of winding up and analyze the role of liquidator while distribution money as per the law.	K4
CO6	<ul style="list-style-type: none">Preparation of Accounting price level changes/ Inflation AccountingDevelop the ability to analyse complex issues.Formulate well reasoned arguments & to reach well considered conclusions	K3


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CORE - X COMPANY LAW

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Define the important concepts in Company's Act, 2013• Discuss on the various provisions related to the incorporation and filing of documents of Companies through electronic mode.	K1,K2
CO2	<ul style="list-style-type: none">• Identify the different kinds of Company's and analyse on the benefits of DEMAT account.	K1,K4
CO3	<ul style="list-style-type: none">• Explain the contents of Memorandum of Association, Articles of Association and Prospectus• Apply the provisions of the Company's Act 2013 for its relevant alterations.	K3
CO4	<ul style="list-style-type: none">• Apply the provisions of the Company's Act for conducting various statutory meetings• Discuss on various types of company Resolutions.	K2,K3
CO5	<ul style="list-style-type: none">• Identify different types of Winding up of Company• Discuss on the Resolutions and Prevention of Oppression	K1,K2
CO6	<ul style="list-style-type: none">• Develop an awareness of the sociological and economic dimensions of modern company law• Evaluate corporate problems, identifying appropriate legal obligations, duties, rights and remedies	K-6

CORE XI PRINCIPLES OF MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Define marketing and Explain evolution of marketing orientation.• Develop an idea about Marketing and its functions• Explain the innovations in Modern Marketing.	K1& K6
CO2	<ul style="list-style-type: none">• Enhance the knowledge of the student on marketing segmentation.• Demonstrate the consumer behavior. Illustrate various theories on Motivation.	K3
CO3	<ul style="list-style-type: none">• Make student understand about various product and pricing decision• Explain Product life cycle and sales forecasting.	K2
CO4	<ul style="list-style-type: none">• To equip the student to take effective distribution decision.• To analyse various promotion mix strategies for products and services	K4
CO5	<ul style="list-style-type: none">• Demonstrate awareness about current trends in marketing environment to enable them to take practical measures.• Explain about social responsibility and marketing ethics.• Summarize market research and MIS	K3,K2
CO6	<ul style="list-style-type: none">• Develop a market research plan and conduct basic research using primary and secondary sources	K-6


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CORE - XII PRACTICAL AUDITING

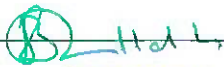
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the terminologies related to auditing to equip the students to identify the basic concepts of auditing.	K1
CO2	Identify, Classify and vouching documents related to financial transactions	K2
CO3	Analyze the Impact of ERP in auditing environment	K3
CO4	Apply the provisions of companies act in relation to appointment of company auditor	K3
CO5	Apply the standards related to auditing in real auditing scenario	K3
CO6	Develop students cognitive skills	K4

CORE XIII COST ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the meaning of Cost Accounting, Financial Accounting and Management AccountingList the objectives of cost accounting, Uniform costing and Inter-firm comparisonList out the requirements of installing a costing system and the stages in installationIdentify the significance of reconciliation of statementsDefine material control by different methods of price computationState the meaning of Inventory turnover and Economic ordering QuantityIdentify the methods of calculating stock levels	K1 & K2
CO2	<ul style="list-style-type: none">Describe the methods of calculating Labour turnover and also reducing itExplain the different types of bonus Plans with examples	K2
CO3	<ul style="list-style-type: none">Demonstrate the importance of Overhead costs and their classificationPrepare apportion Overheads and re-distribute it to various departmentsPrepare statement showing Machine Hour Rate	K3
CO4	<ul style="list-style-type: none">Analyze the meaning and features of process costing with its advantages and disadvantagesCategorize the various types of process lossesDifferentiate process accounts into those with process losses and scrap value and those with abnormal loss and gainOutline the procedure involved in computing inter-process profits	K3
CO5	<ul style="list-style-type: none">Construct the format of a Contract accountDevelop the different stages of contract costing based on different phases of completionInterpreting the computation of Notional profit and settlement of Contract agreement with Escalation clause	K4
CO6	<ul style="list-style-type: none">Analysing the techniques of cost control & discussing the steps to overcome the difficulties.	K4


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CORE - XIV
PRINCIPLES OF FINANCIAL MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate understanding of capital structure, its source and leverage concepts.	K1,K2
CO2	Solve the given problems on capital budgeting and investment decision.	K1,K2,K3
CO3	Compute cost of individual source of capital and also their overall averages based on specific information.	K1,K2,K3, K4
CO4	Explain the concept of dividend policy, its relevance and various models associated with dividend policy.	K1,K2
CO5	Determine factors affecting working capital and calculation of working capital based on given information.	K1,K2,K3, K4
CO6	Enable students to strengthen their knowledge on the important concepts of financial management.	K4

CORE - XV ENTREPRENEURIAL DEVELOPMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Define entrepreneur, understand the several theories of entrepreneurship and recognize the entrepreneurial development in India. 	K1,K2
CO2	<ul style="list-style-type: none"> Conceive new business ideas and identify project opportunities together with problems to be faced. 	K6,K2,K1
CO3	<ul style="list-style-type: none"> Analyze and select the types of organization and interpret about the growth, expansion, diversification and strategies. 	K4,K2
CO4	<ul style="list-style-type: none"> Find the sources of finance and integrate the knowledge about government incentives, subsidies policies, tax concession to SSI units. 	K1,K3
CO5	<ul style="list-style-type: none"> Acquire the awareness about the role and scope of women entrepreneur, rural entrepreneur and NGO's. 	K2
CO6	<ul style="list-style-type: none"> Develop entrepreneurship skills. 	K6



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CORE XVI
INCOME TAX LAW AND PRACTICE –I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the term Income, Person, Assessment Year, Previous Year, Assessee. Describe the provisions connected with Residential status of Individual, Firm & Company.	K1,K2
CO2	Explain the meaning of Salaries under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO3	Discuss House Property income under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO4	Describe the meaning of Capital Gains under Income Tax Act 1961 and apply the provisions to solve problems	K1,K2,K3
CO5	Analyse the role of Income Tax Authorities.	K4
CO6	Enable students to fill FORM 16 & to file the returns.	K5

ELECTIVE-I

Open Elective Paper I – Economic & Corporate Laws (Course offered to other Department Students Shift I & Shift II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Describe the Foreign Exchange Management Act, 1999 contraventions and penalties.	K1
CO2	• Discuss the role of financial intermediaries in Prevention of Money Laundering, Penalties and the adjudication procedure	K2
CO3	• Explain the meaning and importance of Prohibition of Benami transactions & re-transfer of property by benamidar and Penalties & Prosecution	K3
CO4	• Discuss the provisions relating to the Competition Act 2002 in correspondence with the duties, powers and functions of the competition commission.	K3
CO5	• Understand Environment Protection Act and its role in managing and controlling environment concerns and issues.	K3
CO6	• Describe Constitutional Obligation & Fundamental Right to live in Healthy Environment	K2

Open Elective Paper I – Office Management
(Course offered to other Department Students Shift I & Shift II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Analyse and Describe the importance of Front Office Management	K1
CO2	• Apply proper Record Keeping Principles and Office Accommodation & Landscaping	K2
CO3	• Use the Right Charts and prepare Manuals for reporting formal reporting	K3
CO4	• Discuss the Functions of Personnel Management From Hiring to Firing	K3
CO5	• Explain the effective use of office Automation and Labour Saving Gadgets at work	K3
CO6	• Use appropriate techniques to maintain Proper Liasoning and Public Relations	K4


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Open Elective Paper I – E-Commerce (Course offered to other Department Students Shift II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Explain the Role of Internet and Web in E-Commerce	K1
CO2	• Discuss the E-commerce business models & Ecommerce Infrastructure	K2
CO3	• Elaborate Building an ecommerce web site, Security and payment	K3
CO4	• Analyse marketing concepts Online retailing and services	K3
CO5	• Explain Social networks, auctions & Implementation of E-commerce	K3
CO6	• Evaluate the Efficiency of E-Commerce portals and the relative merits & limitations	K2

**Open Elective Paper I –
Marketing of Services (Course
offered to other Department
Students Shift II)**

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Define and Discuss the Components of Service Marketing Mix	K1
CO2	• Explain the Factors influencing Consumer Behaviour for various services & Discuss the Service Quality dimensions	K2
CO3	• Describe the Service Delivery Process and Illustrate the Customer Retention Strategies & its Benefits	K3
CO4	• Discuss the Strategic Issues in Services Marketing & importance of Segmentation, Targeting and Positioning	K3
CO5	• Identify the Challenges of Services Marketing	K3
CO6	• Apply the Concept of Services Marketing at Industry Level	K5

CORE - XVII MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the meaning of management accounting and will analyse and interpret the financial statements	K1
CO2	Interpret the financial position of a company by preparing Find Flow Statement and Cash Flow Statement.	K2,K3
CO3	Understand the significance of budget preparation and also will prepare budgets.	K2
CO4	Understand the concept of marginal costing and also will apply the concept in decision making.	K3
CO5	Understand the various concepts of standard costing and will also analyse the variances.	K3
CO6	Ensure students to acquire and strengthen their fundamental knowledge in management accounting concept.	K4



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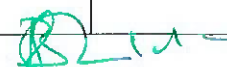
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CORE - XVIII INDUSTRIAL LAW**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none">Define Factory as per Factories Act, 1948Deliberate the details of various welfare, Safety and Health measures available to workers in a factoryWorking hours of Adults, Holiday rates, Employment of young persons, employment of women.	K2 & K3
CO2	<ul style="list-style-type: none">Discuss procedure for Registration of Trade UnionsUnderstand the need for raising General FundsImmunity from civil and criminal liability and penalties and procedures.	K3
CO3	<ul style="list-style-type: none">Deliberate the Importance of Minimum Wages Act, 1948.Explain the components of Minimum wages &, Fixation and revision of wages.	K3
CO4	<ul style="list-style-type: none">Discuss the reasons for Industrial DisputesElaborate the objectives of 'The Industrial Disputes Act, 1947'Distinguish strikes, Lockouts, Layoff and Retrenchment	K3
CO5	<ul style="list-style-type: none">Deliberate the Nature and scope, definitions, rules of 'The workmen's compensation Act 1923Differentiate Permanent, partial and temporary disablement. and the compensation	K4
CO6	<ul style="list-style-type: none">Importance of Social Security Schemes and the Role of Employer and Employee as per, The Employees Provident Fund Act 1952Explain the contribution to the Fund, advances and withdrawals from PF Act 1952.Explain the Eligibility & Coverage of ESI & Benefits of the ESI Act, 1948	K5

CORE-XIX**INCOME TAX LAW AND PRACTICE – II****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none">Discuss the meaning of Business Income & Professional Income under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO2	<ul style="list-style-type: none">Describe Income from Other Sources under Income Tax Act 1961 and apply the provisions to solve problems.	K2,K3
CO3	<ul style="list-style-type: none">Explain the provisions of Set off, Carry Forward of losses & Clubbing of Income under Income Tax Act 1961.	K3
CO4	<ul style="list-style-type: none">Elaborate the provisions of Chapter VI A of Income Tax Act 1961 and solve simple problems.	K3
CO5	<ul style="list-style-type: none">Analyse the different assessment procedures and define TDS, E>Returns & PAN.	K4
CO6	<ul style="list-style-type: none">Preparation of Form 16 and Filling Individuals Tax Returns by enabling Provision for TDS and Clubbing of Income	K5

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Elective II
HUMAN RESOURCE MANAGEMENT
(Intra Department Elective – Shift I & II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Compare and Contrast Human resource Management and Personnel Management.	K4
CO2	Analyse the implication of planning and selection and the process pertaining to it.	K4
CO3	Demonstrate a holistic view of training and training methods associated with the same.	K3
CO4	Develop a need based career planning for the employee in an Organization.	K6
CO5	Conceptualize the various theories of Motivation and its implication and relevance in the current scenario.	K2,K3
CO6	Enable students to take up Human Resources as a profession.	

Elective II FUNDAMENTALS OF INSURANCE

(Intra Department Elective – Shift I & II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate a holistic view of principles of Insurance and apply them to practical situations	K4
CO2	Analyse the implication of Insurance Laws and regulations governing thereon.	K4
CO3	Analyse and understand the principles of Life Insurance and its relevant products	K3
CO4	Analyse and understand the Principles of General Insurance and its relevant products	K6
CO5	Conceptualize the need for group insurances, social security insurance and its relevance to modern days	K2,K3
CO6	Enable students to take up Insurance Consultancy & Advisory services as a profession	K4

ELECTIVE III
INDIRECT TAXES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Compare Tax vs Duty, Direct Tax vs Indirect Tax, explain powers of union/states, varieties of indirect taxes.	K1
CO2	Explain first principles of valuation, procedure for assessment and payment of Customs duty, types of Customs duty and warehousing.	K2
CO3	Discuss an overview of Goods and Service Tax (GST).	K1
CO4	Describe CGST Act 2017.	K2
CO5	Apply IGST Act.	K2
CO6	Ensures students to study the challenges in implementation of GST and ways to overcome them.	K6



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B.Sc (Mathematics) – I SEMESTER

Course Title: Allied Paper – FINANCIAL ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the Meaning of various terminologies used in accounting.Explain accounting concepts and conventionsDistinguish Book-Keeping from AccountingRecord the Journal Entries, Prepare Ledger Accounts and Prepare Trail BalancePrepare single, double and triple column cash book	K1
CO2	<ul style="list-style-type: none">Prepare final accounts of a sole trading concern and also formulate trading a/c, profit and loss a/c and balance sheet of a business.	K2
CO3	<ul style="list-style-type: none">Identify, classify and rectify various errors in the process of recording business transactions.	K2&K3
CO4	<ul style="list-style-type: none">Analyze and evaluate cash book and passbook and Prepare bank reconciliation statement.	K4
CO5	<ul style="list-style-type: none">Discuss the Need, Importance and Causes of DepreciationPrepare Asset Accounts by applying various methods of Depreciation.	K3
CO6	<ul style="list-style-type: none">Identify and apply single entry and double entry system of accounting according to the nature of business.	K3&K5

B.Sc (Mathematics) – II SEMESTER

Course Title: Allied Paper – COST AND MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">List the basic concepts of cost accountingPrepare cost sheet and quotationsAnalyse the reasons for difference in the profits arrived by cost and financial accountant and prepare Reconciliation Statements	K1& K3
CO2	<ul style="list-style-type: none">Define the basic concepts of management accounting and appreciate the differences between cost accounting and Financial Accounting	K2& K3
CO3	<ul style="list-style-type: none">Prepare various functional budgets such as Production, Material Purchase, Material Consumption, Cash and Flexible Budget	K3&K4
CO4	<ul style="list-style-type: none">Analyse corporate financial statements using Common Size Statements, Comparative Statement and Trend Percentages	
CO5	<ul style="list-style-type: none">Define Variable and Fixed cost and prepare Marginal Cost Statement.Apply the basic concepts of Marginal Costing, Absorption Costing and CVP Analysis and identify Break Even Point	K4&K5
CO6	<ul style="list-style-type: none">Analyse the financial statements by using the tool of ratio analysis and interpret the ratios	K5&K6

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BCA – III SEMESTER**Course Title: Allied Paper – FINANCIAL ACCOUNTING****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none">Define the Meaning of various terminologies used in accounting.Explain accounting concepts and conventionsDistinguish Book-Keeping from AccountingRecord the Journal Entries, Prepare Ledger Accounts and Prepare Trail BalancePrepare single, double and triple column cash book	K1
CO2	<ul style="list-style-type: none">Prepare final accounts of a sole trading concern and also formulate trading a/c, profit and loss a/c and balance sheet of a business.	K2
CO3	<ul style="list-style-type: none">Identify, classify and rectify various errors in the process of recording business transactions.	K2&K3
CO4	<ul style="list-style-type: none">Analyze and evaluate cash book and passbook and Prepare bank reconciliation statement.	K4
CO5	<ul style="list-style-type: none">Discuss the Need, Importance and Causes of DepreciationPrepare Asset Accounts by applying various methods of Depreciation.	K3
CO6	<ul style="list-style-type: none">Identify and apply single entry and double entry system of accounting according to the nature of business.	K3&K5

BCA – IV SEMESTER**Course Title: Allied Paper – COST AND MANAGEMENT ACCOUNTING****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none">List the basic concepts of cost accountingPrepare cost sheet and quotationsAnalyse the reasons for difference in the profits arrived by cost and financial accountant and prepare Reconciliation Statements	K1& K3
CO2	<ul style="list-style-type: none">Define the basic concepts of management accounting and appreciate the differences between cost accounting and Financial Accounting	K2& K3
CO3	<ul style="list-style-type: none">Prepare various functional budgets such as Production, Material Purchase, Material Consumption, Cash and Flexible Budget	K3&K4
CO4	<ul style="list-style-type: none">Analyse corporate financial statements using Common Size Statements, Comparative Statement and Trend Percentages	
CO5	<ul style="list-style-type: none">Define Variable and Fixed cost and prepare Marginal Cost Statement.Apply the basic concepts of Marginal Costing, Absorption Costing and CVP Analysis and identify Break Even Point	K4&K5
CO6	<ul style="list-style-type: none">Analyse the financial statements by using the tool of ratio analysis and interpret the ratios	K5&K6

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DEPARTMENT OF CORPORATE SECRETARYSHIP

SHIFT I/II

1	PSO1	Apply knowledge of Company law and Secretarial practice to comply legal formalities and to solve corporate problems with due diligence.
2	PSO2	Foster analytical and critical thinking abilities for preparation and presentation of Financial Statements
3	PSO3	Ability to understand, analyze and communicate global, legal and ethical aspects of business.
4	PSO4	Corporate Secretaryship graduates to acquire in-depth knowledge of Corporate laws and entrepreneurship embedded with ethics
5	PSO5	To instill a sense of social commitment and strive towards personal victory and value creation to society.
6	PSO6	Students studying Corporate Secretaryship to be passionate about multidisciplinary approach for problem solving, critical analysis and decision making.
7	PSO7	To develop value based leadership qualities, give due importance for lateral thinking so that they see things from a perspective which are not just simple but effective.

SEMESTER – I

Core Paper I – FINANCIAL ACCOUNTING-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Analyse various concepts relating to average due date and account current for calculating the debt payments.
CO2	Calculate fire insurance claim for loss of stock (Average clause)
CO3	Explain the different types of errors and rectify those errors by preparing suspense account
CO4	Analyse the wear and tear in machines and need for replacing the machinery at the appropriate time
CO5	Prepare the Final Accounts of a Sole Trading Concern (Adjustments- Closing Stock, Outstanding and Prepaid items, Depreciation, Provision for bad debts, Provision for Discount on debtors, Interest on Capital and Drawings, Manager's Commission)
CO6	Differentiate single and double entry system and able to solve problems with the help of statement of affairs and conversion method



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Core Paper II – PRINCIPLES OF MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define Management and to explain the Management process, Functions of a Manager and Scientific Management
CO2	Explain the different types and steps in Planning and Decision-making and to discuss the Policies, Procedures, Process and Methods in Decision-making
CO3	Compare the different types of Organizations and to explain the Organization Structure, Span of Control, Committees, Departmentalization and Informal Organization.
CO4	Describe Authority and its Delegation, Decentralization, Responsibility, Direction and Leadership Styles.
CO5	Explain the Need, Types and Techniques in Co-ordination
CO6	Describe the Control Process and techniques adopted in business.

Allied Paper I – PRINCIPLES OF MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the importance and role of marketing in the current business world.
CO2	Analyze and demonstrate students towards application of marketing theories in the realm of current business scenario.
CO3	Segment modern marketing methods in relation with global industrial practices.
CO4	Explain Product life-cycle and relevant marketing strategies in various stages
CO5	Discuss basic principles with illustrations to clearly explain elements of marketing.
CO5	Categorize and compare business firms to carryout innovative modern marketing practices for better performance.

Non Major Elective – I EVERYDAY BANKING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define bank, pass book, cheque book. Fill up cheque deposit challan, Account opening form and other bank related transactions. Differentiate between Debit card and Debit card, compare fund transfer methods through ECS, NEFT and RTGS
CO2	Create a strong pass word for online transactions, register for different sites for online transactions, pay utility bills through online, .transact through mobile banking for online purchase and payment of bills.


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SEMESTER – II

Core Paper III – FINANCIAL ACCOUNTING-II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Analyse of the Branch Accounts and its importance in finding out the profits or losses in running a branch.
CO2	Prepare Royalty payment and receivable chart, and Ledger Accounts in the books of Lessee and lessor.
CO3	Calculate the interest to be paid in Hire purchase (Using the guidelines provided) and understanding the importance of hire purchase in the present day context.
CO4	Analysing the problems in Admission, Retirement and Death of a partner, by calculating Revaluation, Partner's Capital Account, Sacrificing Ratio, Gaining Ratio, Good will and Revised Balance Sheet.
CO5	Prepare accounts pertaining to dissolution of Partnership firm
CO6	Analyse the problems in and Insolvency of a partner and calculating the Realisation, Partner's Capital, Deficiency and Bank Account for smooth closing of business.

Core Paper IV– HUMAN RESOURCE MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	State the role of HR functions in an organization.
CO2	Analyse the potential sources of recruitment for an organization, describe the procedure of selection and the various types of interviews
CO3	Classify the various methods of training
CO4	Explain the techniques of performance appraisal and various methods of promotions and transfers.
CO5	Apply the concept of workers participation in management.
CO6	Outline the procedure for handling employee grievances and the causes of indiscipline.

Allied Paper –II -BUSINESS COMMUNICATION

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain business communication role and importance to solve corporate problems towards supportive business environment.
CO2	Know different types of business letters which enlighten students for the purpose of differentiation among its types and usage.
CO3	Provide an outline about modern communication methods to inculcate management ability among students.
CO4	Practically apply and widely spread corporate correspondence methods with shareholders, directors and others for better communication practices in an enterprise.
CO5	Define the role and relevance of communication effectiveness for the purpose of effective decision making in global competitive environment.
CO6	Prepare various reports for corporate communication.


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Non Major Elective – II FUNDAMENTALS OF INSURANCE

Course Outcomes: At the end of the Course, the Student will be able to:

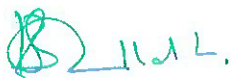
CO1	Define Insurance, discuss the principles of Insurance, explain the objectives and functions of Insurance, compare the different types of insurance, Explain the duties and functions of IRDA
CO2	Compare the different types of policies in life insurance, fill up the documents relating to insurance, explain the benefits of mediclaim policy, identify and analyse the advantages of Mediclaim policy, discuss the procedure and mode of settlement

SEMESTER – III

Core Paper –V - CORPORATE ACCOUNTING-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define a share, Enumerate the types of shares, journalize the transactions relating to issue of shares and forfeiture of shares. Understand the concept of Underwriting, Compute the net liability of underwriter and the amount of final settlement.
CO2	Define a Debenture, identify and analyze different types of debentures, Journalise the transactions relating to issue and redemption of debentures. Understand the Sinking fund mechanism for redemption of debentures. Differentiate between cum interest and ex-interest quotations, compute the loss on cancellation of own debentures, journalize the transactions relating to conversion of debentures.
CO3	Define a Preference share. Compare the preference share with equity shares. Analyse the conditions relating to redemption of preference shares. Journalize the transactions relating to redemption of preference shares.
CO4	Identify and analyse the situations leading to Acquisition of business, Compute the profit prior to incorporation.
CO5	Analyze the need for preparation and presentation of Final accounts of the companies. Understand the format of Profit and loss account and balance sheet. Journalise the adjustment entries and demonstrate their effect in P&L account and balance sheet. Compute Managerial remuneration
CO6	Explain the factors responsible for creating goodwill. Evaluate the different methods of valuation of goodwill. Compute the value of goodwill with the given information. Identifies the need for valuation of shares. Compare the different methods of valuation of shares. Compute the value of shares with the given data


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Core Paper VI - COMPANY LAW AND SECRETARIAL PRACTICE – I


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the important terms in Company's Act 2013 and classify different types of Companies
CO2	Identify the Rights, Duties and liabilities of Company Secretary.
CO3	Apply the provisions of Company's Act for Incorporation and Registration of Companies and compliance procedure to be adopted by a Company Secretary.
CO4	Discuss the Content of Prospectus and liabilities for misstatement of prospectus.
CO5	Define share, classify its types, differentiate Transfer and Transmission of Shares
CO6	Compare and Contrast Members and Shareholder. Explain the Role of Members in a Company, Modes of Acquisition of Membership and their Rights and Liabilities.

Allied Paper III - BUSINESS STATISTICS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define statistics and identify various sources of data and methods of collection of data. the importance of diagrammatic presentation of data and Interpret examples of methods for summarize data sets, including common graphical tools (such as Bar Diagram, Pie Diagram, Histogram and Ogive)
CO2	Illustrate various measures of central tendency, (such as Arithmetic Mean, Median, Quartiles, Mode, Geometric, Harmonic Mean, Combined Mean and Weighted Mean) and their implication on Business performance. Prepare various Measures of Dispersion-range, mean deviation, variance and standard deviation.
CO3	Analyze different types of correlation and interpret the relationship between two variables. Define Regression analysis. State its importance in business decisions making. List the uses of regression studies. Differentiate regression and correlation analysis. Develop two regression Lines.
CO4	Define Time series and identify its methods. State the importance of time series. Analysis the situations in which weighted and unweighted index numbers are useful. Analyze the secular trend, seasonal fluctuations and cyclical fluctuations. Develop trend analysis for the upcoming years using the given data.
CO5	Define Index Numbers. State its uses in business decisions making. Discuss the problems involved in the construction of an index number. Analysis the construction of un weighted index Number.
CO6	Analysis the steps involved in constructing the cost index numbers. Illustrate Laspeyres, Paasche's, and Fisher's Index Numbers.


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SEMESTER – IV
Core Paper VII - CORPORATE ACCOUNTING -II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the concept of financial reporting. Compare the objectives of financial statements and financial reporting. Identify the users in financial reporting. Evaluate the qualitative characteristics of Financial reporting. Predict the benefits of financial reporting.
CO2	Identify and analyse different types of amalgamations. Explain the conditions for amalgamations under AS14, Compute the purchase consideration prepare the journal entries in the books of transferor company and transferee company.
CO3	Describe the procedure for external reconstruction
CO4	Explain the need for alteration of share capital. Discuss the procedure for alteration of share capital. Prepare the journal entries for internal reconstruction and capital reduction. Prepare the balance sheet after reconstruction
CO5	Define Holding and subsidiary company, analyze the profits into capital and revenue, compute Cost of control and Minority interest, prepare the consolidated balance sheet
CO6	Outline the situations leading to Liquidation of a company. Compare the procedure for liquidation in different methods of liquidation. Compute the commission payable to liquidator. Prepare the Liquidator's final statement of account.

Core Paper VIII - COMPANY LAW & SECRETARIAL PRACTICE- II

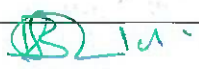
Course Outcomes: at the end of the Course, the Student will be able to:

CO1	Definition of a term debentures under Companies Act 2013 and identify different types of borrowings & the different kinds of debentures.
CO2	Apply the provisions of Companies Act 2013 for appointment of the directors and the procedure to be followed for the removal of the directors.
CO3	Describe role of secretary and statutory provisions for conduct of meetings of company
CO4	Discuss the rules pertaining to dividend and unclaimed dividend
CO5	Explain the role of auditors towards corporate social responsibilities and the rights and duties of the auditors.
CO6	Differentiate Creditors voluntary winding up and the members voluntary winding up.

Allied Paper IV - PRACTICAL AUDITING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Cite and describe important concepts of auditing.
CO2	Classify audit and differentiate between internal check, inter control and internal audit
CO3	Determine the procedure of vouching, verification and valuation of assets and liabilities of business entities
CO4	Explain auditors duty relating to specific items and special audits for different business enterprise
CO5	Apply statutory provisions of Companies Act for appointment, remuneration and removal of auditor and to discuss the rights, duties and liabilities of auditor
CO6	Analyze the management controls exercised within the information technology infrastructure


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SEMESTER – V
Core Paper IX - COST ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify and classify the elements of cost in order to develop cost sheet and generate tender and quotation.
CO2	Apply the techniques of inventory control for determining stock levels and economic ordering quantity.
CO3	Explain various methods of pricing material issues to prepare stores ledger.
CO4	Compare and contrast different methods of remuneration and incentive systems.
CO5	Describe the methods of absorption and recovery of overhead to prepare Overhead distribution summary.
CO6	Carry out various methods of costing to determine the cost and to propose better model in cost decisions.

Core Paper X - BUSINESS ECONOMICS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Recall conceptual definitions in business economics
CO2	Classify and differentiate the important terms in business economics
CO3	Understand and illustrate law of demand, Elasticity of demand and Demand forecasting
CO4	Determine the law of supply, underlying assumptions and properties of Law of diminishing marginal utility and indifference curves
CO5	Explain the law of returns to scales, economies and diseconomies to scale
CO6	Analyse the price and output determination under various market forms


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Core Paper XI - –INCOME TAX LAW, THEORY & PRACTICE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define important terms under the Income Tax Act 1961, explain the concept of Residential Status, identify the residential status, compute the incidence of Tax. Understand the concept of Salary, classify its different forms, identify and analyze the taxability of various allowances and perquisites compare different types of Provident funds.
CO2	Compare and appreciate the taxability of House properties used for different purposes. Identify the deductions and explain the taxability of Unrealized rent and loss under the head House property. Analyze the admissible deductions and specific disallowances for computing Income from Profits and Gains of Business and Profession. Explain the treatment of Depreciation and Loss under the head Business and Profession.
CO3	Define Capital assets under the Income Tax Act, 1961. Explain the concept of Capital Gains, list out the exemptions for Capital Gains, compute the Taxable Capital Gains. Understand the concept of TDS, identify and analyze different incomes taxable under other sources, Evaluate the taxability of various incomes and deductions available for each income, compute the taxable income under other sources.
CO4	Compare and appreciate the clubbing up provisions under different situations. Identify the losses that can be set off inter source and intra source. Explain the provisions for carry forward and set off of losses, Compute the Total Income after setoff and carry forward of losses.
CO5	Analyze the admissible deductions from Gross Total Incomes and specific limits and provisions for availing various deductions Differentiate between the deductions for incomes and deductions for investments / expenses. Compute the Deductions available under various sections
CO6	Discuss the powers and duties of various Income Tax Authorities, Appreciate the need and use of PAN, Explain the procedure for Assessment and discuss the different types of Assessment.

Core Paper XII - BUSINESS LAW

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify and analyse the nature and forms of Contracts, their regulation and relevance of the concepts and principles of Commercial Law in India.
CO2	Define the basic principles of valid contractual agreements and illustrate the impact of legislation on the Law of Contracts.
CO3	Discuss the circumstances and liabilities of parties in the case of invalid contracts and outline the remedies for breach of contract.
CO4	Explain contracts of Indemnity, Guarantee. Categorise the rights and liabilities of the parties to such contracts.
CO5	Differentiate Bailment and Pledge. State the rights and duties of bailor and bailee
CO6	Outline the Duties and Rights of various kinds of Agents and describe the legal structure to support the principles and practice of Agency.



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Elective Paper I - CORPORATE GOVERNANCE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the evolution, need and scope of corporate governance and outline the conceptual framework of corporate governance
CO2	Explain the contemporary developments in the field of corporate governance in U.S. and compare with India
CO3	Describe the legislative framework of corporate governance in different forms of business entities
CO4	Analyse the diversity in the composition of the board and its effectiveness in corporate governance
CO5	Apply the secretarial standards in board processes
CO6	Determine the relationship between corporate governance and the stakeholders

SEMESTER – VI

Core Paper XIII - MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define Management accounting. List out the functions of management accounting Discuss the use of Management accounting as a tool in decision making. Analyze the role of management accountant with regard to evolving the financial policy of an industrial enterprise. Differentiate management accounting, financial accounting and cost accounting.
CO2	Identify the role of ratio analysis in the interpretations. Explain the different techniques of analysis and interpretations of financial statements. .Prepare comparative income statement using the financial statement of a company. Categorize the ratios based on the various heads. Give an interpretation for the financial statement using ratio analysis.
CO3	State the significance of fund flow statement. Describe the significance of fund flow statement. Use the fund flow statement to predict the financial position of a company.
CO4	Construct new cash flow statement of the company from the past two years. Compare the fund flow statement and cash flow statement.
CO5	List out the uses of budget in management. Give examples of five budgets that may be prepared and employed by a manufacturing company. Prepare a proforma of flexible budget of a manufacturing concern for their imaginary activity levels in a suitable form. Outline a plan for sales budget and purchase budget. What considerations are necessary in the preparation of such budgets. Generate a sample cash budge for a manufacturing company.
CO6	List out the limitations of BEP. Explain the concepts of BEP and CVP. Analyze the terms marginal costing and absorption costing and bring out its difference. Develop a break even chart to find the various levels of activity.



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Core Paper XIV - PRINCIPLES OF FINANCIAL MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	List out the objectives of financial management and identify the sources of fund
CO2	Define and understand, leverages and its types
CO3	Apply the techniques of capital budgeting for investment decisions
CO4	Compute cost of capital and classify them
CO5	Explain dividend policies and describe various dividend models
CO6	Determine the factors influencing working capital and to forecast working capital requirements

Core Paper XV - GOODS AND SERVICE TAX & CUSTOMS LAW

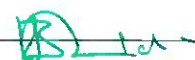
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the Concept of Goods & Service Tax. Identify the need of GST in India Define the concept of Supply
CO2	Describe the Input Tax Credit under GST.
CO3	Discuss the procedure for registration under GST. Explain Tax Invoice. Explain the procedure for cancellation of registration
CO4	Describe the Accounts and Records to be maintained under Sec 39 of GST Act Differentiate Electronic Cash Ledger and Electronic Credit Ledger
CO5	Analyze the concept of Customs Duty. Describe the different types of Customs Duty Outline the procedure for Assessment of Customs duty
CO6	List the procedures for Export and Import under Customs Duty. Describe Baggage Rules & Exemptions

Elective Paper II - ENTREPRENEURIAL DEVELOPMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the key terms, List the attributes and functions, Classification of entrepreneurs and Enumerate the factors influencing entrepreneurs.
CO2	Discuss the various agencies for entrepreneurial development and their functions.
CO3	Use the various business idea generation techniques and Prepare a business project proposal incorporating the various techniques of ranking a business proposal.
CO4	Construct a framework for a typical EDP.
CO5	Explain the role of entrepreneurs in economic growth.
CO6	Analyse the recent trends in entrepreneurship and evaluate the development of women entrepreneurs.



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INSTITUTIONAL TRAINING – PROJECT REPORT AND VIVAVOCE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify, gather, organize, analyze and interpret the data relating to a particular concept
CO2	Demonstrate the conceptual understanding of the topic chosen for presentation
CO3	Develop presentation and leadership skills
CO4	Demonstrate the skills required for effective presentations
CO5	Justify the methodology of presenting the topic chosen
CO6	Apply the creative approaches in designing and delivering the content of presentation



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Course Title: Classical Algebra

Course Outcomes: At the end of the course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Explain the concept of binomial, exponential and logarithmic series • Discuss other forms of binomial expansion • Find summation of series using binomial, exponential and logarithmic series
CO2	<ul style="list-style-type: none"> • Describe theory of equations • Explain the relation between the roots and coefficients of an equation • Discuss symmetric functions of roots of an equation • Find the sum of the powers of the given equation
CO3	<ul style="list-style-type: none"> • Solve reciprocal equation • Use diminishing of roots to transform the equation • Discuss Descarte's rule of signs • Discuss Newton's and Horner's method
CO4	<ul style="list-style-type: none"> • Classify different types of matrices and their properties • Find the eigen values and eigen vectors of a matrix • Compute inverse of the matrix using Cayley Hamilton theorem
CO5	<ul style="list-style-type: none"> • Use Fermat's, Euler's theorems to solve congruence equation • Find the sum, number of all divisors of N • Define congruence and describe their properties

Course Title: Differential Calculus

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Retrieve the concept of differentiation and perceive the idea of finding nth derivative using Leibnitz theorem. • Find the derivatives of nested functions –chain rule. • Choose the chain rule to find the derivatives of implicit function and total differentiation.
CO2	<ul style="list-style-type: none"> • Determine the derivative for a function of several variables in partial forms– Jacobian matrix • Examine the maxima and minima for the function of two variables • Implement the idea of maxima and minima for functions subject to the constraints (Lagrange Multipliers)
CO3	<ul style="list-style-type: none"> • Attaining the knowledge of finding the angle between radius vector and tangent to the curve. • Infers the bending of the curve by finding the radius of curvature in both Cartesian and polar form. • Extend the idea of tangent to a curve to find the radius of curvature for pedal curve
CO4	<ul style="list-style-type: none"> • Recall the concept of radius of curvature and tangent to find the centre of curvature. • Examine the locus of centre of curvature to calculate the evolute • Survey the family of curves to find an envelope.
CO5	<ul style="list-style-type: none"> • Identify the asymptote of a rational algebraic curve by various methods • Estimate the possible number of asymptote by analyzing the given curve.



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Course Title: Trigonometry

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Use Demoivre theorem to expand $\sin^n \theta$, $\cos^n \theta$• Express $\sin^n \theta$, $\cos^n \theta$ in multiples of θ• Express $\sin \theta$, $\cos \theta$ and $\tan \theta$ in terms of θ
CO2	<ul style="list-style-type: none">• Express hyperbolic functions in terms of exponential functions and obtain hyperbolic identities• Manipulate expressions involving hyperbolic functions• Classify relation between circular and hyperbolic functions
CO3	<ul style="list-style-type: none">• Express inverse trigonometric functions in terms of logarithmic functions• Differentiate hyperbolic, inverse – hyperbolic trigonometric functions• Separate the real and imaginary parts of trigonometric functions of complex variable
CO4	<ul style="list-style-type: none">• Recognize the concept of logarithmic of complex numbers• Estimate sum of series of sines and cosines of n terms in A.P
CO5	<ul style="list-style-type: none">• Manipulate any forms of summation of series such as binomial, logarithmic, geometric and Gregory's series• Recognize the concept of $C+iS$ method

Course Title: Integral Calculus

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Identify the various techniques of integration and apply them to integrate rational and irrational functions
CO2	<ul style="list-style-type: none">• List the Properties of definite Integrals and evaluate definite integrals using these properties easily.• Apply the technique of integration by parts and integrate.
CO3	<ul style="list-style-type: none">• Summarize Bernoulli's formula and Evaluate Integrals using the same.• Prove the reduction formulae for Standard functions and use the same to solve problems on standard integrals.• Analyze Definite integral as area under the curve using summation and limits.
CO4	<ul style="list-style-type: none">• Classify double and triple integrals and evaluate them.• Solve double integrals by changing order of Integration• Use Polar coordinate system to solve Calculus application problems• Evaluate the area of plane surfaces and Volume of Solids using double and triple Integrals.
CO5	<ul style="list-style-type: none">• Define Beta and Gamma Functions, summarize their properties and Use them to integrate complex functions.• Derive the recurrence formula For Gamma functions, and Relation between Beta and Gamma functions.



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Course Title: Differential Equations


Course Outcome: After completing the course, the students will be able to

CO1	<ul style="list-style-type: none">• Discuss the differential equation of first order and higher degree of the form $f(x, y, p) = 0$• Define the necessary and sufficient condition for exact equation• Convert differential equation which are not exact into exact equation
CO2	<ul style="list-style-type: none">• Estimate solution to second order linear homogeneous Differential Equations with constant coefficient.• Illustrate the basic knowledge of complementary function and particular integral
CO3	<ul style="list-style-type: none">• Estimate solution to second order Differential Equation with variable coefficient.• Use the method "Variation of parameter" to find the solution of higher order D.E with variable coefficient
CO4	<ul style="list-style-type: none">• Discuss the solution for PDE of standard type $f(p, q) = 0, f(x, p, q) = 0, f(y, p, q) = 0, f(x, p) = f(y, q) = 0$ and by eliminating the arbitrary constant and arbitrary function, complete integral, singular integral and general integral.• Create the solution of Clairaut's form and linear partial differential equations
CO5	<ul style="list-style-type: none">• Define homogeneous equation• Solve the homogeneous linear partial differential equation with particular integrals $e^{ax+by}, \sin(mx + ny), \cos(mx + ny), x^m y^n$

Course Title: Mathematical Statistics

Course Outcomes: At the end of the Course, the Students will be able to

CO1	<ul style="list-style-type: none">• Illustrate and describe sample spaces and events for random experiments.• Interpret and calculate probabilities of event in discrete sample spaces and conditional probabilities of events using Baye's theorem.
CO2	<ul style="list-style-type: none">• Illustrate the concept of a probability distribution• Sketch the same to real world problems involving various distributions like Binomial, Poisson and Normal distribution
CO3	<ul style="list-style-type: none">• Measure and analyse the strength of the relationship between two variable using a correlation analysis.• Predict the value of any independent variable to the value of dependent variable using linear regression analysis
CO4	<ul style="list-style-type: none">• Categorize small and large samples• Produce a significant test of hypothesis concerning the value of population mean based on Normal distribution.
CO5	<ul style="list-style-type: none">• Produce a significant test of hypothesis concerning the value of population mean based on t-distribution, F-test, χ^2-test.• Explain the concept of analysis of variance and use them to investigate factorial dependence• Discuss about goodness of fit for given data


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Course Title: Numerical Method-I

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Restate the principal of least curves • Solve the problems of fitting of straight lines, parabolas • Solve the problems of the different form of exponential curves
CO2	<ul style="list-style-type: none"> • Solve algebraic equations using various methods like Bisection method, Iteration method, RegulaFalsi method and Newton – Raphson method
CO3	<ul style="list-style-type: none"> • Estimate the solution of simultaneous linear equations using direct methods : Gauss-elimination method , Gauss –Jordan method and Crout's method • Estimate the solution of simultaneous linear equations using Iterative method :Gauss-Siedel
CO4	<ul style="list-style-type: none"> • Define basic concept of operators Δ, ∇ and E. • Differentiate the factorial polynomial • Solving interpolation with equal intervals problems using Gregory Newton's forward formula and Newton's backward formula • Estimate the missing value for the equidistant terms
CO5	<ul style="list-style-type: none"> • Explain the operators μ, δ and relation with the operator • Estimate the solution of central difference formula using the methods Gauss's forward, backward formula, Stirling's formula, Bessel's formula and Laplace Everett formula.

Course Title: Vector Calculus, Analytical Geometry Of Three Dimensions

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Restate Gradient, Curl and Divergent • Solve the problems of directional derivatives • Solve the problems of unit normal to the surface
CO2	<ul style="list-style-type: none"> • Define line ,surface and volume • Estimate the integration using Gauss, Stoke's, Green's theorems
CO3	<ul style="list-style-type: none"> • Restate general equation of plane • Estimate the equation of a plane passing through three points • Solve the problem of intercept form and normal form • Explain angle between two planes • Distinguish between condition of perpendicularity and parallelism • Demonstrate the equations from perpendicular distance form a point to a give plane, equation of plane pausing through the line of interchange of two planes. • Solve problems on ratio in which the plane divides the line joining the two points.
CO4	<ul style="list-style-type: none"> • Define general equation of the straight line, Symmetric, transformation. • Explain angle between plane and line. • Identify conditions of a line • Solve problems on parallel to the plane and two lie a plane • Classify coplanar lines, intersection of two given, skew lines and short distance between the lines.
CO5	<ul style="list-style-type: none"> • Define equation of the sphere, section of the sphere by a plane. • Demonstrate an equation of a circle, equation of a sphere passing through a given circle. • Explain intersection of two sphere, Orthogonal sphere and Identify condition for Orthogonality • Distinguish equation of the tangent two spheres, length of a tangent.



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Course Title: Transforms and Fourier series


Course outcomes: At the end of the course, the student will be able

CO1	<ul style="list-style-type: none">• Use Laplace transform and Inverse Laplace transform in solving differential equations with constant coefficients.• Differentiate between Laplace transform and Inverse Laplace transform• Demonstrate the concept of Laplace transform and Inverse Laplace transform by giving examples and classify it
CO2	<ul style="list-style-type: none">• Demonstrate the Fourier series to study the behaviour of Periodic functions and their applications.• Evaluate the problems in Fourier series using periodic functions.
CO3	<ul style="list-style-type: none">• Categorize Even and odd functions and Classify half range Fourier series.
CO4	<ul style="list-style-type: none">• Understand Fourier Integral theorem and evaluate problems under Integrals using the theorem.
CO5	<ul style="list-style-type: none">• Analyze and understand infinite Fourier transforms and its inversion properties using convolution and Parseval's identity for Fourier transforms.• Evaluate integrals using sine and cosine transforms.

Course Title: Numerical Methods-II

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Define interpolation and extrapolation.• Use the Newton's divided difference formula and Lagrange's formulas for interpolation.• Construct a polynomial passing through the (n+1) points.
CO2	<ul style="list-style-type: none">• Explain the definitions of Newton's forwards, backward, divided difference and Stirling's formula for numerical differentiation.• Prepare the first order second order derivatives from a set of tabulated values.• Point out the extreme values of model real time problems.
CO3	<ul style="list-style-type: none">• Demonstrate a definite integral numerically.• Summarize the concept of Trapezoidal, Simpson's (1/3), Simpson's (3/8) and Weddle's rules.• Compute definite integral from a set of tabulated values by various numerical integration methods.
CO4	<ul style="list-style-type: none">• Identify linear homogeneous and non-homogeneous difference equations.• Distinguish difference equation and differential equation.• Formulate first and second order difference equations.• Solve first and second order difference equations.
CO5	<ul style="list-style-type: none">• Explain Taylor's series, Euler's method, Modified Euler's method Runge-Kutta method.• Solve first order differential equation by various numerical methods.• Point out the importance of Milne's and Adams-Bashforth Predictor-corrector methods.


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Course Title: Algebraic Structures


Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Summarize the structure of Group, Subgroups.• Demonstrate operations satisfying various properties in group structure• Explain Lagrange's Theorem and its consequences.
CO2	<ul style="list-style-type: none">• Classify and demonstrate examples of subgroups, normal subgroups and quotient groups• Summarize the properties of cyclic subgroups of a group.• Explain Isomorphism and homomorphism of Groups.
CO3	<ul style="list-style-type: none">• Explain the notion of permutations and operations on them• Summarize Cayley's theorem• Classify Inner automorphism and their properties
CO4	<ul style="list-style-type: none">• Define Rings, Integral Domains, Fields and Divisors of Zero.• Classify Quotient Rings, Ideals and their existence with examples• Demonstrate the characteristics of a ring, quotient rings and ideals• Explain Homomorphism and Isomorphism of Rings
CO5	<ul style="list-style-type: none">• Classify the different types of Ideals and their properties.• Illustrate Imbedding of Integral domain over Field• Identify Euclidean Rings and investigate their properties.

Course Title: Real Analysis I

Course Outcomes: After completion of this course, students will be able to

CO1	<ul style="list-style-type: none">• Describe the fundamental properties of the real numbers that lead to the formal development of real analysis.• Define and recognize the basic properties of the field of real numbers.• Identify the cardinality of a sets.
CO2	<ul style="list-style-type: none">• Demonstrate an understanding of limits and how that are used in sequences.• Ability to explain the basic principles of the convergence of a sequence.• Know the condition(s) of convergent and divergent of a sequence.
CO3	<ul style="list-style-type: none">• Identify the limit superior and limit inferior of a sequence.• Understand the Cauchy definition of a sequence.
CO4	<ul style="list-style-type: none">• Construct rigorous mathematical proofs of convergence test of a sequence.• Distinguish between conditional convergence and absolute convergence.
CO5	<ul style="list-style-type: none">• Explain and apply the basic concepts of absolute convergence of a sequence.• Derive the 'test for convergence' using summation by parts.


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Course Title: Complex Analysis I


Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Explain point at infinity and Stereographic projection.• Rephrase the complex variable and mapping.• Infer limits of a complex function.
CO2	<ul style="list-style-type: none">• Restate derivatives and the significance of differentiability for complex function.• Describe Cauchy Riemann equation.• Derive Cauchy Riemann equation in polar form.
CO3	<ul style="list-style-type: none">• Judge Analytic function and harmonic function.• Design analytic function• Explain Cauchy's Theorem and evaluate line integral
CO4	<ul style="list-style-type: none">• Judge and classify mappings by elementary functions• Classify fractional transformation.• Define inverse points• Create new transformation and observe it.
CO5	<ul style="list-style-type: none">• Discuss various standard transformations.• Define conformal mapping and its basic mapping.

Course Title: Discrete Mathematics

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Explain the definition of Mathematical logic and analyze statements using truth tables• Differentiate between conjunction and disjunction, conditional and bi-conditional statements• Formulate an argument using logical notation and determine if the argument is or is not valid
CO2	<ul style="list-style-type: none">• Distinguish between NAND, NOR and Normal forms.• Construct simple mathematical proofs and possess the ability to verify them.
CO3	<ul style="list-style-type: none">• To solve recursive functions in a formal mathematical manner.• Classify the algorithm for solving finite order homogeneous and non-homogeneous finite linear relation.• Develop problem-solving skills using logical thinking.
CO4	<ul style="list-style-type: none">• Solve problems on generating functions for recurrence relations• Illustrate different types of graphs and explain some definitions and basic theorems.• Indicate the concept of degree sequences, Graph isomorphism and operations on graphs.
CO5	<ul style="list-style-type: none">• Apply graph theory based tools in solving practical problems.• Describe Kruskal's and Prim's algorithm in finding minimum weight spanning tree• Restate the definitions and simple examples of Eulerian and Hamiltonian graphs


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Course Title: Operations Research –I


Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Formulate the linear programming model. Express in Standard form and canonical form for given LPP Identify the feasible solution and optimal solution by using Simplex Method and graphical Method. Explain the application of linear programming.
CO2	<ul style="list-style-type: none"> Define artificial variable. Explain primal and dual variable. Distinguish between primal and dual variable. Express primal into dual and vice versa. Apply dual simplex method to solve LPP.
CO3	<ul style="list-style-type: none"> Explain transportation model. Interpret the initial basic feasible solution such as row minima, column minima, Vogel's approximation method, least cost method, Northwest corner rule. Describe the algorithm of getting optimal solution.
CO4	<ul style="list-style-type: none"> Explain Assignment problem. Define mathematical formulation. Explain the procedure of getting optimal solution. Solve the application of assignment model.
CO5	<ul style="list-style-type: none"> Interpret Queuing Models. Define and explain the concepts of queuing system. Calculate the traffic intensity and utilization factor of queuing system. Explain birth and death process, M/M/1 model, M/M/S model and apply this models.

Course Title: Linear Algebra

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Define Polynomial rings over a field $F[x]$. Demonstrate that $F[x]$ is a Euclidean Ring and is a PID. Describe Polynomial Rings over Commutative Rings ie $R[x]$, Relate the properties of $R[x]$ with that of R and hence Conclude that if R is a UFD then so is $R[x]$. Explain Eisenstein Criteria for irreducibility of Polynomials and apply the same to investigate the irreducibility of given polynomials.
CO2	<ul style="list-style-type: none"> Quote an axiomatic description of an abstract vector space Define the terms span, linear independence, basis, dimension, and Discuss their properties and apply these concepts to various vector spaces and subspaces Compute Basis and Dimension of Vector Spaces in R^n.
CO3	<ul style="list-style-type: none"> Summarize Vector Space Homomorphisms and Annihilator. Demonstrate that $\text{Hom}(V, W)$ is the dual space for a given vector space V. Define Norm and Orthogonality of vectors and Inner Product Space. Discuss orthogonal and orthonormal basis Explain the Gram-Schmidt Orthogonalization process, and Construct orthogonal and orthonormal basis for a given basis.
CO4	<ul style="list-style-type: none"> Define Algebra over F. Indicate that $\text{Hom}(V, V)$ is an Algebra over F. Outline the properties of Invertible Linear transformations Discuss the Kernel and Range of linear transformations and Compute rank nullity of associated vector spaces. Discuss Characteristic Roots and Characteristic Vectors of Linear Transformations in $A(V)$.



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CO5	<ul style="list-style-type: none"> Associate Linear Transformations with matrices and represent them using matrix. Demonstrate that F_n the set of all $n \times n$ matrices forms an Associative Algebra over F and hence conclude that $A(V)$ and F_n are isomorphic as algebras over F. Describe matrix of a transformation for a given basis and Demonstrate similarity transformation using Triangular forms.
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Course Title: Real Analysis II

Course Outcomes: After completion of this course, students will be able to

CO1	<ul style="list-style-type: none"> Explain the Euclidian distance function and the geometric meaning of each of the metric space properties. Point out whether a given distance function is a metric.
CO2	<ul style="list-style-type: none"> Explain the continuity of a functions via open and closed sets. Demonstrate the value of a limit of a function at a point using definition of a limit.
CO3	<ul style="list-style-type: none"> Determine the Riemann integrability of a bounded function and identify the size of a sets by outer measure. Choose the Riemann integral properties to find the value of the integrals.
CO4	<ul style="list-style-type: none"> Demonstrate the usage of the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis. Understand the consequences of Roll's theorem and Mean value theorem for differentiable functions.
CO5	<ul style="list-style-type: none"> Recognize the difference between point wise and uniform convergence of a sequence of functions. Illustrate the effect of uniform convergence on the limit function with respect to continuity, differentiability, and integrability.

Course Title: Complex Analysis II

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Identify simply connected domain and multiply connected domain. Examine the values of the function using Cauchy's Goursat theorem. Illustrate Anti derivative and Cauchy's Integral theorem.
CO2	<ul style="list-style-type: none"> Restate derivatives of analytical function. Derive Morera's theorem . Maximum moduli functions Derive Liouville's theorem and Fundamental theorem of algebra
CO3	<ul style="list-style-type: none"> Derive various series for an analytic function. Categorize poles and zeros. Categorize the singularities
CO4	<ul style="list-style-type: none"> Estimate the number of poles Derive Argument principle and Rouché's theorem Estimate the residues at poles.
CO5	<ul style="list-style-type: none"> Evaluates Improper real integrals.


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Course Title: Mechanics

Course outcomes: At the end of the course, the student will be able to

CO1	<ul style="list-style-type: none">Understand the Vectorial and scalar representation of forces and moments.Identify basic definitions and categorize Lami's theorem and its Applications.
CO2	<ul style="list-style-type: none">Explain Static equilibrium of particles and rigid bodies in two dimensions and also in three dimensions.Distinguish problems under moments, parallel forces and couples.
CO3	<ul style="list-style-type: none">Illustrate the Laws of motion, Kinematics of motion and their Interrelationship.Compare the relationship between Resultant, relative, angular and relative angular velocities.
CO4	<ul style="list-style-type: none">Recall concepts of projectilesDifferentiate time of flight, horizontal range and range in an inclined plane.
CO5	<ul style="list-style-type: none">Analyse the properties of surfaces and solids in relation to moment of Inertia.Explain moment of Inertia of simple bodies and theorems of parallel and perpendicular axes.Demonstrate various moments of Inertia of triangular and circular lamina as well as hollow and solid right sphere and cone.

Course Title: Operations Research - II

Course Outcomes: At the end of this Course, the Student will be able to

CO1	<ul style="list-style-type: none">Explain the rules for Network constructions.Evaluate time calculation in PERT.Describe PERT algorithm.Distinguish between PERT and CPM.
CO2	<ul style="list-style-type: none">Explain basic concepts of EOQ models.Apply the decision models to various real time problems.Describe and analyze various models in EOQ.
CO3	<ul style="list-style-type: none">Discuss about models of replacement.Apply and evaluate the replacement of an item whose maintenance cost increases with time and money value is not changed.Apply and evaluate various models in replacement.
CO4	<ul style="list-style-type: none">Explain the concept of game theory.Describe and solve the two person zero sum game with and without saddle point.Explain and evaluate dominance rule.Solve $2 \times n$ and $m \times 2$ game by using game theory.
CO5	<ul style="list-style-type: none">Discuss the concepts of sequencing problem.Describe and solve n jobs - 2 machines, n-jobs through 3 machines and n-jobs through n-machines.Apply and solve problems by using graphical method.



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Course Title: Allied Mathematics- I

➤ **Course Outcomes: At the end of the Course, the Student will be able**

CO1	<ul style="list-style-type: none"> Point out the location and describe the nature of the roots Demonstrate the equation through roots multiplied by a given number, increase the roots, and decrease the roots. Develop the skill necessary to solve the problems
CO2	<ul style="list-style-type: none"> Write the expansion of $n\theta$, $\sin n\theta$, and $\cos^n \theta$, $\sin^n \theta$ in a series of sines and cosines of multiples of θ. Define hyperbolic and Inverse hyperbolic functions $\sinh^{-1}x$, $\cosh^{-1}x$ and $\tanh^{-1}x$ in terms of logarithmic functions.
CO3	<ul style="list-style-type: none"> Describe the applications of derivatives and higher order derivatives Restate the n^{th} derivatives of functions and applying the Leibnitz's theorem for finding n^{th} derivative Point out maxima and minima functions of two variables Summarize the concept of Jacobian and explain radius of curvature in Cartesian co-ordinates
CO4	<ul style="list-style-type: none"> Explain properties of definite integrals. Prove reduction formulae and evaluate some problems by using these formulae. Prepare Fourier Series expansions for given functions in the interval $(0, 2\pi)$
CO5	<ul style="list-style-type: none"> Formulate partial differential equations by eliminating arbitrary functions and constants. Categorize the integrals of first order linear pde into complete, general and singular integrals. Identify and obtain the solution of Clairaut's form and Lagrange's equation

Course Title: Allied Mathematics- II

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Define symmetric, skew-symmetric, unitary, orthogonal matrices and solve simple problems. Describe characteristic equation of matrices and list eigen values and eigen vectors of a given matrix. State Cayley - Hamilton theorem and compute inverse of a matrix using the theorem
CO2	<ul style="list-style-type: none"> Define basic concepts of operations Δ, ∇, E. Identify the missing terms using Binomial method with equal intervals. Calculate intermediate values by using Newton's forward, Newton's backward formula and Lagrange's formula.
CO3	<ul style="list-style-type: none"> Apply Laplace transform to solve differential equations of the form $e^{-at}f(t)$, $tf(t)$, $\frac{f(t)}{t}$. Evaluate the inverse Laplace transform of a given function. Solve linear differential equation of order two with constant coefficients.
CO4	<ul style="list-style-type: none"> Compute and apply the important quantities associated with scalar fields such as partial derivatives of all order, the gradient vector and directional derivatives. Express the divergence, curl and scalar potential.
CO5	<ul style="list-style-type: none"> Evaluate Line, Surface, double and triple integrals. Use integrals to verify the seminal integral theorem as Green's theorem in the plane, Gauss divergence theorem and Stoke's theorem.

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Course Title: Business mathematics I
(For B.Com. (Gen))

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Restate the definition of sets.• Differentiate the elements and sets.• Demonstrate relation and functions of sets.
CO2	<ul style="list-style-type: none">• Distinguish between permutation and combination.• Solve the problem on binomial theorem.• Summarise the concepts of exponential and logarithmic series.
CO3	<ul style="list-style-type: none">• Define the term ratio.• Demonstrate the importance of proportions..• Solve the problems on ratios, proportion and variance.
CO4	<ul style="list-style-type: none">• Define the term differentiation .• Explain the concept of maxima and minima of univariate functions.• Judge and classify the concepts of maxima and minima.
CO5	<ul style="list-style-type: none">• Define the term interest.• Point out the important term of annuity and banker's discount.

Course Title: Business mathematics II
(For B.Com. (Gen))

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none">• Restate the definition of plane analytical geometry.• Demonstrate the Cartesian co-ordinate system.• Demonstrate gradient of straight line.
CO2	<ul style="list-style-type: none">• Distinguish between arithmetic mean and geometric mean.• Solve the problem on arithmetic mean and harmonic mean.
CO3	<ul style="list-style-type: none">• Understand the concept of integral calculus.• Demonstrate the meaning and rules of integration.• Solve the problems on integration by parts rule.
CO4	<ul style="list-style-type: none">• Define the term interpolation .• Explain the concept of binomial method.• Judge and classify the concepts of Newton and lagrange interpolation method).
CO5	<ul style="list-style-type: none">• Define the term matrix.• Point out the important term of matrix inversion, solution to linear equation.

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Course Title: Business Statistics and Operations Research – I
(For B.Com. (Gen))


Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Explain about classification and tabulation of statistical data • Plot the diagrammatic and graphical representation of data
CO2	<ul style="list-style-type: none"> • Explain about central tendency and calculate various measures • Explain how mean, median, mode are related in symmetric and skew symmetric distributions • Explain about dispersion and calculate various measures • Estimate the coefficient of variation using standard deviation • Investigate the uniformity or consistency of a data using coefficient of variation • Interpret the concept of skewness and methods to calculate its coefficient
CO3	<ul style="list-style-type: none"> • Define correlation and its types • Calculate and interpret correlation between two variables • Apply regression equations to estimate the values of unknown variable using the given data • Rank the given data and examine the rank correlation
CO4	<ul style="list-style-type: none"> • Define the nature and features of operations research • Explain the term LPP • Formulate and model a linear programming problem • Solve an LPP using graphical and simplex method • Identify a feasible solution and optimal solution using simplex method
CO5	<ul style="list-style-type: none"> • Explain basic components of network analysis and critical path • Define CPM and PERT • Construct the network using CPM and PERT techniques to plan, schedule and control project activities

Course Title: Business Statistics and Operations Research –II
(For B.Com. (Gen))

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Explain the term time series • Classify the various components of time series • Analyze the seasonal and cyclical pattern in series of time
CO2	<ul style="list-style-type: none"> • Interpret indices to identify trends in a data set • Construct simple and weighted price, quantity and value indices • Use the consumer price index to determine the purchasing power
CO3	<ul style="list-style-type: none"> • Explain basic probability axioms and rules • Calculate probabilities by using addition and multiplication law, with the terms independent and mutually exclusive events • Apply Baye's Theorem to solve real world events


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CO4	<ul style="list-style-type: none"> • Explain the Transportation problem and formulate it as LPP and solve the problem • Determine that an assignment problem is a special case of LPP and evaluate using Hungarian Method
CO5	<ul style="list-style-type: none"> • Define various terms and rules used in the Theory of Games • Identify strategic situations and represent them as games • Compute general solution of $m \times n$ rectangular games • Demonstrate graphical solution for $m \times 2$ and $2 \times n$ games

Course Title: NME-I QUANTITATIVE APTITUDE

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Define AND, OR, NOT, NOR, NAND gates. Solve the basic logic statements including simple statement and compound statements using truth tables and the properties of logic. Express a logic sentence in terms of logical connectives.
CO2	<ul style="list-style-type: none"> • Explain the surds and classify the order of surd, rationalize the denominator and solve the square root of surds.
CO3	<ul style="list-style-type: none"> • Demonstrate the importance of indices and solving through numerical examples.
CO4	<ul style="list-style-type: none"> • Recall the fundamental concepts of logarithms. Express the indices value as logarithmic function. Classify and categorize the logarithms and solve the logarithmic expressions.
CO5	<ul style="list-style-type: none"> • Solve the quadratic equations by completing the Square method. Restate the quadratic equation in a standard form and discuss the nature of Quadratic equations with illustrations.

Course Title: NME-II Numerical Methods

Course objectives

- To predict the future values using the existing data by applying the method of least squares.
- To use Interpolation formulae in finding future trend values in various fields like Business, Stock market etc.,

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> • Explain the principles of least squares and use it to fit a straight line and parabola with illustrated examples.
CO2	<ul style="list-style-type: none"> • Summarize the uses of Interpolation, extrapolation for equal and unequal intervals. • Explain the Newton forward and Backward interpolation formula and apply in solving solve the problem • Solve the missing terms for equal intervals using difference table.
CO3	<ul style="list-style-type: none"> • Distinguish the Newton divided difference formula and Lagrange's method • Solve the problems based on Newton divided difference formula and Lagrange's method for unequal intervals.
CO4	<ul style="list-style-type: none"> • Point out the importance of the Numerical differentiation using Newton Forward and Backward interpolation formula for equal intervals.
CO5	<ul style="list-style-type: none"> • Explain and solve the numerical integration using trapezoidal rule, Simpson's $1/3^{\text{rd}}$ rule and Simpson's $3/8^{\text{th}}$ rule and compare with actual integration.



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2.DEPARTMENT OF PHYSICS

PROGRAM SPECIFIC OUTCOMES

PSO1 - Understand, identify basic principles and concepts of various branches of Physics, correlate and solve the problems in the field of core and applied Physics.

PSO2 - Demonstrate the acquired knowledge of Physics on various scientific issues.

PSO3 - Design various experiments, electronic circuits investigate and become capable problem solver, using mathematical, conceptual and hands on skills.

PSO4 - Apply analytical abilities acquired from the class room / laboratory and promote scientific ideas, harness renewable and nonconventional energy resources.

PSO5 - Appreciate their experimental learning beyond the classroom; construct logical arguments, using technical language, develop programming skills, approach open-ended problems and innovate solutions.

SEMESTER – I

(SYLLABUS)

MECHANICS AND PROPERTIES OF MATTER

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) , K6(Creating)

CO1	To Discuss and use Laws of impact, study the behavior of rigid body dynamics.	K2,K3
CO2	Examine the definition for centre of gravity in hemisphere, hollow hemisphere, etc.	K3,K4
CO3	Study the elastic behavior in terms of three moduli of elasticity and working of torsion Pendulum. Study of bending of beams and analyze the expression for Young's Modulus.	K3,K4
CO4	Analyze the performance of hydrostatic and hydrodynamics.	K3
CO5	Explain the surface tension and viscosity of fluid and support the interesting phenomena associated with liquid surface. Soap films provide an analogue solution to many engineering problems.	K2,K3

ALLIED PHYSICS PAPER – I

(For I B.Sc. Mathematics students)

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,K5(Evaluating) ,K6(Creating)

CO1	Explain SHM, Extend their knowledge in the study of various dynamic motions analyzes and it demonstrates mathematically.	K2,K4
CO2	Explain their knowledge of understanding about materials and their behaviors and apply it to various situations in laboratory and real life.	K3
CO3	Comprehend basic concept of thermodynamics concept of entropy and associated theorems able to interpret the process of flow temperature physics in the background of growth of this technology.	K5
CO4	Articulate the knowledge about electric current resistance, capacitance in terms of potential electric field and electric correlate the connection between electric field and magnetic field and analyze them mathematically verify circuits and apply the concepts to construct circuits and study them.	K3,K4,K6
CO5	Apply the basic knowledge of principles and theory about behaviors of light and explain several phenomena we observe in daily the using mathematically interpretation.	K2,K3

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SEMESTER II
THERMAL PHYSICS AND ACOUSTICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	To acquire knowledge on how to distinguish between temperature and heat. Introduce him/her to the field of thermometry and explain practical measurements of high temperature as well as low temperature physics. Student identifies the relationship between heat capacity, specific heat capacity. The study of Low temperature Physics sets the basis for the students to understand cryogenics, superconductivity, superfluidity and Condensed Matter Physics	K2
CO2	Derive the efficiency of Carnot's engine. Draw the significance of first law and second law of thermodynamics. Discuss the implications of the laws of Thermodynamics in diesel and petrol engines and analyze their performance of thermodynamic systems viz efficiency by problems. An Insight into thermodynamic properties like enthalpy, entropy.	K4
CO3	Study the process of thermal conductivity and apply it to good and bad conductors.	K3
CO4	Understand physical characteristics of SHM and obtaining solution of the oscillator using differential equations. Use Lissajous figures to understand SHM vibrations of same frequencies and different frequencies.	K3
CO5	Familiarize with general terms in acoustics like intensity, loudness, reverberation, etc., and study in detail about production, detection, properties and uses of ultrasonic waves.	K2

CORE PRACTICAL-I

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Apply the knowledge of mathematics physics fundamentals and using instrumentation, technics to arrive at solutions for various problems.	K3
CO2	Translate basics laws and theories to demonstrations to determine various preparations of materials given.	K2
CO3	Relate application of experiment in real life situation.	K3
CO4	Demonstrate experiments involving basic concept of properties of matter, sound, heat, optics and usage of KT tools.	K3



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SEMESTER – II
Allied Physics – II

(For I B.Sc. Mathematics students)

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,K5(Evaluating) ,K6(Creating)

CO1	Explain the concepts of Interference diffraction using principles of superposition of waves, Interpret wave patterns,	K2
CO2	Outline the basic foundation of different atom models and various experiments establishing quantum concepts. Relate the importance of interpreting improving theoretical models based on observation. Appreciate interdisciplinary nature of science.	K3,K4
CO3	Summarize the properties of nuclei, nuclear forces structure of atomic nucleus and nuclear models. Solve problems on decay rate half life and mean life. Interpret nucleus process like fission fusion and production of nuclear energy in nuclear reactors atom bombs and stars.	K3,K2
CO4	To describe the basic concepts of relativity like equivalence principle, inertial frames and Lorentz transformation. Extend their knowledge on concepts of relativity and translate the mathematical equation to physical concepts and vice versa.	
CO5	Summarize the working of semiconductor devices like junction diode, zener diode, transistors. Interpret the real life solutions using AND, OR, NOT basic logic gates and intend their ideas to universal building blocks. Infer operations using Boolean algebra and acquire elementary ideas of IC circuits.	K2
CO6	Construct circuits using semiconductor devices and ICs and analyze their working.	K3,K4

NON MAJOR ELECTIVE PAPERS

1. PHYSICS IN EVERYDAY LIFE – I

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Extend the basic knowledge of workforce energy to understand real life happening.	K2,K3
CO2	Relate different forms of energy and interpret working of various appliances / concepts involving energy.	K2,K3
CO3	Demonstrate the application of heat energy in everyday life.	K2,K3
CO4	Build the concepts and understanding about light its proportion various phenomena.	K2,K3
CO5	Extend the knowledge of heat to understand the principle behind various happenings day to life.	K2,K3



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2. PHYSICS IN EVERYDAY LIFE – II

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)


CO1	Apply the idea of Bernoulli's theorem to interpret various important things around us.	K2,K3
CO2	Summarize principles of physics to understand the concept of real life situation.	K2,K3
CO3	Plan experiments to translate the learning into hands on activities.	K2,K3
CO4	Relate the optical phenomena in sky and space with knowledge of light.	K2,K3
CO5	Construct demonstration and build on the basic ideas on sound and acoustics.	K2,K3

2. ASTROPHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Extend the knowledge of optics to understand the working various astronomical instruments	K2,K3
CO2	Outline various physical concepts of Solar System	K2,K3
CO3	Interpret the Solar System based on various models	K2,K3
CO4	Rephrase the concept of Stellar evolution under white dwarf – Supernovae	K2,K3
CO5	Apply their knowledge and develop cognition about theories of universe and galaxies	K2,K3


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3. NON CONVENTIONAL ENERGY SOURCES

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Extend the knowledge on conventional energy and renewable energy to understand Solar energy	K2,K3
CO2	Explain application of Solar energy for various purposes	K2,K3
CO3	Translate the idea of renewable energy resource to understand wind energy	K2,K3
CO4	Outline the concept of utilizing tidal energy and the process behind	K2,K3
CO5	Summarize the nature and application of chemical and nuclear energy	K2,K3

5. BIOPHYSICS


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Extend the knowledge on hydrodynamics to understand the fluid flow under various circumstances.	K2,K3
CO2	Explain the physiology of respiration using the concept of transport of gases.	K2,K3
CO3	Interpret hearing and the physics of audition.	K2,K3
CO4	Construct the ideas to understand vision, power of eye myopia and hypermetropia.	K2,K3
CO5	Rephrase various concept of biomechanics, locomotion in the background of laws of physics.	K2,K3

6. INTRODUCTION TO NUMERICAL METHODS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Apply the concept of statistics to solve problems in Physics	K2,K3
CO2	Extend the knowledge probability to compare error analysis	K2,K3
CO3	Solve various numerical problems having the idea of curve fitting	K2,K3
CO4	Demonstrate computational techniques for solving related problems	K2,K3
CO5	Solve numerical problems using Trapezoidal rule- Simpson's rule	K2,K3


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7. CONTRIBUTION OF INDIA TO MODERN SCIENCE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the view of world in the Greco- Roman perspective.	K2,K3
CO2	Compare and contrast Indian knowledge system with Western World view summarize contribution of our country to Mathematics and astronomy.	K2,K3
CO3	Outline the idea of cognition in plants impact of Swami Vivekanandha, J.C Bose, Schrodinger and Heisenberg. Interpret evolution of duality principle.	K2,K3
CO4	Relate the growth of science and Technology with great trigonometrical survey of India	K2,K3
CO5	Interpret the importance of Triple helix Structure based on x-ray crystallography and outline the contribution of many Indian Physicist	K2,K3

SEMESTER – III

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Outline basic knowledge of principles and theories about the behavior of light.	K2
CO2	Discuss the principle of superposition of wave so thus, uses these ideas to understand the wave nature of light through working of interferometer.	K2
CO3	Extend the knowledge about nature of light through diffraction techniques; apply mathematical principles to analyze the optical instruments.	K2,K3,K4
CO4	Interpret basic formulation of polarization and gain knowledge about polarimeter .	K3
CO5	Relate the principles of optics to various fields such as spectroscopy and laser physics.	K3

ALLIED PHYSICS PAPER – I

(For II B.Sc. Chemistry students)

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,K5(Evaluating) ,K6(Creating)

CO1	Explain SHM, Extend their knowledge in the study of various dynamic motions analyzes and it demonstrates mathematically.	K2,K4
CO2	Explain their knowledge of understanding about materials and their behaviors and apply it to various situations in laboratory and real life.	K3
CO3	Comprehend basic concept of thermodynamics concept of entropy and associated theorems able to interpret the process of flow temperature physics in the background of growth of this technology.	K5
CO4	Articulate the knowledge about electric current resistance, capacitance in terms of potential electric field and electric correlate the connection between electric field and magnetic field and analyze them mathematically verify circuits and apply the concepts to construct circuits and study them.	K3,K4,K6
CO5	Apply the basic knowledge of principles and theory about behaviors of light and explain several phenomena we observe in daily the using mathematically interpretation.	K2,K3



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SEMESTER – IV
ATOMIC PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,K5(Evaluating) ,K6(Creating)


CO1	Identify the properties of positive rays and explain various man spectrographs.	K3
CO2	Demonstrate a working, quantitative understanding of the photoelectric effect and list same photoelectric devices and explain performance.	K2
CO3	Develop semi classical model of the atom and show how these model lead to quantum mechanics.	K4
CO4	Apply selection ruler and analyze the fine structure of atomic spectra.	K4
CO5	Make use of the effect of magnetic field on atomic spectra and explain normal and anomalous Zeeman effect.	K3
CO6	Distinguish between continues and characteristic X-ray spectra and to input how the Compton established the particle nature of radiation.	K4

CORE PRACTICAL-II

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Develop skills to understand the concept of elastic constants of solid and acquire knowledge of applications.	K3
CO2	Demonstrate experiments to involving various optical phenomena, principles, workings and application of optical instruments.	K2
CO3	Apply standard method to calibrate the analog meters and to measure various physical quantities.	K3


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Allied Physics – II
(For II B.Sc.Chemistry students)

Course Outcomes: At the end of the Course, the Student will be able to:


Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing)
,K5(Evaluating) ,K6(Creating)

CO1	Explain the concepts of Interference diffraction using principles of superposition of waves, Interpret wave patterns,	K2
CO2	Outline the basic foundation of different atom models and various experiments establishing quantum concepts. Relate the importance of interpreting improving theoretical models based on observation. Appreciate interdisciplinary nature of science.	K3,K4
CO3	Summarize the properties of nuclei, nuclear forces structure of atomic nucleus and nuclear models. Solve problems on decay rate half life and mean life. Interpret nucleus process like fission fusion and production of nuclear energy in nuclear reactors atom bombs and stars.	K3,K2
CO4	To describe the basic concepts of relativity like equivalence principle, inertial frames and Lorentz transformation. Extend their knowledge on concepts of relativity and translate the mathematical equation to physical concepts and vice versa.	
CO5	Summarize the working of semiconductor devices like junction diode, zener diode, transistors. Interpret the real life solutions using AND, OR, NOT basic logic gates and intend their ideas to universal building blocks. Infer operations using Boolean algebra and acquire elementary ideas of IC circuits.	K2
CO6	Construct circuits using semiconductor devices and ICs and analyze their working.	K3,K4

Allied Physics – Practical

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Relate scientific methods and recall the process of measuring different physical variables.	(K2)
CO2	Demonstrate the fundamentals of instrumentation data acquisition and interpretation of results.	(K2)
CO3	Apply the concepts of Physics to understand material properties.	(K3)
CO4	Experiment with fundamental of optics, acoustics, electricity and magnetism.	(K3)


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SEMESTER – V
ELECTRICITY AND ELECTROMAGNETISM

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate the relationship between thermodynamics and electricity. (K2)
CO2	Compare and contrast D.C and A.C circuits. (K2)
CO3	Apply theorems to construct and solve electric circuits. (K3)
CO4	Design and construct experiments as well to analyze and interpret magneto static concepts. (K4,K6)
CO5	Relate the principles and of electromagnetic and build simple circuits involving inductors. (K3)
CO6	Discuss the four fundamental equation that govern all electromagnetic phenomena.(K2)

MATHEMATICAL METHODS IN PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

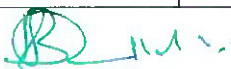
CO1	Discuss basic mathematical concepts in vector calculus and apply them to solve problems in hydrodynamics.	K2
CO2	Outline the fundamentals of matrixes and illustrate their importance in physics.	K2
CO3	Explain special functions such as Beta Gamma and series solution of Bessel and Legendre differential equations.	K2
CO4	Deduce Lagrangian equation of motion and compute solutions of various simple physical systems.	K5
CO5	Solve Hamiltonians of simple system and derivations of equation of motion.	K3

SOLID STATE PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Summarize the fundamentals of crystals structure; Related the significance of crystal study with industry and other applications.	(K2)
CO2	Experiment with X-ray diffraction techniques; Apply proper methods to explore crystal imperfections.	(K3)
CO3	Compare and contrast bonding in crystals.	(K5)
CO4	Investigate the theoretical fundamentals of lattice vibrations; The theory with the applications such as super conductivity.	(K5)
CO5	Analyze concepts of dielectrics; Categorize types of polarization and apply theory to inspect different types of materials.	(K4)
CO6	Compare the different types of magnetic materials and discuss the necessary theory to understand their basic properties of magnetic materials.	(K5)


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BASIC ELECTRONICS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Interpret the conductivity behavior of solids based on their knowledge acquired in atomic physics course. Explain the properties of semiconductors, their basic configuration, their characteristics, construct and analyze various electronic circuits which have very relevant applications, classify various rectifier circuits based on their efficiency and components used.	K2,K3,K4
CO2	To extend the ideas of diodes to understand transistors, build amplifier circuits and analyze based on various parameters.	K3
CO3	Classify various transistors amplifier circuits based on their nature, characteristics and working.	K3
CO4	Develop oscillators, models using amplifiers construct, classify and categorize various types of oscillators. Extend these oscillators towards designing different types of multivibrators.	K3
CO5	Identify the need for special semiconductor devices, Extend their theoretical knowledge in construction of these devices and analyze their behavior using application oriented electronic circuits.	K3,K4

ELECTIVE 1

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)


CO1	Summarize the characteristics of operational amplifier its parameters and construct circuit to perform various mathematical operation.	K2,K3
CO2	Solve simultaneous equation and differential equation using electronic circuit analyzes the performance of electronic circuit in handling mathematical equations. Design circuits to generate waveform to perform analog computation.	K3,K4,K6
CO3	Extend their knowledge of digital analog circuit to understand 555 times, design circuits which are very commonly used in various applications.	K4
CO4	Compare digital and analog systems, discuss the need for conversion and design circuits for the same.	K4
CO5	Classify semiconductor memories based on the principle of operation, categorize and compare them based on the size and other memory parameters.	K2

I b NUMERICAL METHODS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Solve simultaneous equations using method of triangularisation	K2,K3
CO2	Find the inverse of a matrix using Gauss Jordan Method	K3
CO3	Solve Algebraic, Transcendental and Differential Equation using different methods	K3,K4
CO4	To fit a curve for the given data using principles of least squares	K3,K4
CO5	Integrate the functions using different rules like Simpsons 1/3 rule	K3,K4


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ELECTIVE I c. PROBLEMS SOLVING SKILLS IN PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Think Laterally and provide necessary solution	K2,K3
CO2	Use appropriate mathematical methods to given problem	K3
CO3	Verify whether the answer obtained is correct or not	K3,K4
CO4	Use logical and other skills to solve problem	K3,K4
CO5	Clear all the entrance examinations leading higher education in premier institutions	K3,K4

SEMESTER - VI

RELATIVIY & QUANTUM PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	To describe the basic concepts of relativity and to translate the mathematical equations to physical concepts and vice-versa.	(K2)
CO2	To identify the wave nature of matter; to illustrate the wave-particle duality with experiments.	(K3)
CO3	To apply the concepts of basic postulates Quantum mechanics; compute the Schrodinger equation for the systems.	(K3)
CO4	Associated the Quantum mechanics wave functions with the corresponding operators and eigen values.	(K4)
CO5	To deduce angular momentum operators. To evaluate various commutator relations of orbital and spin angular momenta.	(K4) (K5)
CO6	To solve the Schrodinger equation of physically important one dimension potentials.	(K5)
CO7	To estimate the shape of wave functions; to conceive methods such as separation of variables to solve three dimension problems.	(K6)



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NUCLEAR AND PARTICLE PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Characterize nuclei based on their general properties and describe qualitatively models of nuclear structure.	K2
CO2	Outline the mechanism of radioactivity and summarize the necessary theories related to it.	K2
CO3	Quantify radioactivity and describe its dependence using concepts of half life.	K2
CO4	Relate the properties of nature of nuclear system with radiation detectors and particle acceleration.	K3
CO5	Paraphrase basic aspects of nuclear reaction and calculate Q-value and realize the nature of the reaction.	K2
CO6	Apply the fission and fusion well as nuclear energy in nuclear reactors and stellar energy in star.	K3
CO7	Appraise the theoretical prediction of nuclear reaction to understand the host of sub atomic particle nature reveals.	K5

Elective II

(Any one of the three below)

I a.DIGITAL ELECTRONICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Classify numbers based on various number systems using digital technology and apply to solve binary operation.	K2,K3
CO2	Interpret real life situations using AND, OR, NOT, basic logic gates and extend their ideas to universal building blocks. Infer operation using Boolean Algebra simplify using mapping techniques.	K3
CO3	Construct analyze digital circuits - combinational and using logic circuits.	K3,K4
CO4	Build sequential circuits and analyze working.	K3,K4
CO5	Construct digital circuits – registers and counters analyze their working.	K3,K4
CO6	Explain basic of IC technology various process during fabrication and integration.	K2

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ELECTIVE II b. GEOPHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,
K5(Evaluating) ,K6(Creating)

CO1	Understand the different layers of the atmosphere.	K2,K3
CO2	Know the details about geophysical and chemical methods	K3
CO3	Gain sufficient knowledge on the earthquakes and Tsunami warning systems	K3,K4
CO4	Have an idea on geomagnetism and gravity	K3,K4
CO5	Understand the radioactivity of the earth	K3,K4

ELECTIVE II c. MEDICAL PHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) ,
K5(Evaluating) ,K6(Creating)

CO1	Functional knowledge regarding the need of radiological protection	K2,K3
CO2	Gain knowledge on diagnostic and therapeutic application like X-rays, Ultrasound imaging , Magnetic resonance imaging etc.,	K3
CO3	Gets familiar with various detectors used in medical imaging	K3,K4
CO4	Hands on training which will be useful for the students to enter the job market	K3,K4
CO5	Learn importance concepts of radiation as an applied knowledge	K3,K4



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Elective III
(Any one of the below four)
III a. MICROPROCESSOR FUNDAMENTALS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the basic concepts of microprocessor architecture and describe the functions of different pins.	K2
CO2	Apply programming instruction sets of microprocessor and execute assembly language programs.	K3
CO3	Recognize basic ideas of memory; Extend their knowledge in memory interfacing to 8085.	K2
CO4	Apply the programming techniques to interface I/O ports to 8085.	K3
CO5	Developing algorithm to find solution for real time problems.	K6

ELECTIVE III b. FIBRE OPTICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Understand the overview of communications signals transmitted over optical fibers and optical fiber communication devices.	K2,K3
CO2	Understand the importance of fiber optic material like GA As laser, LED, modulation formats and modulation and demodulation.	K3
CO3	understand and differentiate losses and couplers and its function	K3,K4
CO4	Understand the basic concepts in the process involving the parameters like modulation and demodulation.	K3,K4
CO5	Learn the various fiber optic materials.	K3,K4


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ELECTIVE III c. ASTROPHYSICS

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	There are many institutions have the department as Department of Physics and Astronomy that offers courses and jobs for the students those who study Astrophysics.	K2,K3
CO2	The Indian institute of Astrophysics and several other astronomical institutions offer the job opportunities based on this course.	K3
CO3	Later in future after the study and experience, the job opportunities are available in famous Indian agencies like DRDO and ISRO and in foreign astronomical institutions and agencies	K3,K4
CO4	Understand the evolution of stars, white dwarfs, binary stars, quasars	K3,K4
CO5	Learn about various galaxies, cosmic rays	K3,K4

ELECTIVE III d. WEATHER FORECASTING

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)


CO1	To learn basic techniques to measure temperature and its relation with cyclones and anti-cyclones..	K2,K3
CO2	Gain knowledge of simple techniques to measure wind speed and its directions, humidity and rainfall	K3
CO3	Understand various causes of climate change like global warming, air pollution, aerosols, ozone depletion, acid rain	K3,K4
CO4	Develop skills needed for weather forecasting.	K3,K4
CO5	Uncertainties in predicting weather based on statistical analysis.	K3,K4

CORE PRACTICAL III

Course Outcomes: At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	The student will be able to Analyze the nature of light both quantitative and quantitatively.	K4
CO2	Apply the theory the design basic electrical circuits.	K3
CO3	Associate theoretical concepts like seebeck effect and electromagnetism with practical demonstration.	K4


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CORE PRACTICAL IV

Course Outcomes:

At the end of the Course, the Student will be able to:

Knowledge level - K1(Remembering) ,K2(Understanding),K3(Applying) ,K4(Analyzing) , K5(Evaluating) ,K6(Creating)

CO1	Substitute basic laws and theories learnt in class to use junction diode, Zener diode, transistors etc.	K2
CO2	Apply the theory to design basic electrical circuits.	K3
CO3	Analyze the response of various electrical devices using the circuits construction.	K4
CO4	Interpret the application of basic circuit to create amplification, oscillation, regulate power supply, logical combinations etc.	

CORE PRACTICAL V

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Solve combinational circuits of linear IC's and compute the necessary output.	K3
CO2	Relate the theory learnt to design OP-AMP and IC-555 circuits.	K3
CO3	Apply the algorithm learnt in classroom to write and execute assembly language program using 8085 Microprocessor.	K3
CO4	Correlate theoretical and practical ideas with software	K4



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3.B.Sc. Chemistry

PROGRAM SPECIFIC OUTCOMES (PSO's)

At the time of graduation, our under graduates would be able to:

PSO 1- Evaluate, analyze, interpret and effectively apply the basic laws, principles, phenomena, processes and mechanisms involved in the domain of organic, inorganic, physical and analytical Chemistry

PSO2 - Demonstrate the knowledge of Chemistry in the domain of research, education and perspective entrepreneurship.

PSO3 - Evaluate distinct problems in the field of chemical data analysis, scientific interpretation and reaction mechanisms with an understanding on basic tools to be employed.

PSO4 – Apply the knowledge of Chemistry to appreciate, develop and test the theoretical aspects for applications in environment, materials, medicines, and technology.

PSO5 - Employ standard laboratory equipment, instrumentation and classical techniques to carry out experiments and develop skills to interpret and explain the validity of experimental data in terms of accuracy and underlying theory.

COURSE TITLE: CORE I - GENERAL CHEMISTRY –I

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Calculate the thermal energy of gases using kinetic theory of gases and it can be compared with the results of principle of equipartition of energy - Identify the distribution of molecular velocities using Maxwell equation and - calculate the mean, root mean square and most probable velocity of gases - Assess an ideal and non-ideal behaviour of gases with the help of various equation of states -Use the basic concepts of gaseous state in thermodynamic study
CO 2	Differentiate work and heat, isothermal and adiabatic processes, reversible and irreversible processes - Calculate enthalpy change for a given reaction from heat capacity data - Calculate work, heat, ΔU , ΔH , for reversible and irreversible processes from First law of thermodynamics.
CO 3	Classify metals, non-metals and metalloids - Explain chemical behaviour of the elements from periodic properties - Determine electronegativity using Pauling scale - Justify factors affecting the periodic properties
CO 4	Analyse the basic radicals in a given sample from the concepts of solubility, solubility product, and common ion effect - Estimate the amount of substance present in the whole of the given solution from the principles of volumetric analysis
CO 5	Compare the stability of intermediates, acidity of carboxylic acids, basicity of amines from polar effects - Assess the chemistry of alkanes - Differentiate Conformation and configuration



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COURSE TITLE: CORE II - GENERAL CHEMISTRY – II

Course Code :	Credits : 05
L:T:P:S : 6:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Calculate packing fraction, radius ratio, density of crystals – Determine interplanar distance in crystals from X-ray diffraction data - Explain the conductance of insulators, semiconductors, superconductors
CO 2	Calculate heat of reaction, heat of solution, heat of dilution, bond energy, bond enthalpy for a given thermochemical reaction from thermodynamic data.
CO 3	Calculate lattice energy from Born-Haber cycle and assess the factors affecting lattice energy - Determine the hybridisation and shapes of simple inorganic molecules from VSEPR and VB theory - Sketch the Molecular orbital diagram for homo and hetero diatomic molecules.
CO 4	Analyse physical and chemical properties and applications of alkali and alkaline earth metals - Compare stabilities of carbonates of alkaline earth metals - Compare the solubility of sulphates of alkaline earth metals - Restate the special position of hydrogen in the periodic table
CO 5	Compare the stability of intermediates from the concept of aromaticity - Assess the mechanism of electrophilic substitution reaction in polynuclear hydrocarbons and it's reactivity towards the same reaction.
CO 6	Assess the mechanism of S_N1 , S_N2 , and S_Ni reactions and analyse the effect of substrate structure, base, temperature, solvent, nucleophiles towards the same reactions - Analyse the reactions of halogen derivatives and poly halogen derivatives.

COURSE TITLE: CORE III INORGANIC QUALITATIVE ANALYSIS

Course Code :	Credits : 04
L:T:P:S : 6:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60


Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Identify the interfering and non-interfering anions (Acid radicals) in a given inorganic mixture systematically by semimicro qualitative analysis
CO 2	Eliminate interfering radical to analyse cations (Basic radicals)
CO 3	Identify cations in a given mixture from the knowledge of solubility, solubility product and common ion effect

COURSE TITLE: NME – I DETECTION OF ADULTERANTS IN FOOD PRACTICAL-I**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Identify the glassware commonly used in the Chemistry laboratory and know how to properly utilize the glassware (K1)
CO2	Recognize the colors and adulterants present in foods and beverages (K1)
CO3	Classify the food additives and discuss their functions (K2)
CO4	Analyse the food products and identify the adulterants (K4, K1)

COURSE TITLE: SIGNIFICANCE OF CHEMISTRY IN EVERYDAY LIFE –II


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Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

COURSE OUTCOMES:

At the end of the Course, the Student will be able to:

CO1	Determined the pH of the soft drink and shampoo whether the acid or base
CO2	Identified the soil are acid or base which type of soil are suitable for agriculture
CO3	Determined the quality of in various commercial available milk product
CO4	Understand adsorption concept involved in activated charcoal
CO5	Redox reaction and Equilibrium reaction and non equilibrium reaction
CO6	Determination of unknown glucose solution using clock reaction
CO7	Estimation of iron in adulterated tea powder (iron fillings) and Thin layer chromatographic analysis of stic pens/ gel pens.

COURSE TITLE: CORE IV – GENERAL CHEMISTRY- III

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the II law of Thermodynamics, necessity for the II law, different statements of II law, Carnot cycle, concept of entropy, including Clausius inequality, Gibb's free energy, Helmholtz free energy, Gibb's-Helmholtz equations and its applications.
CO2	Explain the concept of partial molar properties.
CO3	Explain the different laws for ideal solution (Raoult's law & Henry's law), discuss about non ideal solution, azeotropes, partially miscible liquid systems Discuss the various colligative properties and methods of determining them.
CO4	Discuss about partially miscible liquid systems (phenol-water, water-triethylamine, water-nicotine) and partition coefficient
CO5	Explain the general periodic trend, preparation and properties of electron deficient boron compounds, difference between carbon and silicon from the rest of the family.
CO6	Explain types of oxides and oxyacids, their structure and reactivity of nitrogen, oxygen. Discuss the periodic properties and reactivity of halogen family. Explain the properties of interhalogen compounds and pseudo halogens. Explain the periodic position of noble gases, structure and properties of Xenon compounds
CO7	Explain the methods of preparation and properties of aliphatic alcohols, phenols and polyhydric phenols.
CO8	Explain the classification, preparation and properties of alkyl and aryl ethers. Discuss the preparation, properties of epoxides and importance of crown ethers.
CO9	Explain the reactivity of carbonyl compounds, preparation, oxidation and reduction of aldehydes and ketones.
CO10	Discuss the preparation of dialdehydes and diketones.

COURSE TITLE: ALLIED PAPER CHEMISTRY – I (For Mathematics & Physics)

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Course Outcomes: At the end of the Course, the Student will be able to:

CO1	define various terms in nuclear chemistry and distinguish their application (K1, K2)
CO2	identify the chemical compounds used in fuels, fertilizers and polymer (K1)
CO3	analyze hardness water and the importance of water treatment techniques (K4)
CO4	describe the types of reagent and reaction and differentiate their nature based on polar effects (K1, K4)
CO5	predict the feasibility of thermal reaction from the concepts of entropy, enthalpy and internal energy (K2)
CO6	explain the basic concepts of chemical kinetics & photochemistry and calculate the order of the reaction (K2, K3)

COURSE TITLE: ALLIED PAPER CHEMISTRY – I (For Botany Major)

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discuss the applications of nuclear energy for useful purposes and radio isotopes in medical and industrial field and also explain the radio activity, predict the products in nuclear reactions
CO2	Predict the geometry of organic compounds by using concept of hybridization and analyze the various types of organic reactions like addition, substitution, elimination...etc. and Assess the mechanism of reactions like nitration, halogenation, and alkylation.
CO3	Calculate the efficiency of heat engine and Predict the spontaneity of various thermodynamic processes using the concepts such as entropy, Gibbs free energy and enthalpy.
CO4	Outline the different types of fuels and its applications and convert hard water into soft water from the concepts of zeolite, reverse osmosis and demineralization processes.
CO5	Demonstrate the usage of various types of preservatives to preserve the specimens and explain the environmental pollutions like water pollution, soil pollution, air pollution and its adverse effects.

COURSE TITLE: CORE V – GENERAL CHEMISTRY


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Course Code :	Credits : 05
L:T:P:S : 6:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1.	To contribute the first and second law of thermodynamics to equilibrium of reactions and to discuss the concept of entropy. [K3]
CO 2	To deduce the phase rule and interpret the same for various binary and ternary mixture[K4]
CO 3.	To infer the periodic properties and discuss the concentration of ores for the extraction of metals. [K5]
CO 4.	To distinguish the optical and geometrical isomerism of co-ordination complexes[K3]
CO 5.	To discuss the preparation and properties of carboxylic acids.[K3]
CO 6.	To discuss the amines, nitro and heterocyclic compounds.[K3]

COURSE TITLE: CORE VI - VOLUMETRIC AND PREPARATION PRACTICAL

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Estimate the amount of metal ions like copper, silver, zinc, calcium present in the solution
CO2	Prepare various chemical compounds such as Ferrous ammonium sulphate, sodium thiosulphate pentahydrate.
CO3	Show the preparation of various concentrations of solutions from stock solution.
CO4	Differentiate the chemical substances as acid, base, oxidizing and reducing agents.
CO5	Assess the choice of indicators according to the pH involved in the titrations.
CO6	Explain the volumetric laws and concept of normality, molarity, molality, and equivalent mass

COURSE TITLE: ALLIED CHEMISTRY-II (For Mathematics and Physics)


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Course Code:
L:T:P:S: 4:0:0:0
Exam Hours:03

Credits:04
CIA Marks:40
ESE Marks:60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Deduce the basic principles and reaction involving coordination compounds and illustrate the biological role of coordination complexes.
CO2	Infer the structure and functions of simple and essential biomolecules.
CO3	Evaluate the phase rule and reduced phase rule to simple binary systems.
CO4	Implement electrochemical series and types of cells to devise electroplating process and conductometric titrations.
CO5	Describe the principles of volumetric analysis and summarize chromatographic separations and purification techniques.

Course Title: ALLIED PAPER CHEMISTRY – II (For Botany)

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

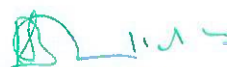
CO1	Predict the geometry of coordination compounds using the concept of hybridization and estimate the metal ions like nickel, aluminum etc., present in the given sample gravimetrically by converting them into coordination compounds
CO2	Explain various types of sugars and amino acids and the inter conversions, preparation and properties of sugars.
CO3	Analyse the adulterants in various food samples like sugar, salt, turmeric powder, honey etc., and the need for Choice of proper balanced diet from calorific values of different food
CO4	Demonstrate the usage of herbs like thulasi, kezhaneli, neem as remedies for common diseases and Explain the importance of chemistry in siddha, Ayurveda and homeopathy medicines
CO5	Explain the various volumetric solutions and estimate the amount of solute present in the given solution by volumetric principles –separate the organic compounds by using chromatographic techniques like column, paper, thin layer chromatography.

**COURSE TITLE: ALLIED CHEMISTRY PRACTICALS
(PHYSICS, MATHEMATICS AND BOTANY)**

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Define the various terms and outline the principles of volumetric analysis (K1, K4)
CO2	Perform the volumetric analysis and estimate the quantity present (K2)
CO3	Identify and analyze organic compounds (K2)

COURSE TITLE: CORE VII - ORGANIC CHEMISTRY-I


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Course Code:	Credits:04
L:T:P:S:	CIA Marks:40
Exam Hours:03	ESE Marks:60

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Predict the structure and stereochemistry of simple organic compounds and analyse optical isomerism in compounds with chiral centre, chiral axis and chiral plane.
CO2	Differentiate geometrical and optical isomerism and devise conformational analysis of acyclic and cyclic systems.
CO3	Infer the fundamental laws of spectroscopy and selection rules; Interpret electronic spectroscopy and Infrared Spectra of organic molecules.
CO4	Illustrate the principle and instrumentation of NMR and to examine the spectra of simple organic molecules.
CO5	Deduce the mechanism of molecular rearrangements and cite the importance of organic dyes.

COURSE TITLE: CORE VIII - INORGANIC CHEMISTRY I

Course Code :	Credits : 04
L:T:P:S : 6:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1.	To assess the concept of electronic arrangement, various oxidation states and their exclusive magnetic properties of lanthanides and actinides [K2]
CO 2	To predict the shape, geometry, hybridisation, magnetic properties and stability of various six and four membered octahedral and square planar complexes of 3d series transition metals. [K2]
CO 3.	To discuss the about the origin and concept of pollution arising from metals and chemicals which affects the environment that includes biosphere, hydrosphere, atmosphere and lithosphere. [K3]
CO 4.	To acquire knowledge on the various donor systems donating sigma and pi bonds involved in the structure, bonding and properties pertaining to utility nature of organometallic compounds comprising of Pb, Zn, Li Cu and B. [K3]
CO 5.	To distinguish the structure of solids as hcp/ccp based on the arrangement of atoms in the crystal lattice and establish the nature of the crystal lattice as FCC or BCC or SCC[K2].

Course Title: CORE IX - PHYSICAL CHEMISTRY- I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the basics of atomic structure (related problems) including wave particle duality
CO2	Predict the number of microstates and macro states for given set of particles and outline about Maxwell-Boltzmann statistics
CO3	Provide an insight into the kinetics aspects of chemical reactions and derive kinetic equations
CO4	Discuss the basic of ionics and applications of conductance measurements
CO5	Discuss the basics of electrode potential, cell and its applications to practical purposes

COURSE TITLE: ELECTIVE I - ANALYTICAL CHEMISTRY

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Course Outcomes: At the end of the Course, the Student will be able to:

CO 1.	To enumerate on Laboratory hygiene and safety and to tabulate the statistical analysis of data. [K1]
CO 2	To quantify the ions gravimetrically and assess the differential weight with respect to temperature thermogravimetrically. [K3]
CO 3.	To identify different currents, and distinguish metal ions by half wave potential from polarogram. To determine the end point of the titrations by amperometry. To interpret the presence of racemic mixture by polarimeter. [K3]
CO 4.	To analyse the mixture using column, paper, HPLC, and gas chromatography. [K4]
CO 5.	To deduce and quantify the presence of metal ions by flame emission and atomic absorption spectroscopy. [K3]

COURSE TITLE: ELECTIVE I - PHARMACEUTICAL CHEMISTRY

Course Title: CORE X - ORGANIC CHEMISTRY II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	They can define & classify carbohydrates They can differentiate between configuration & conformation .They can draw the fischer, newmann conformation for simple molecules like D-glucose & can draw the structure of polysaccrides like starch & cellulose. They can compare / differentiate the reactivity of glucose & fructose. They can able to interconvert various forms of sugars. They can predict the products/ propose the mechanisms. They can determine the ring size- pyranose & furanose form.
CO2	They can classify reducing & non-reducing sugars. They can able to draw the structure of starch & cellulose.They can determine the structure of sucrose, maltose & lactose by chemical degradation.
CO3	They can able to define amino acids, proteins & polypeptides. They can able to classify proteins & peptides. They can draw and determine the structure of proteins by end group analysis. They can understand the biological importance proteins & amino acids.
CO4	They can draw the structure of base like adenine & guanine. They can able to differentiate nucleotides & nucleoside. They can explain the structure of DNA & RNA. They can define, steroids, fatty acids & classify fats. They can draw the structure of vitamin A & Steroids like cholesterol. They can understand the biological importance of DNA & RNA.
CO5	They can draw the simple structure of terpenoids like citral , geraniol. They can able to explain the synthesis of important terpenoids like piperine, papaverine.They can determine the structure of terpenoids by chemical degradation method.



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Course Title: CORE XI - INORGANIC CHEMISTRY
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Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Qualitative analysis very useful to identified various oxidation state of the metal. 18 electron rule to understanding the stability of various carbonyl complex
CO2	Therapeutic chelating agents are used as antidotes for heavy metal poisoning. EDTA and other complexing agents have been used to speed the elimination of harmful radioactive and other toxic elements from the body. (e.g. Pb^{2+}). In these cases a soluble metal chelate is formed.
CO3	Chelating agents can be used as Synthetic detergents such as tripolyphosphate. The chelating agent sequesters hard-water cations, rendering them incapable of interfering with the surfactant. Gravimetric Analysis : Here chelating ligands are often used to form insoluble complexes e.g. $Ni(DMG)_2$ and $Al(oxine)_3$. So we can estimate amount of ion present in unknown solution
CO4	Rationalize the synthesis, structure, bonding, properties and reactivity of both main group and transition metal organized Industrially important catalytic processes through the application of organometallic principles. Work to a professional level of skills in a chemical synthesis laboratory demonstrating effective laboratory safety and etiquette especially in the areas of handling of air sensitive reagents, chromatographic techniques and spectroscopic characterization
CO5	Clathrate compounds used as medical applications such as in magnetic resonance imaging. Used to study the photo-behaviour of organic and inorganic molecules by introducing them as probes (guests) into clathrate cages. Resolution of racemic mixtures. Zeolites can remove atmospheric pollutants, ozone-depleting CFC's and harmful organics from water.
CO6	understand and calculate the mass defect for a nuclear reaction and calculate nuclear binding energy Define the age of an object (radiochemical dating) Differentiated Artificial radioactivity and induced radioactivity, how energy produced from different type of reactor
CO7	Recognize and uses of proton, neutron, electron, positrons, alpha particles, beta particles and gamma particles. Comparing the penetrating power of alpha particles, beta particles and gamma particles. Qualitatively interpret a decay series. Recognize a band stability plot and be able to predict the type of decay that a nucleus will undergo based on its composition relative to the band of stability.



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Course Title: CORE XII - PHYSICAL CHEMISTRY II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	compare the energy gap between translational, rotational, vibrational and electronic energy levels
CO2	determine bond length, dissociation energy, force constant and zero point energy and so on of gaseous molecules using the principles of spectroscopy.
CO3	Quantitatively calculate the effect of temperature on the rate of a reaction using collision theory and ARRT which helps him to plan the chemical reaction.
CO4	compare the catalytic activity of conventional catalyst and enzyme catalyst and make use of its specificity and sensitivity to temperature and pH to plan the chemical reaction.
CO5	Students could set up different chemical and concentration cells to generate electricity and also explain the working of pace maker cells.
CO6	Determine the concentration of an unknown solution, solubility product and activity coefficient etc. with the help of the potentiometer.
CO7	Use the concept of overvoltage for the selection of suitable electrodes in the construction of battery or electrolysis. They will be able to control the corrosion using thermodynamic and kinetic concepts and also utilizing passivation.
CO8	Explain the foundation for the advanced group theory which finds wider applications in fields such as quantum chemistry, spectroscopy etc. They can discuss and explain the various photochemical and photo physical processes
CO9	Apply Schrodinger wave equation to quantum mechanical systems such as 1D, 2D, 3D and rigid rotor to deduce the expression for the energy which he can use in molecular spectroscopy.
CO10	Can set up Schrodinger equation for hydrogen atom and identify the radial and angular probability distribution functions to visualize and grasp the concept of various orbitals and their shapes

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Course Title: ELECTIVE II - APPLIED CHEMISTRY

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Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the pragmatic impacts of polymer in human daily life.
CO2	Quote the chemical changes which are taking place in a polymer like degradation with live examples.
CO3	Explain the importance of Glass transition temperature (T _g) as a tool to modify the physical properties of drugs and polymer molecules.
CO4	Solve the chemical quality related issues of dairy industry.
CO5	Apply the knowledge on physico-chemical properties and composition of milk to distribute them into useful dairy products.
CO6	Summarise the concepts of forensic science for its pivotal role in legal system and related issues
CO7	Explain the major facts of investigations as well as evidence collection and preservation techniques.
CO8	Analyse a crime scene and they will be in a position to assess and interpret the evidences based on chemical and instrumental analysis.
CO9	Predict the chemical formulation of drugs which are chronically used.
CO10	Compare the size of objects of nano and micro levels with bulk entities.
CO11	Explain the importance of surface area and how it helps in increasing the reaction rate and wide field applications are formulated based on nano particles.
CO12	Classify the various medicinal application of nano particles involved in drug delivery, therapy technique and diagnosis.

Course Title: ELECTIVE II - INDUSTRIAL CHEMISTRY

Units	Learning objectives
01	To understand the requirements to start an industry – different fuels used and the industrial catalyst used. K3
02	To know about different petrochemical industries thoroughly. K3
03	To understand the manufacture of fertilizers and speciality chemicals. K3
04	To acquire knowledge about oils, soaps, detergents, sugar industry, leather and pesticide industries. K3
05	To understand the important process of metallurgy extraction of metals and environmental problems caused by chemical industries K4


Course Title: ELECTIVE III PHYSICAL CHEMISTRY PRACTICAL
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Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	derive kinetic equations and investigate the reaction rate
CO2	construct phase diagram & determine the eutectic composition and temperature
CO3	compute the colligative properties such as depression of freezing point & cryoscopic constant
CO4	predict the transition temperature of hydrated salts
CO5	apply Nernst distribution law and calculate equilibrium constant
CO6	determine the miscibility temperature of phenol–water system and study the effect of impurity to CST

Course Title: ELECTIVE III POLYMER CHEMISTRY

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

COs	Learning objectives
01	To know the types of polymers and the chemistry of polymerization K2
02	To understand the physical properties of polymers, their reactions and degradation K3
03	To acquire knowledge about the polymerisation techniques and polymer processing. K3
04	To know the chemistry of individual polymers, their preparation properties K3
05	To have an idea about the recent advances in polymer science. K4

ELECTIVE IV


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**Course Title: INORGANIC CHEMISTRY PRACTICALS - GRAVIMETRIC ANALYSIS AND
INORGANIC CHEMISTRY COMPLEX PREPARATION**

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To determine amount of analyte to get precipitate.
CO2	To predict the percentage of analyte precipitate
CO3	Student can able to explain why is gravimetric analysis is more accurate than volumetric analysis
CO4	The students will get training in the quantitative analysis of metal ions and anions using gravimetric method.
CO5	Determination of purity and thermal stability of both the primary and secondary standard
CO6	Determination of composition of complex mixture
CO7	Studying the sublimation behavior of various mixture and in gravimetric sample preparation, both solids and solvents are weighed to prepare specific, precise concentration, which help minimize out of specification error

Course Title: ELECTIVE PAPER V ORGANIC CHEMISTRY PRACTICALS I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	They can able to analysis simple organic compounds (mono & bi functional groups) qualitatively
CO2	They can able to prepare simple organic compounds by using FGI, Functional Group Inter conversion.

SKILL ENHANCEMENT COURSE

Course Title: ANALYTICAL CHEMISTRY PRACTICALS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Determine the cell constant and explain the effects of dilution on equivalent and molar conductance.
CO2	Carry out conductometric titrations to determine the concentration of unknown acids
CO3	Learnt to use the potentiometer and carryout potentiometric titrations for acid base and redox reactions.
CO4	They learnt to use colorimeter and measure absorption to find the unknown concentrations of the given solutions.
CO5	Identify the number of components in a mixture using TLC and column chromatography.
CO6	Use polarimeter to measure specific rotation of an optically active compound such as sucrose and calculate the concentration.
CO7	Determine the thermodynamic parameters of a reaction in the Daniel cell using potentiometer.


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OPEN ELECTIVE PAPER
CHEMISTRY IN EVERYDAY LIFE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define hardness of water and chemical methodologies to get rid of the same.
CO2	Summarise the air pollutants which causes air pollution and their impact in human life.
CO3	Quote the significant role of cement, ceramics, glass and refractories.
CO4	Recall the product used in daily life with a correlation to the polymer studies.
CO5	Assess the chemical formulations of cosmetic products used in industries and their hazards.
CO6	Compare the importance of chemical fertilizers over natural fertilizers and the risks involved in using chemical fertilizers.
CO7	Compare the solid, liquid and gaseous fuel with illustration in accordance with natural and artificial sources.
CO8	Recall the chemical composition of colour pigments and dyes.
CO9	Predict the chemical formulation of drugs which are commonly used for fever and to relieve pain.

OPEN ELECTIVE PAPER
FOOD ADDITIVE CHEMISTRY AND FIVE BASIC SENSES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the glazing agent from natural and nature -mimic sources and food products which are coated with these glazing agents.
CO2	Summarise the list of natural, artificial and spurious colourants used in food products
CO3	Quote the mechanism of sound and digestion correlations
CO4	Recall the role of emulsifiers, stabilizers and thickeners which gives required texture and consistency for food.
CO5	Assess the sweetener in terms of Structure Activity Relationship (SAR) with respective to its taste.
CO6	Compare the type of flavourants as natural, nature-identical, artificial flavouring substances.


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OPEN ELECTIVE PAPER
FOOD CHEMISTRY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic difference between oils and fats in terms of structural terminology.
CO2	Summarise the concepts of MUFA and PUFA for its pivotal role in preventing heart diseases.
CO3	Quote the role of additives like artificial sweetener, food colourants and flavouring agents and preservatives in food products.
CO4	Explain the importance of first aid to be given to a poison consumed victim.
CO5	Apply the knowledge of various chemical poisoning substances which are ingested in the food every day.
CO6	Explain the use of alcoholic and non-alcoholic beverages in everyday life.
CO7	Solve the adulteration related issues of food items by simple qualitative chemical test.



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4.B.Sc., PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

PROGRAMME SPECIFIC OUTCOMES (PSO)

At the time of graduation Our Graduates will be able to:

PSO1	Evaluate, Analyse and interpret diversity of plant and animal life forms, using specific identification key characteristic features and its significance in structured framework, including critical understanding of the established theories, principles and concepts of a number of advanced and emerging issues in the field of Life sciences.
PSO2	Demonstrate the comprehensive knowledge in various plant and animal structure and functions (both internal & external), physiological metabolism, Gene concepts, genome, cell organelles & tissue culture.
PSO3	Elucidate the knowledge of distribution of plants, herbal medicines, methods of gardening, different habitats and their degradation and analyse the diseases of crop plants and their control measures, study about communicable and non-communicable diseases and health & hygiene.
PSO4	Apply the knowledge of Lifescience to solve complex problem in research labs using the latest biological tools and techniques.
PSO5	Comprehend the latest developments in the field of Life science, both theoretical and practical and also on entrepreneurial development skills in a way to foster their core competency and lifelong learning.

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13101	ALGAE, FUNGI & LICHENS	Core paper - I	6				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Evaluate in detail about Algal classification and its importance	K1 & K3
CO2	Identify different forms of Algae	K2
CO3	Assess knowledge of fungi with respect to classification and its importance to mankind	K1 & K3
CO4	Identify various life forms of Fungi	K2
CO5	Outline the salient features of Lichens	K2



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Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13102	ALLIED ZOOLOGY - I	Allied paper - I	4				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Outline the classification of animal kingdom	K1
CO2	Discuss about various parasites that cause diseases in animals	K1 & K3
CO3	Discuss the affinities of amphioxus with other chordates	K2
CO4	Compare the life history of different animals	K1 & K2
CO5	Discuss about various systems of chordates	K1 & K2

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13103	VERMITECHNOLOGY	Part IV: NME -I	2				2

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Apply vermiculture techniques by using different types of soil	K1
CO2	Discuss the role of local species of earthworm in vermitechnology	K1 & K2
CO3	Design a vermicomposting bed	K1, K2 & K3
CO4	Apply the procedure for vermicompost	K3
CO5	Apply the methods to reduce the enemies of earthworms during vermicomposting	K3

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13204	BASICS IN MICROBIOLOGY AND PLANT PATHOLOGY	Core paper - II	6				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Evaluate the existence of various microbes and their importance	K2, K3
CO2	Demonstrate usage of various glassware's and ways of microbial isolation	K3
CO3	List out the important usage of microbial products	K1
CO4	Identify various plant pathogens and their positive and negative aspects	K2

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CO5	List out various plant diseases and their remedial measures						K1,K3	
	Course Code	Course Title	Category	L	T	P	S	Credits
	16-19/13104	PRACTICAL – I (Algae, Fungi & Lichens, Basics In Microbiology And Plant Pathology)	Core Paper : III			8		4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Dissect and prepare micro slides of Algae and Fungi	K3
CO2	Examine the morphological and anatomical features of Algae, fungi & Lichens	K2
CO3	Apply techniques in cleaning and maintenance of glass wares	K3
CO4	Identify and Isolate of microbes from contaminated items	K3
CO5	Identify different plant diseases	K1

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13205	ALLIED ZOOLOGY - II	Allied paper - II	4				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Discuss various cell organelles	K2
CO2	Understand the concepts associated with genes and their disorders	K2
CO3	Analyze the human physiology process	K1
CO4	Explain the concepts of evolution	K2
CO5	Discuss about importance of culturing techniques of honey bee, silkworm and poultry	K3

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13209	ALLIED ZOOLOGY PRACTICAL	Allied Practical			4		2

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Compare the spotters of different species of animals	K1
CO2	Apply the methods for dissection and display of animals	K3
CO3	Apply the procedure for mounting on slides	K3
CO4	Discuss the various types of animal association	K1 & K2

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CO5	Identify the different species of animals					K3			
Course Code	Course Title	Category	L	T	P	S	Credits		
16-19/13206	PUBLIC HEALTH & HYGIENE	Part IV: NME -II	2				2		

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome.	Knowledge Level (According to Bloom's Taxonomy)
CO1	Analyze the scope of public health and hygiene and their problems related to unhygienic conditions and malnutrition	K1
CO2	Critique various pollution causing sources	K2
CO3	Discuss various communicable diseases of man	K2
CO4	Understand different types of non-communicable diseases	K2
CO5	Apply Health education awareness for betterment of society	K3

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13309	BRYOPHYTES AND PTERIDOPHYTES	Core Paper : IV	6				5

Course Outcomes

At the end of the Course, the Student will be able to:


	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Illustrate about the nature of non vascular plants	K1
CO2	List out examples of various non vascular forms	K1
CO3	Understand about first land plants and classify them	K2
CO4	Point out living forms of vascular plants	K3
CO5	Understand the origin and importance of vascular plants	K2

Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13410	GYMNOSPERMS, PALAEOBOTANY & EVOLUTION	Core Paper : V	6				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Discuss about first naked seed bearing plants	K1
CO2	Evaluate external and internal features of naked seed bearing plants	K2
CO3	Criticize the extinct plants and their origin	K2
CO4	Understand extinct plant forms	K2
CO5	Analyze the various theories behind origin of life	K2


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Course Code	Course Title	Category	L	T	P	S	Credits
16-19/13412	PRACTICAL – II (Bryophytes, Pteridophytes, Gymnosperms, Paleobotany And Evolution)	Core Paper : VI			8		4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Dissect and explain vegetative parts of Vascular and Non vascular plants	K3
CO2	Dissect and explain the reproductive parts of Vascular and Non vascular plants	K3
CO3	Examine the permanent micro slides of Vascular and Non vascular plants	K2
CO4	Analyze the fossil forms and the reasons for fossilization	K2
CO5	Identify the evolutionary Biologists and their related theory	K2

Course Code	Course Title	Category	L	T	P	S	Credits
09-18/13412/35433	ENVIRONMENTAL STUDIES	PART IV: EVS	4				2

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Discuss about natural resources and apply the conservation of natural resources.	K1 & K3
CO2	Discuss the structure and functions of an ecosystem and natural curiosity and creativity for the immediate surroundings	K1
CO3	Summarize the sources, effects and control measures of various types of Pollutants and awareness of conservation of biodiversity	K1, K2 & K3
CO4	Apply the methods for sewage treatment and rain water harvesting	K2 & K3
CO5	Acquire the awareness on communicable disease (AIDS) and awareness on natality	K3


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Course Code	Course Title	Category	L	T	P	S	Credits
1613515/1713513	PLANT MORPHOLOGY, TAXONOMY AND ECONOMIC BOTANY	Core Paper : VII	5				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand the Plant Morphology terminologies	K1,k2
CO2	Understand the Principles of classification and nomenclature and Collect, identify and preserve plants	K2
CO3	Identify members of the families in Polypetalae and Gamopetalae by observing diagnostic features and economic importance	K2,K3
CO4	Identify members of the families in Monochlamydae and Monocots by observing diagnostic features and economic importance	K2,K3
CO5	Illustrate the Cultivation methods and uses of some economically important plants	K3

Course Code	Course Title	Category	L	T	P	S	Credits
1613516/1713514	PLANT ANATOMY AND EMBRYOLOGY	Core Paper : VIII	4				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Discuss the Basic organization of various types of tissues	K1,K2
CO2	Understand the anatomy of Primary & Secondary growths in Stem & Roots	K2
CO3	Explain the Knowledge on Anomalous Secondary growth in Dicot & Monocot Plants	K1
CO4	Comprehend the structure and development of male and female gametophytes in plants	K2
CO5	Compare the structure and development of dicot and monocot embryos	K3



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Course Code	Course Title	Category	L	T	P	S	Credits
1613517/1713515	CELL BIOLOGY AND MOLECULAR BIOLOGY	Core Paper : IX	5				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Compare two different cell types and its process	K2
CO2	Outline the structure and functions of various cell organelles	K1
CO3	Apply concepts of genetic engineering	K3
CO4	Explain in detail about nucleic acids	K2
CO5	Discuss applications of molecular tools and diagnostics	K3

Course Code	Course Title	Category	L	T	P	S	Credits
1613518/1713516	GENETICS, PLANT BREEDING AND BIOSTATISTICS	Core Paper : X	5				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Identify father of genetics and the role of genes in biotic community	K2
CO2	Understand the concepts of heredity, their role in determining gender in plants and factors that causes abnormality of genes.	K2
CO3	Remember the theories put forward in a biome	K1
CO4	Evaluate various practices for crop improvement	K2
CO5	Apply the statistical approach to various problems	K3

Course Code	Course Title	Category	L	T	P	S	Credits
1613519/1713517	HORTICULTURE AND MUSHROOM CULTIVATION	Core Elective : I	5				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Discuss the history and various management practices in Horticulture	K2
CO2	Demonstrate the about Hydroponic culture and organic farming	K2, K3
CO3	Analyze the different crop protection measures and Plant propagation techniques	K2
CO4	Comprehend the harvest and storing technology	K1
CO5	Explain the Prospects and Scope of Mushroom cultivation	K3



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Course Code	Course Title	Category	L	T	P	S	Credits
1613621/1713618	PLANT ECOLOGY AND PHYTOGEOGRAPHY	Core Paper : XI	4				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Compare biotic and abiotic factors influence on vegetation, and gather knowledge on various habitats	K1
CO2	Explain the components of ecosystem	K2
CO3	Evaluate hierarchy of biotic community and their importance in balancing the ecosystem	K3
CO4	Identify the procedures for better conservation	K3
CO5	Understand distribution of plants and various types of vegetation	K1,K2

Course Code	Course Title	Category	L	T	P	S	Credits
1613622/1713619	PLANT PHYSIOLOGY AND PLANT BIOCHEMISTRY	Core Paper : XII	5				5

Course Outcomes

At the end of the Course, the Student will be able to:


	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Evaluate Physiological process and its significance	K1,K2
CO2	Understand the entire process of Photosynthesis	K2
CO3	Compile respiration process and importance of nitrogen in plant development	K3
CO4	Identify reasons for plant growth and development	K1,K2
CO5	Explain concepts of plant biochemistry	K1,K2

Course Code	Course Title	Category	L	T	P	S	Credits
1613623/1713620	PLANT BIOTECHNOLOGY	Core Paper : XIII	4				4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Define biotechnology and evaluate its applications	K1
CO2	Apply plant tissue culture techniques in bringing out successful plant varieties	K1,K2
CO3	Recall various procedures to save the environment	K1
CO4	Explain industrial applications of microbes and utilization of enzymes for improvement of plants	K3
CO5	Assess the databases through computational biology	K3


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Course Code	Course Title	Category	L	T	P	S	Credits
1713623	PRACTICAL –III (Plant Morphology, Taxonomy & Economic Botany, Plant Anatomy & Embryology, Cell Biology & Molecular Biology, Genetics, Plant Breeding & Biostatistics)	Core Paper : XIV			4		4

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Identify the different parts of flowering plants	K1,K2
CO2	Discuss the vegetative and reproductive characters of selected families of flowering plants	K2
CO3	Examine the Internal vegetative structure and reproductive stages of Dicot and monocot plants	K3
CO4	Outline the structures of cell organelles	K1
CO5	Evaluate various genetic and statistical problems	K1,K2,K3

Course Code	Course Title	Category	L	T	P	S	Credits
1713624	PRACTICAL –IV (Plant Ecology & Phytogeography, Plant Physiology & Plant Biochemistry, Plant Biotechnology)	Core Paper : XV			6		3

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Examine the internal structure of plants growing in different habitats	K1,K2
CO2	Outline the Phyto- geographical regions of India	K1
CO3	Apply and evaluate the various physiological experiments	K2, K3
CO4	Estimate some biochemical components	K2
CO5	Prepare medium for plant tissue culture	K3



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Course Code	Course Title	Category	L	T	P	S	Credits
1613624/1713621	HERBAL SCIENCE AND ETHNOBOTANY	Core Elective - II	5				5

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand different Indian Systems of Medicine	K1,K2
CO2	Acquire Knowledge about some Medicinal uses of Plants	K1
CO3	Understand the importance and history of ethnobotany	K1,K2
CO4	Acquire Knowledge about tribes of Tamil Nadu	K1
CO5	Apply methodologies for Ethnobotanical Studies	K3

1613625/1713622	MICROTECHNIQUE	Core Elective - III	5				5
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Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Analyze various types of Microscope	K2
CO2	Explain different sectioning procedures and specimen preparation	K2,K3
CO3	Compare types of microtome and staining methods	K1,K2,K3
CO4	Formulate fixatives and mount preparation	K3
CO5	Assess specific micro techniques	K2

Course Code	Course Title	Category	L	T	P	S	Credits
	ORGANIC FARMING	Open Elective : I	2				3

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand the basics of Organic farming.	K2
CO2	Identify the properties of soil and its pollution.	K2, K3
CO3	Demonstrate and Apply the importance of Bio-fertilizers and Organic manure.	K2, K3
CO4	Describe the different pest and crop protection measures.	K1
CO5	Explain the concepts of marketing and certification of Organic farming.	K3

(Signature)

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Course Code	Course Title	Category	L	T	P	S	Credits
	BIOINFORMATICS	Open Elective : II	2				3

Course Outcomes

At the end of the Course, the Student will be able to:


	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand the concept of Bioinformatics	K2
CO2	Knowledge about biological databases.	K1
CO3	Demonstrate various tools associated with databases	K2
CO4	Understand and apply the concept of phylogeny through tools	K1 & K3
CO5	Explain the various aspects of drug discovery and its importance.	K3

Course Code	Course Title	Category	L	T	P	S	Credits
	SEAWEED TECHNOLOGY	Open Elective : III	2				3

Course Outcomes

At the end of the Course, the Student will be able to:

	Course Outcome	Knowledge Level (According to Bloom's Taxonomy)
CO1	Understand the basics of Seaweeds.	K2
CO2	Discuss the structure, reproduction and life history of seaweeds.	K2, K3
CO3	Identify seaweed resources in India and abroad. Demonstrate the importance of seaweed fertilizers.	K1, K2
CO4	Illustrate the methods of commercial cultivation of seaweeds and discuss the issues and problems related to seaweed cultivation.	K1, K3
CO5	Understand and Apply the commercial uses of seaweeds.	K2, K3


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PROGRAM SPECIFIC OUTCOMES

- PSO 1: அறிவாற்றல், மொழியாற்றல் மூலம் ஆசிரியராக, வழக்கறிஞராகப் பணியாற்றல்.
PSO 2: போட்டித் தேர்வுகள்வழி அரசுப்பணி / தேர்வுகளில் தேர்ச்சிப் பெறுதல்.
PSO 3: கலைத்துறையில் வெற்றிகரமாகப் பயணித்தல்.
PSO 4: பகுப்பாய்வு செய்யும் திறன்மூலம் ஊடகவியலாளராக / ஆய்வாளராகப் பணியாற்றல்.
PSO 5: தனது ஆளுமைப் பண்புகள் மூலம் சுயதொழில் தொடங்குதல்.

முதலாம் பருவம்
(பாடத்திட்டம்)

Course Title: இக்கால இலக்கியம் – 1

Course Code : 1938101	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழ் மொழியில் உருவான சங்க இலக்கியம் முதல் இருபத்தோராம் நூற்றாண்டு வரையிலான கவிதை மரபை மாணவர்கள் அறிந்துகொள்ளுதல்.
CO2	புதுக்கவிதைகளைச் சமகால பொருண்மைகளை மையமாக்கி கொண்டு கவிதைகளைப் படைத்தல்
CO3	முகநூல், கட்செவி முதலான ஊடகங்களில் கவிதைகளைப் படைத்து வெளியிடுதல்
CO4	தமிழ்நாடு அரசால் நடத்தப்பெறும் போட்டித் தேர்வுகளுக்கு மாணவர்கள் தயாராதல்
CO5	திரைப்படங்கள், குறும்படம், ஆவணப்படம் முதலான ஊடகங்கள் சார்ந்து பாடல்களை உருவாக்குதல்.
CO6	ஊடகங்களில் பணியாளராகச் சேர்ந்து பணியேற்றல்



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முதலாம் பருவம்
(பாடத்திட்டம்)
Course Title:
நன்னூல் – எழுத்ததிகாரம்

Course Code : 1938102	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	எழுத்துக்கள் கூட்டாகிச் சொற்களாக அமையும் மொழியின் அமைப்பை அறிந்திருத்தல்
CO2	மொழியைச் சரியாக உச்சரித்தல் மற்றும் நூல்களைக் கற்றதன் அறிவு கொண்டு சரளமாகப் பேசும் பேச்சாற்றல் வளம் பெறல்.
CO3	மொழியைச் சரியான தொடர் அமைப்புடன் இலக்கணப் பிழையில்லாமல் எழுதக்கற்று இருத்தல்.
CO4	நூலின் அழகு, குற்றம், உத்தி முதலானவற்றைக் கற்றதால் ஒரு நூல் எவ்வாறு இருக்கவேண்டும், அதன் உட்கூறு பொருண்மை சார்ந்து எவ்வாறு அமைந்திருக்க வேண்டும் என்பதை அறிந்து கொண்டு சிறந்த திறனாய்வாளனாக உருப்பெறுதல்
CO5	சொற்கள் தம்முள்தாம் புணர்ந்து அதன் கட்டமைப்பை விடாமல் ஆயிரக்கணக்கான ஆண்டுகளாக இருந்து வரும் சிறப்பை உணர்ந்திருத்தல்.
CO6	சிறந்த மாணவனாகச் சிறந்த சமுதாயத்தைப் படைக்கும் சமூக உணர்வுடையவனாக மிளிர்ந்தல்.


முதலாம் பருவம்
(பாடத்திட்டம்)

Course Title: தமிழக வரலாறும் பண்பாடும் - 1

Course Code : 1938103	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழக வரலாற்றை அறிந்துகொள்வது ஏன் அவசியம்? அதனை எவ்வாறு புரிந்துகொள்வது? சான்றுகள் மூலம் வரலாற்றை எவ்வாறு எழுதுவது? அண்மைக்காலத்தில் கிடைத்த சான்றுகள் மூலம் உலகளவில் தமிழக வரலாறு பெறும் முக்கியத்துவம் என்ன? போன்றவற்றை அறிதல்.
CO2	இயற்கை அமைப்புகளை அறிவதன் வழி இயற்கையை ஏன் பாதுகாக்க வேண்டும் என்ற தெளிவு ஏற்படுதல்.
CO3	வரலாற்றுக்கு முற்பட்ட காலம் முதல் சிந்து சமவெளிக் காலம் வரையிலான தமிழர்களின் வரலாற்றைப் புதைபொருள் ஆய்வுகள், மொழியாராய்ச்சி போன்ற சான்றுகள் மூலம் அறிதல்.
CO4	பண்டைத் தமிழர்கள் உலகளாவிய வணிகத்தில் முக்கியத்துவம் பெற்றிருந்ததனை அயல்நாட்டார் குறிப்புகள், அகழ்வாராய்ச்சிச் சான்றுகள், சங்கப் பாடல்கள் போன்ற சான்றுகள் மூலம் அறிதல்.
CO5	முச்சங்கங்கள், சங்ககால இலக்கியங்கள், ஆட்சிமுறை, போர்முறை, சமூகநிலை, பண்பாடு, கலைகள் ஆகியனவற்றைக் கற்றல்.
CO6	களப்பிரர், பல்லவர் கால இலக்கியங்கள், ஆட்சிமுறை, போர்முறை, சமூகநிலை, பண்பாடு, கலைகள் ஆகியனவற்றைக் கற்றல்.


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முதலாம் பருவம்
(பாடத்திட்டம்)
Course Title:
பயன்பாட்டுத் தமிழ் (NME – I)

Course Code : 1938104	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	மாணவர்கள் தமிழ் மொழியின் இலக்கண அறிவைப் பெறுதல்
CO2	மாணவர்கள் பிழையின்றி தமிழில் வாசித்தல், எழுதுதல், பேசுதல்
CO3	இதழ்கள், பொது இடங்களில் தமிழ் மொழியில் உள்ள அறிவிப்புகளைக் கண்டு பிழைகளை அறிதல், களைதல்
CO4	அரசுப் பணித் தேர்வுகளில் தமிழ் மொழி சார்ந்த வினாக்களுக்கு விடையளிக்கும் அறிவைப் பெறுதல்
CO5	தமிழ் இலக்கியங்களின் அறிமுகங்களின் மூலமாக மாணவர்கள் ஒழுக்கத்தைப் பெறுதல்
CO6	மாணவர்கள் ஒருவரோடு ஒருவர் பழகும் ஆளுமைகளை தமிழ் இலக்கிய அறிமுகங்களின் மூலம் பெறுதல்

இரண்டாம் பருவம்
(பாடத்திட்டம்)
Course Title: இக்கால இலக்கியம் – II

Course Code : 1938205	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழ் மொழியில் உருவான புதிய இலக்கிய வகைமைகளை மாணவர்கள் அறிந்துகொள்ளுதல்
CO2	சிறுகதை, புதினம் முதலான இலக்கியப் படைப்பு உத்திகளை அறிந்துகொள்ளுதல்
CO3	அரசுத் தேர்வுகளில் கேட்கப்படும் தமிழ் இலக்கியம் சார்ந்த வினாக்களுக்கான விடைகளை சேகரித்தல்
CO4	இளங்கலை முடித்த அடுத்த நிலை கல்விகான முதுகலை மற்றும் ஆய்வு நிலையிலான படிப்பைச் சார்ந்த நுழைத்துத் தேர்வில் வெற்றிபெற மாணவர்களுக்குப் பயன்படுதல்
CO5	பருவ இதழ்கள், வலையொலி முதலான ஊடகங்களில் சிறுகதைகளை படைத்து வெளியிடும் படைப்பாளியாக உருவாதல்
CO6	சிறுகதை, புதினம் முதலான இலக்கியங்களை வாசித்து ஆவணப்பட உருவாக்குநராதல்


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இரண்டாம் பருவம்
(பாடத்திட்டம்)
Course Title:
நன்னூல் - சொல்லதிகாரம்

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	சொற்களை அதனதன் பொருளுக்கேற்ப பெயர்ச்சொல், வினைச்சொல் என்பனவாகப் பிரித்து மொழியைப் பிறர் தெளிவாகப் புரிந்து கொள்ளும் வகையில் கையாளக் கற்று இருத்தல்.
CO2	வேற்றுமை உருபுகள் சொல்லின் பொருளை மாறுபடுத்தும் பாங்கை நன்கு தெரிந்து அதற்கேற்ப உரிய உருபுகளைப் பயன்படுத்தி இலக்கணக் கட்டமைப்புடன் எழுதவும் சரளமாகப் பேசவும் அறிந்திருத்தல்.
CO3	வினைச்சொற்கள் பெயரெச்சங்களாகவும் வினையெச்சங்களாகவும் வினைமுற்றுகளாகவும் அமைந்து தொடர் அமைப்பில் சரியாக இடம் பெறும் தன்மையைப் புரிந்து வைத்திருத்தல்.
CO4	ஒரு சொல்லானது பால், எண், இடம் ஆகியனவற்றிற்கேற்பப் பொருள் நிலையில் எவ்வாறு மாற்றம் அடைகிறது என்பதை உணர்ந்து மொழியின் அழகியலை உணர்ந்து இருத்தல்.
CO5	மொழியை வழுவில்லாமல் எழுதுவதும் பேசுவதும் குறித்துத் தெளிவாக அறிந்திருப்பதோடு எவையெல்லாம் மரபின் காரணமாக வழுவாக அமையாமல் உள்ளன என்பதையும் அறிந்து இருத்தல்.
CO6	மொழியின் கட்டமைப்புக்கு இடைச்சொற்களும் உரிச்சொற்களும் எவ்வாறு இன்றியமையாதனவாக இருக்கின்றன என்பதை அறிந்து இருத்தல்.

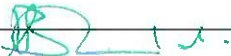
இரண்டாம் பருவம்
(பாடத்திட்டம்)
Course Title:

தமிழக வரலாறும் பண்பாடும் - 2

Course Code : 1938207	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	பிற்காலச் சோழர்களின் எழுச்சி, வளர்ச்சி, வீழ்ச்சியையும் அரசர்களையும் அதற்கான காரணங்களையும் கற்றல்.
CO2	பிற்காலச் சோழர்கலாத்தில் நிர்வாக முறை, சமயநிலை, நகரங்களின் அமைப்பு, பெண்கள் நிலை, பழக்கவழக்கங்கள், நம்பிக்கைகள், கலை, இலக்கியங்களின் வளர்ச்சி, மக்களின் வாழ்க்கைமுறை ஆகியன குறித்துக் கற்றல்.
CO3	பிற்காலப் பாண்டியர், சுல்தான்கள், நாயக்கர்கள், மராட்டியர்கள் கால ஆட்சிமுறை, மக்களின் வாழ்க்கைமுறை, கலை, இலக்கியநிலை, சமூகநிலை ஆகியனவற்றைக் கற்றல்.
CO4	ஐரோப்பியரின் வரவையும், அது தமிழக அரசியலிலும், சமூகநிலையிலும் ஏற்படுத்திய தாக்கம் குறித்து ஆராய்தல்.
CO5	இருபதாம் நூற்றாண்டில் தமிழக ஆட்சிமுறை, இலக்கியங்கள், கலைகள், கல்வி, பொருளாதாரம் போன்றவற்றில் ஏற்பட்ட மாற்றங்களையும் அதன் நன்மை, தீமைகளையும் பகுப்பாய்வு செய்தல்.
CO6	சிறப்புற்று விளங்கிய தமிழ்ப் பேரரசுகள் விழுந்ததற்கான காரணங்களைக் கண்டறிந்து வருங்காலத்தைத் தீர்மானித்தல்.



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இரண்டாம் பருவம்
(பாடத்திட்டம்)
Course Title:
இதழியல் – ஓர் அறிமுகம்

Course Code : 1938208	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	தமிழர்களின் தொன்மையான கருத்துப் பரிமாற்ற முறைமைகளை மாணவர்கள் அறிந்துகொள்ளல்
CO2	மாணவர்கள் தங்களின் வலையொலி முதலான சமூக ஊடகங்களுக்குத் தாங்களே செய்திகளைத் திரட்டும் நிருபர்களாகச் செயல்படுதல்
CO3	தியாகிகள், விளையாட்டு வீரர்கள், தலைவர்கள் முதலானவர்களை நேர்காணல் செய்யும் ஆற்றல் பெறுதல்
CO4	கல்லூரிக்கு வருகைப் புரியும் சிறப்பு விருந்தினர்களோடு கலந்துரையாடுதல், அவர்களைப் பற்றிய அனுபவங்களை அவர்களிடமிருந்து சேகரித்தல். மேடையில் சிறப்பு விருந்தினர்களை அறிமுகப்படுத்தும் ஆற்றலை உருவாக்கிக் கொள்ளுதல்.
CO5	சமூக ஊடகங்களில் பிறரை நேர்காணல் செய்தல், செய்தி வாசித்தல் முதலான பணிகளை மேற்கொள்ளும் ஆற்றலை வளர்த்துக்கொள்ளுதல்
CO6	கேலிச் சித்திரங்களை வரைதல், வெளியிடுதல் முதலான திறன்களை மாணவர்கள் வளர்த்துக் கொள்ளுதல், பிழைத்திருத்தம் செய்யும் முறைமைகளை அறிந்துகொள்ளுதல்

மூன்றாம் பருவம்
(பாடத்திட்டம்)
Course Title:
பக்தி இலக்கியமும் சிற்றிலக்கியமும்

Course Code : 1938309	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழர்களின் வாழ்வியல் பக்தியோடும் சார்ந்த வாழ்வியல் என்பதை மாணவர்கள் அறிந்துகொள்ளுதல்
CO2	பக்தி இலக்கியங்களை கற்பதன் மூலமாக அரசுப் பணித் தேர்வுகளுக்கு தயாராதல்
CO3	குறவஞ்சி, பள்ள ஆகிய இலக்கியங்களைக் கற்பதன் மூலமாக தமிழர்களின் நிலப் பாகுபாடுகளையும் நிலப் பாகுபாடு சார்ந்த வாழ்வியலையும் மாணவர்கள் அறிந்துகொள்ளுதல்
CO4	தமிழ்விடு தூது என்னும் தூது இலக்கியத்தைக் கற்பதன் மூலமாகத் தமிழ் எழுத்துகளின் எழுத்துக்களின் பிறப்பு, வகைகள், பயன்பாடு முதலானவற்றை மாணவர்கள் அறிந்து கொள்ளுதல்
CO5	சைவம், வைணவம், கிறித்துவம், இஸ்லாமியம் முதலான சமயங்களின் கொள்கைகளை மாணவர்கள் அறிந்துகொள்ளுதல்
CO6	பக்தி சார்ந்த இதழ்களில் பணியாளராக பணியேற்கும் வாய்ப்பை மாணவர்கள் பெறுதல்



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மூன்றாம் பருவம்
(பாடத்திட்டம்)
Course Title:
நம்பியகப்பொருள்

Course Code : 1938310	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	அகப்பொருள் வகைகள், கூறும் முறைமை, ஐந்திணைக்குரிய முப்பொருள்கள், கைகோள் வகைகள், களவுப் புணர்ச்சியின் வகைகள், குறியிடங்கள், பிரிவின் வகைகள், அறத்தொடு நின்றல் போன்ற களவு, கற்புக்குப் பொதுவான இலக்கணக் கூறுகளை அறிந்துகொள்வதன் மூலம் அக இலக்கணம் குறித்த தெளிவைப் பெறுதல்.
CO2	களவுக்கு உரிய கிளவித் தொகைகளான இயற்கைப் புணர்ச்சி, வன்புறை, தெளிவு, பிரிவுழி மகிழ்ச்சி, பிரிவுழிக் கலங்கல், இடந்தலைப்பாடு, பாங்கற் கூட்டம், பாங்கிமதியுடம்பாடு, பாங்கியிற் கூட்டம், பாங்கமை பகற்குறி, பகற்குறி இடையீடு, இரவுக்குறி, இரவுக்குறி இடையீடு, வரைவு வேட்கை, வரைவு கடாதல், ஒருவழித் தணத்தல், வரைவிடை வைத்துப் பொருள்வயிற் பிரிதல் ஆகியனவற்றை இக்காலச் சூழலோடு ஒப்பிட்டு பண்டைத் தமிழரின் சிறப்பை உணர்ந்துக் கற்றல்.
CO3	தலைவன் தலைவி இருவரும் திருமணம் செய்துகொள்ளும் பல்வேறு முறைமைகள் குறித்து வரைவியல் விளக்குகிறது. வரைவின் இலக்கணம், வரைவு மலிதல், அறத்தொடு நின்றல், உடன்போக்கு, மீட்சி, வரைதலின் வகைகள் ஆகியவற்றைப் புரிந்துகொள்ளல்.
CO4	தலைவன் தலைவி இருவரும் ஒழுக்க நெறிகளுடன் இனிதே இல்லறம் நடத்துதலைக் கற்பியல் கூறுகிறது. கற்பின் இலக்கணம், கற்பிற்கு உரிய கிளவித்தொகை, இவ்வாழ்க்கை பரத்தையிற் பிரிவு, ஊடல் வகைகள், அணிவழி உணர்த்தல் ஐவகைப் பிரிவுகள் ஆகியனவற்றை இக்காலச் சூழலோடு ஒப்பிட்டுப் பார்த்துப் புரிந்துகொள்ளல்.
CO5	பல்லவ, பாண்டியர் காலத்தில் பக்தி இயக்கமும் பக்தி இலக்கியமும் எவ்வாறு இயைந்து செயல்பட்டன?, நாயன்மார்கள், ஆழ்வார்கள், அவர்களது பாடல்தொகுப்புகளான பன்னிரு திருமுறை, நாலாயிரத் திவ்வியப் பிரபந்தம், பிற்காலப் பக்தி இலக்கியங்கள், அவற்றைப் பாடிய அடியார்கள் போன்ற விவரங்களை நுட்பமாகத் தெரிந்து வைத்திருத்தல்.
CO6	எந்த இயலிலும் கூறப்படாத, ஆனால் அனைத்து இயல்களுக்கும் பொதுவான செய்திகள் அனைத்தும் இவ்வியலில் கூறப்படுகிறது. குறிப்பாக அகப்பாட்டு உறுப்புக்களான கூற்று, கேட்போர், இடம், காலம், பயன், முன்னம், மெய்ப்பாடு, எச்சம், பொருள்வகை, துறை போன்ற உறுப்புகளையும் உத்திகளையும் அகப்பாடல்களோடு பொருத்திப் பார்த்தல், பயன்படுத்துதல்.


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மூன்றாம் பருவம்

(பாடத்திட்டம்)

Course Title:

தமிழ் இலக்கிய வரலாறு - I

Course Code : 1938311	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	சங்க இலக்கிய நூல்கள், புலவர்கள், அகப்புற மரபுகள், உள்ளுறை, இறைச்சி போன்ற இலக்கிய உத்திகள், நிலைத்த உண்மைகள் ஆகியனவற்றை அறிந்திருப்பர்.
CO2	சங்ககால அகப்புற மரபுகள் எவ்வாறு அதற்கடுத்தடுத்த காலகட்டத்திலும் தன்னைப் புணரமைத்துக்கொண்டன என்பதனை ஆராய்தல்.
CO3	சங்க காலத்திலேயே தோற்றம் பெற்ற நீதி கூறும் இலக்கியவகை களப்பிரர் காலத்தில் எவ்வாறு பல்கிப் பெருகின?, மருந்துப் பெயர்களாலான நூல்கள், பழமொழிகள் மூலம் நீதி கூறும் நூல், ஆசாரத்தை வலியுறுத்திக் கூறும் நூல், பிற்கால நீதி இலக்கிய வளர்ச்சி என நீதி நூல்கள் குறித்து நுட்பமாகத் தெரிந்து வைத்திருப்பர்.
CO4	கதைகள் வழியாக இலக்கிய நயத்துடன் அறத்தை வலியுறுத்தும் காப்பிய இலக்கியத்தின் தோற்றம். வளர்ச்சி, பிற்காலக் காப்பியங்கள், காப்பிய வகைகள் ஆகியனவற்றை ஆராய்தல்.
CO5	பல்லவ, பாண்டியர் காலத்தில் பக்தி இயக்கமும் பக்தி இலக்கியமும் எவ்வாறு இயைந்து செயல்பட்டன?, நாயன்மார்கள், ஆழ்வார்கள், அவர்களது பாடல்தொகுப்புகளான பன்னிரு திருமுறை, நாலாயிரத் திவ்வியப் பிரபந்தம், பிற்காலப் பக்தி இலக்கியங்கள், அவற்றைப் பாடிய அடியார்கள் போன்ற விவரங்களை நுட்பமாகத் தெரிந்து வைத்திருத்தல்.
CO6	அக, புற இலக்கியங்கள், நீதி இலக்கியங்கள், காப்பிய இலக்கியங்கள், பக்தி இலக்கியங்கள் ஆகியவற்றுக்கான தோற்றம், வளர்ச்சி, நீட்சி, மாற்றம் போன்றவற்றைத் தெளிவாக விளக்குதல்.

நான்காம் பருவம்


(பாடத்திட்டம்)

Course Title:

காப்பியம்

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழ் மொழியில் உருவான காப்பிய மரபின் தொன்மையை மாணவர்கள் அறிந்துகொள்ளுதல்.
CO2	சமணம், பௌத்தம், வைதீகம், கிறித்துவம், இஸ்லாமியம் ஆகிய சமயங்கள் சார்ந்த கொள்கைகளை நுட்பமான வேறுபாடுகளுடன் மாணவர்கள் அறிந்துகொள்ளுதல்
CO3	ஆசிரியர் பணிக்கான தேர்வுகளுக்குரிய நுழைத்தேர்வை எதிர்கொள்ள பயன்படுதல்
CO4	காப்பிய உருவாக்கக் கூறுகளை அறிந்துகொள்வதன் மூலமாக மத்திய, மாநில அரசுகள் சார்ந்து நடத்தப் பெறும் தேர்வுகளுக்கு மாணவர்கள் தயாராதல்
CO5	தொலைக்காட்சி முதலான ஊடகங்களுக்கான தொடர் கதைகளை உருவாக்கும் பயிற்சியை மாணவர்கள் பெறுதல்
CO6	கம்பன் கழகம், சேக்கிழார் இலக்கிய அமைப்பு, ஆன்மீக இலக்கிய அமைப்புகள் முதலான அமைப்புகள் நடத்தும் பேச்சு, கட்டுரை முதலான போட்டிகளில் பங்கேற்று விருதுகள், பரிசுகளைப் பெறுதல்


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நான்காம் பருவம்

(பாடத்திட்டம்)

Course Title:

புறப்பொருள் வெண்பாமாலை

Course Code : 1938413	Credits : 05
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	ஆநிறைக் கவர்தல், ஆநிறை மீட்டல் ஆகிய வெட்சி, கரந்தை போர்முறைகளில் உள்ள பல துறைகளையும் அதற்கான எடுத்துக்காட்டுப் பாடல்களையும் கற்றல்.
CO2	மண்ணாசை காரணமாக மற்றொரு நாட்டின்மீது படையெடுத்தல், தன் நாட்டின்மீது போர் தொடுக்க வந்த படைகளோடு போரிடுதல் ஆகிய வஞ்சி, கரந்தை ஆகிய திணைகளையும் அதன் துறைகளையும் சான்றுப் பாடல்களோடு புரிந்துகொள்ளுதல்.
CO3	மற்றொரு நாட்டின் கோட்டையைக் கைப்பற்றப் போர் தொடுத்தலும், பகைவர் தம் கோட்டையைக் கைப்பற்றுவதைத் தடுக்க எதிர்த் தாக்குதல் தொடுத்தலும் ஆகிய உழிஞை, நொச்சி ஆகிய திணைகளையும் அதன் துறைகளையும் தற்காலத்திலும் உள்ள கோட்டை அமைப்புகளை ஒப்பிட்டுப் பார்த்து புரிந்துகொள்ளுதல்.
CO4	இரு திறத்துப் படைகளும் ஓர் இடம் குறித்துப் போரிடுதலும், போரில் பெற்ற வெற்றியைக் கொண்டாடுதலும் ஆகிய தும்பை, வாகை ஆகிய திணைகளையும் அதன் துறைகளையும் சான்றுப் பாடல்களோடு புரிந்துகொள்ளுதல்.
CO5	ஆளும் தன்மையுடைய ஒருவரின் வீரம், புகழ், கொடை போன்ற பண்புகளைப் புகழும் பாடாண் திணையையும் துறையையும் எடுத்துக்காட்டுப் பாடல்களோடு கற்றல்.
CO6	சிறுநிலக்கியங்கள், தமிழ் இலக்கண வகைகள், தத்துவ நூல்கள், உரை வகைகள், இசை நாடக இலக்கியங்கள், தமிழ் வளர்ச்சிக்குப் பங்காற்றிய சமயங்கள், மறுமலர்ச்சி இலக்கியங்கள் ஆகியவற்றுக்கான தோற்றம், வளர்ச்சி, நீட்சி, மாற்றம் போன்றவற்றைத் தெளிவாக விளக்குதல்.

நான்காம் பருவம்

(பாடத்திட்டம்)

Course Title:

தமிழ் இலக்கிய வரலாறு - II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	சிறுநிலக்கியக் காலம், வகைதொகை, சிறுநிலக்கியங்களில் சிறப்புப் பெற்ற வகைமைகள், புலவர்கள், பிற்கால வளர்ச்சி ஆகியவற்றை நுட்பமாகக் கற்றல்.
CO2	தமிழின் ஏழு இலக்கண வகைகளையும் சமய தத்துவ இலக்கியங்களையும் உரைவகைகளையும் மதிப்பிடல்.
CO3	பள்ள, குறவஞ்சி, கிர்த்தனை, நொண்டி நாடகம், சங்கரதாஸ் சுவாமிகள் நாடகம் போன்ற இசை நாடகங்களையும் பல்வேறு சமயங்களும் தமிழ் வளர்ச்சிக்கு எவ்வாறு பங்காற்றின என்பது குறித்தும் தெளிவாக விளங்கிக் கொள்ளுதல்.
CO4	பத்தொன்பதாம் நூற்றாண்டுத் தமிழ்ப் புலவர்கள், உலகத் தமிழர்கள், பல்வேறு இயக்கங்கள் தமிழ் வளர்ச்சிக்கு பங்காற்றியிருப்பதனைப் பகுப்பாய்வு செய்தல்.
CO5	நவீன இலக்கியங்களான மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை, புதினம், கட்டுரை, உரைநடை, பிற துறைகள் சார்ந்து தமிழ் இலக்கிய மரபு எவ்வாறு வளர்ச்சி பெற்றது என்பதை மதிப்பிடல்.
CO6	சிறுநிலக்கியங்கள், தமிழ் இலக்கண வகைகள், தத்துவ நூல்கள், உரை வகைகள், இசை நாடக இலக்கியங்கள், தமிழ் வளர்ச்சிக்குப் பங்காற்றிய சமயங்கள், மறுமலர்ச்சி இலக்கியங்கள் ஆகியவற்றுக்கான தோற்றம், வளர்ச்சி, நீட்சி, மாற்றம் போன்றவற்றைத் தெளிவாக விளக்குதல்.



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ஐந்தாம் பருவம்
(பாடத்திட்டம்)
Course Title:
சங்க இலக்கியம் - அகம்

Course Code : 1838515	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழனின் களவு, கற்பு வாழ்க்கை முறைகளையும், சமூக நிலை போன்றவற்றை அவற்றின் பின்னணியோடு அறிந்து கொண்டு அதனைப் பகுப்பாய்வு செய்வது. அறிவாற்றலை வளர்க்கும்.
CO2	போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.
CO3	சங்க காலத்தைப் பற்றிய தெளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்கையை முறை குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி பெற உதவும். ஆளுமைப் பண்பை உருவாக்கும்.
CO4	பழந்தமிழனின் கலை மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.
CO5	குடும்ப உறவுகளை அறிவதன் வழி குடும்பத்தைப் பாதுகாக்க வேண்டும் என்ற தெளிவும். இயற்கை அமைப்புகளை அறிவதன் வழி இயற்கையை ஏன் பாதுகாக்க வேண்டும் என்ற தெளிவு ஏற்படும். சமூக பொறுப்பை உண்டாக்கும்.
CO6	சங்க இலக்கியத்தில் அக வாழ்வு பற்றி அறிந்து கொண்டு வருங்காலத்தைத் தீர்மானித்தல். அகப்பாடல்களை அறிந்து கொள்வதன் வழி படைப்பாற்றல் உருவாகும்.

ஐந்தாம் பருவம்
(பாடத்திட்டம்)
Course Title:
யாப்பருங்கலக்காரிகை

Course Code : 1838516	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

CO1	யாப்பிலக்கணத்தின் அடிப்படை உறுப்புகளான எழுத்து, அகை, சீர் ஆகியவற்றின் அடிப்படைகளைக் கற்றல்.
CO2	தளை, அடி, தொடை ஆகிய யாப்பிலக்கண உறுப்புகளைப் பற்றிய வரையறை, வகைகள் ஆகியனவற்றைப் புரிந்துகொள்ளல்.
CO3	வெண்பா, ஆசிரியப்பா ஆகிய இரு பாக்கள், அதன் பாவினங்கள் அமைப்புமுறைகளை கற்றுக்கொண்டு பாக்களை உருவாக்க முயல்தல்.
CO4	கலிப்பா, வஞ்சிப்பா, மருட்பா ஆகிய மூன்று பாக்கள், அதன் பாவினங்கள் அமைப்புமுறைகளை கற்றுக்கொண்டு பாக்களை உருவாக்க முயல்தல்.
CO5	மேற்கண்ட அனைத்து இயல்களுக்கும் பொதுவானதாகவும் ஆனால் அவற்றில் கூறப்படாததாகவும் உள்ள யாப்பிலக்கணக் கூறுகளைப் புரிந்துகொண்டு பயன்படுத்தல்.
CO6	இலக்கியங்களை உருவாக்கும்போதும் சுவைக்கும்போதும் உணர்ச்சியை அறிவதற்கும் உணர்வதற்கும் யாப்பிலக்கண அறிவு அவசியமானது என்பதைக் கற்றுப் பயன்படுத்தல்.

ஐந்தாம் பருவம்


PRINCIPAL
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Vaijnnav College
Arumbakkam, Chennai - 600106.

(பாடத்திட்டம்)

Course Title:

மொழி வரலாறு

Course Code : 1838517	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழ்மொழியின் படிநிலைகள், ஒலி கூறுகள், மொழி குடும்பங்களுக்குள் உள்ள தொடர்புகள்/ வேறுபாடுகள், தனித்தியங்கும் ஆளுமை, மொழியில் ஏற்பட்டு வந்துள்ள மாற்றங்கள் போன்றவற்றை அதன் பின்னணியோடு அறிந்து ஆய்வுக் உட்படுத்துதல்.
CO2	போட்டித் தேர்வுகளுக்கு மொழியியல் (Linguistics) பாடத்தைத் தேர்வு செய்து பயன்படுத்துதல்.
CO3	தமிழ் - பிற திராவிட மொழிகள் (தெலுங்கு, மலையாளம், கன்னடம், துளு மற்றும் பிற) குறித்த அறிவை விரிவு செய்தல். தமிழ் - வடமொழி குடும்பங்களின் தனித்துவத்தை வெளிப்படுத்துதல், மாணவர்களுக்கு புதியதொரு மொழியைக் கற்க தூண்டுதல்.
CO4	அறிவியல் அடிப்படையிலான மொழியியல் ஆய்வுத்துறையில் ஈடுபட வழிவகுத்தல்.
CO5	மொழி ஒலிப்பு முறைகளை அறிவதின் ஊடாக இலக்கண இலக்கிய பயிற்சி பெறுதல், புதிய படைப்புகளை உருவாக்க தூண்டுதல், ஆளுமைப் பண்பை உருவாக்குவது.
CO6	பேச்சுமொழி எழுத்துமொழி போன்றவற்றைப் புரிந்துகொள்ள செய்வதனுடாக வருங்காலத்தில் மொழியியல் குறித்த புரிதலை உருவாக்கவும் வழக்கொழியும் நிலையிலுள்ள மொழிகளை மீட்டெடுக்க தூண்டுதலும் முதன்மையாக அமைகிறது.

ஐந்தாம் பருவம்

(பாடத்திட்டம்)

Course Title:

தமிழ் இலக்கியத் திறன்

CO1	திறனாய்வைப் பற்றிய புரிதல், இலக்கிய ஆய்வுகள், இலக்கிய மதிப்பீடுகள், இலக்கிய உணர்ச்சிகள், மானிட உண்மைகள், இலக்கிய கலை, போன்றவற்றை அறிந்து கொண்டு அவற்றைப் பகுப்பாய்வு செய்வது.
CO2	திறனாய்வு குறித்த போட்டித் தேர்வுக்குப் பயன்படுத்துவது.
CO3	திறனாய்வு செய்வதைப்பற்றி இந்திய நாடு மற்றும் மேல் நாட்டு அறிஞர்கள் விளக்கங்களை அறிந்து கொண்டு தமிழின் தலைசிறந்த இலக்கியங்களைத் தெர்ந்தெடுப்பது அதன் பெருமையை அடையாளம் காண்பது மாணவர்கள் புத்துணர்ச்சி பெற உதவும்.
CO4	தமிழ் இலக்கியங்களைத் திறனாய்வு செய்யத் தூண்டும். இதன் மூலம் ஆளுமைப் பண்பு வளரும்.
CO5	இலக்கியங்களைத் திறனாய்வு செய்யக் கற்றுக் கொள்வதன் வழி இலக்கியங்களை ஏன் படித்துப் பாதுகாக்க வேண்டும் என்ற பொறுப்பு ஏற்படும்.
CO6	காப்பியம், கவிதை, புதினம், சிறுகதை போன்ற இலக்கியங்களைப் படிக்கவும் அதனை எவ்வாறு படைப்பது என்பது குறித்த படைப்பாற்றலும் வளரும், வருங்காலத்தில் அதனைத் திறனாய்வு செய்ய முடியும்.

ஐந்தாம் பருவம்


PRINCIPAL

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(பாடத்திட்டம்)

Course Title:

இதழியலும் மொழிபெயர்ப்பும்

Course Code : 1838519	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	தமிழர்களின் தொன்மையான கருத்துப் பரிமாற்ற முறைமைகளை மாணவர்கள் அறிந்துகொள்ளல்.
CO2	மாணவர்கள் தங்களின் வலையொலி முதலான சமூக ஊடகங்களுக்குத் தாங்களே செய்திகளைத் திரட்டும் நிருபர்களாகச் செயல்படுதல்.
CO3	தியாகிகள், விளையாட்டு வீரர்கள், தலைவர்கள் முதலானவர்களை நேர்காணல் செய்யும் ஆற்றல் பெறுதல்.
CO4	கல்லூரிக்கு வருகைப் புரியும் சிறப்பு விருந்தினர்களோடு கலந்துரையாடுதல், அவர்களைப் பற்றிய அனுபவங்களை அவர்களிடமிருந்து சேகரித்தல். மேடையில் சிறப்பு விருந்தினர்களை அறிமுகப்படுத்தும் ஆற்றலை உருவாக்கிக் கொள்ளுதல்.
CO5	சமூக ஊடகங்களில் பிறரை நேர்காணல் செய்தல், செய்தி வாசித்தல் முதலான பணிகளை மேற்கொள்ளும் ஆற்றலை வளர்த்துக்கொள்ளுதல்.
CO6	கேலிச் சித்திரங்களை வரைதல், வெளியிடுதல் முதலான திறன்களை மாணவர்கள் வளர்த்துக் கொள்ளுதல், பிழைத்திருத்தம் செய்யும் முறைமைகளை அறிந்துகொள்ளுதல்.

ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

சங்க இலக்கியம் - புறம்

Course Code : 1938620	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழரின் வீரம், கொடை, நட்பு, புகழ், தத்துவங்கள் போன்ற புறவாழ்க்கைச் செய்திகளை அவற்றின் பின்னணியோடு அறிந்துகொண்டு அதனைப் பகுப்பாய்வு செய்வது. அறிவாற்றலை வளர்க்கும்.
CO2	போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.
CO3	சங்க காலத்தைப் பற்றிய தெளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்கைமுறை குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி பெற உதவும்; ஆளுமைப் பண்பை உருவாக்கும்.
CO4	பழந்தமிழனின் கலை மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.
CO5	சங்ககால மக்களின் வீர உணர்வையும் அற உணர்வையும் அறிவதன்வழி இது குறித்த தெளிவு ஏற்படும். இது சமூக பொறுப்பை உண்டாக்கும்.
CO6	சங்க இலக்கியத்தில் புற வாழ்வு பற்றி அறிவதன்வழி வருங்காலத்தைத் தீர்மானித்தல். புறப்பாடல்களை அறிந்து கொள்வதன் வழி படைப்பாற்றல் உருவாக்கல்.



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ஆறாம் பருவம்
(பாடத்திட்டம்)
Course Title:
தண்டியலங்காரம்

Course Code : 1938621	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	தொல்காப்பியர் உவமவியலில் கூறியுள்ள இலக்கணம் பிற்காலத்தில் அணியிலக்கணமாக வளர்ச்சி பெற்றதைக் கற்றல்.
CO2	போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.
CO3	குளவணி, சொல்லணி, பொருளணி ஆகிய மூவகை அணிகளில் பொருளணியே மிகுதியாகப் பயன்பாட்டில் உள்ளதனை ஆராய்தல்.
CO4	பழந்தமிழனின் அழகியல் உணர்வைத் தண்டியலங்காரம் வழிப் புரிந்துகொள்ளுதல்.
CO5	அணிகளின் பல வகைகளைச் சான்றுகளுடன் கற்றல்.
CO6	கற்றுக்கொண்ட அணியிலக்கணத்திபடி மரபுக்கவிதை இயற்றுதல்.

ஆறாம் பருவம்
(பாடத்திட்டம்)
Course Title:

திராவிட மொழிகளின் ஒப்பாய்வு

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	வரலாற்றுக்கு முற்பட்ட மொழிநிலை ஆய்வு குறித்தும் திராவிட மொழிக் குடும்ப ஒப்பாய்வின் வரலாறு குறித்தும் கற்றல்.
CO2	திராவிட மொழிகளின் முப்பிரிவுகள், அவற்றுக்கிடையேயான ஒற்றுமை, வேற்றுமைகளை ஒப்பீடு செய்தல்.
CO3	திராவிட மொழிகளுக்குரிய மெய்யொலிகளின் இயைபு, திரிபு, மெய்யொலி மாற்றங்கள் ஆகியன குறித்தும், இடம், திணை, பால், எண் உணர்த்தும் முறை குறித்தும் தெளிவு பெறல்.
CO4	திராவிட நாகரிகம் மிகப் பழமையானது என்பதை மொழியியல் ஆய்வு அடிப்படையில் விளக்குதல்.
CO5	மக்களின் நாகரிகம், பண்பாடு, வளமான வாழ்க்கை, வளமற்ற தன்மை போன்றவற்றை அவர்கள் பேசும் மொழிகள் கொண்டே முழுமையாக அறியமுடியும் என்பதை மொழியியல் கொண்டு கற்றல்.
CO6	மாணவர்களுக்கு மொழியியல் குறித்த ஆர்வத்தைத் தூண்டி, மொழியியல் ஆய்வாளர்களாக அவர்களை ஊக்கப்படுத்துதல்.


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ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

விருப்பப்பாடம் - நாட்டுப்புறவியல்

Course Code : 1938623	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	நாட்டுப்புறவியல் என்னும் புதிய துறையின் அறிவை மாணவர்கள் பெறுதல்
CO2	நாட்டுப்புற மக்களிடையே தரவுகளைச் சேகரிக்கும் களப்பணி அறிவை மாணவர்கள் பெறுதல்
CO3	நாட்டுப்புற கலைகள் குறித்த அறிவைப் பெற்று, நாட்டுப்புறக் கலைஞர்களாக மாணவர்கள் உருவாதல்
CO4	மாணவர்கள் இன்றைய ஊடகங்களில் பணி வாய்ப்பைப் பெறும்பொழுது நாட்டுப்புறக் கதைகள், பாடல்களை நிகழ்த்தி தனிப்பட்ட ஆளுமையாளராக சிறப்பைப் பெறுதல்
CO5	நாட்டுப்புற விளையாட்டுகள் முதலான வழக்காறுகளைப் பயன்படுத்தி விளம்பர உத்திகளை ஊடகங்களில் பயன்படுத்துதலுக்கான மாணவர்கள் உருவாதல்
CO6	பயன்பாட்டு நாட்டுப்புறவியல் முறையில் புதியபுதிய பொருள்களை மக்களிடையே கொண்டுச் சேர்க்கும் சந்தைப்படுத்துதலுக்கான திறனை மாணவர்கள் பெறுதல்

ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

அடிப்படைக் கணினியியல்

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	கணினியின் தோற்றம், வளர்ச்சி, ஐந்து தலைமுறைக் கணினிகள், கணினியின் வகைகள் குறித்து தெரிந்துகொள்ளுதல்.
CO2	கணினியின் பாகங்களான உள்எட்டகம், வெளியீட்டகம், மையச் செயலகம். ஆகியவற்றை நேரடியாகக் கண்டு புரிந்துகொள்ளுதல்.
CO3	கணினியில் பல்வேறு தொழில்நுட்பங்களைப் பயன்படுத்தி மைக்ரோசாஃப்ட், வேர்டு, எக்ஸெல், பவர்பாய்ண்ட் ஆகியவற்றை உருவாக்குதல் குறித்து செய்முறையாகச் செய்துபார்த்து கற்றல்.
CO4	இணையத்தில் தமிழ் செல்தெறி, தமிழ் இணைய மாநாடுகள் கணிப்பொறித் திருவிழாக்கள், தமிழ்க் கணினி மொழியியல் ஆகியனவற்றை மதிப்பிடல்.
CO5	மின்னஞ்சல், சுட்டுரை, முகநூல், தமிழ் எழுத்துரு பதிவிறக்கம், மின் மொழிபெயர்ப்புகள் போன்ற தமிழ் இணையப் பயன்பாட்டுச் செயலிகளையும் தமிழ் மின்னியல் நூலகம், தமிழ் விக்கிப்பீடியா போன்ற திறந்தவெளிக் கற்றல் வளங்களையும் கல்விக்காகப் பயன்படுத்துதல்.
CO6	கணினியின் முழுப் பயன்பாட்டைத் தெரிந்துகொள்வதோடு கல்விக்காகவும் அடுத்த கட்ட வளர்ச்சிக்காகவும் கணினியைப் பயன்படுத்துதல்



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PROGRAM SPECIFIC OUTCOMES

PSO 1: அறிவாற்றல், தமாழியாற்றல் மூலம் ஆசிரியராக, வழக்கறிஞராகப் பணியாற்றல்.

PSO 2: தபாட்டித் ததர்வுகள்வழி அரசுப்பணி / ததர்வுகளில் ததர்ச்சிப் தபறுதல்.

PSO 3: கமலத்துமறயில் தவற்றிகரமாகப் பயணித்தல்.

PSO4: பகுப்பாய்வு தசய்யும் திறன்மூலம் ஊடகவியலாளராக / ஆய்வாளராகப் பணியாற்றல்.

PSO 5: தனது ஆளுமம்ப் பண்புகள் மூலம் சுயததாழில் ததாடங்குதல்.

முதலாம் பருவம்

(பாடத்திட்டம்)

Course Title: இக்கால இலக்கியம் – 1

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 தமிழ் மமாழியில் உருவான சங்க இலக்கியம் முதல் இருதையதாராம் நூற்றாண்டு வமரயிலான கவிமத மரமை மாணவர்கை அறிந்துமகாை்ளுதல்.
- CO2 புதுக்கவிமதகமைச் சமகால மைாருண்மமகமை மமயமாக்க் மகாண்டு கவிமதகமைை் னைமைத்தல்
- CO3 முகநூல், கைம்சவி முதலான னைகங்கிகில் கவிமதகமைை் னைமைத்து மவையிடுதல்
- CO4 தமிழ்நாடு அரசால் நைத்தை்மைறும் யைாை்டித் யதர்வுகளுக்கு மாணவர்கை தயாராதல்
- CO5 திமரைை்ைங்கை, குறும்ைைம், ஆவனைைைம் முதலான னைகங்கைச் சார்ந்து னைைல்கமை உருவாக்குதல்.
- CO6 னைகங்கிகில் னைணியாை்ராகச் யசர்ந்து னைணியயற்றல்

முதலாம் பருவம்

(பாடத்திட்டம்)

Course Title:

நன்னூல் – எழுத்ததிகாரம்

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 எழுத்துக்கள் கூட்டாகித் தசாற்களாக அமமயும் தமாழியின் அமமம்மப அறிந்திருத்தல்
- CO2 தமாழிமயச் சரியாக உச்சரித்தல் மற்றும் நூல்கமளக் கற்றதன் அறிவு தகாண்டு சரளமாகப் தபசும் தபச்சாற்றல் வளம் தபறல்.
- CO3 தமாழிமயச் சரியான ததாடர் அமமப்புடன் இலக்கணப் பிமழயில்லாமல் எழுதக்கற்று இருத்தல்.
- CO4 நூலின் அழகு, குற்றம், உத்தி முதலானவற்றைக் கற்றதால் ஒரு நூல் எவ்வாறு இருக்கதவண்டும், அதன் உட்குறு தபாருண்மம சார்ந்து எவ்வாறு அமமந்திருக்க தவண்டும் என்பமத அறிந்து தகாண்டு சிறந்த திறனாய்வாளனாக உருப்பறுதல்



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முதலாம் பருவம்
(பாடத்திட்டம்)

Course Title: தமிழக வரலாறும் பண்பாடும் – 1

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 தமிழக வரலாற்றை அறிந்துகொள்வது ஏன் அவசியம்? அதனை எவ்வாறு புரிந்துகொள்வது? சான்றுகள் மூலம் வரலாற்றை எவ்வாறு எழுதுவது? அண்மக்காலத்தில் கிடைத்த சான்றுகள் மூலம் உலகளவில் தமிழக வரலாறு தபறும் முக்கியத்துவம் என்ன? தபான்றவற்றை அறிதல்.
- CO2 இயற்கை அமமப்புகமள அறிவதன் வழி இயற்கைமய ஏன் பாதுகாக்க தவண்டும் என்ற ததளிவு ஏற்படுதல்.
- CO3 வரலாற்றுக்கு முற்பட்ட காலம் முதல் சிந்து சமதவளிக் காலம் வமரயிலான தமிழர்களின் வரலாற்றைப் புமததபாருள் ஆய்வுகள், தமாழியாராய்ச்சி தபான்ற சான்றுகள் மூலம் அறிதல்.
- CO4 பண்மடத் தமிழர்கள் உலகளாவிய வணிகத்தில் முக்கியத்துவம் தபற்றிருந்ததனை அயல்நாட்டார் குறிப்புகள், அகழ்வாராய்ச்சிச் சான்றுகள், சங்கப் பாடல்கள் தபான்ற சான்றுகள் மூலம் அறிதல்.
- CO5 முச்சங்கங்கள், சங்ககால இலக்கியங்கள், ஆட்சிமுறை, தபார்முறை, சமூகநிமல, பண்பாடு, கமலகள் ஆகியனவற்றைக் கற்றல்.
- CO6 களப்பிரர், பல்லவர் கால இலக்கியங்கள், ஆட்சிமுறை, தபார்முறை, சமூகநிமல, பண்பாடு, கமலகள் ஆகியனவற்றைக் கற்றல்.

முதலாம் பருவம்
(பாடத்திட்டம்)

Course Title: (NME – I) Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 மாணவர்கை தமிழ் மமாழியின் இலக்கண அறிமவை மைறுதல்
- CO2 மாணவர்கை பிமழயின்றி தமிழில் வாசித்தல், எழுதுதல், யைசுதல்
- CO3 இதழ்கை, மைாது இைங்கிகில் தமிழ் மமாழியில் இை அறிவிை்புகமைக் கண்டு பிமழுகமை அறிதல், கமைதல்
- CO4 அரசுை் இைணித் யதர்வுகிகில் தமிழ் மமாழி சார்ந்த வினாக்களுக்கு விமையிக்கும் அறிமவை மைறுதல்

இரண்டாம் பருவம்
(பாடத்திட்டம்)

Course Title: இக்கால இலக்கியம் – II

- CO1 தமிழ் மமாழியில் உருவான புதிய இலக்கிய வமகமமகமை மாணவர்கை அறிந்துமகாை்ளுதல்
- CO2 சிறுகமத, புதினம் முதலான இலக்கியை இைமைை்பு உத்திகமை அறிந்துமகாை்ளுதல்
- CO3 அரசுத் யதர்வுகிகில் யகைக்கைடும் தமிழ் இலக்கியம் சார்ந்த வினாக்களுக்கான விமையகமை யசுகரித்தல்
- CO4 இைங்கமல முடித்த அடுத்த நிமல கல்விகான முதுகமல மற்றும் ஆய்வு நிமலயிலான இைடிை்மைச் சார்ந்த நுமழத்துத் யதர்வில் மவற்றிமைற மாணவர்களுக்குை் இையன்இைடுதல்
- CO5 இைருவ இதழ்கை, வமலமயாலி முதலான இைங்கிகில் சிறுகமதகமை இைமைத்து மலையிிடும் இைமையை்ை்ாை்ியாக உருவாதல்
- CO6 சிறுகமத, புதினம் முதலான இலக்கியங்கமை வாசித்து ஆவணைை் உருவாக்குநராதல்

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இரண்டாம் பருவம்

(பாடத்திட்டம்)

Course Title:

நன்னூல் – போல்லதிகாரம்

CO1

தசாற்கமள அதனதன் தபாருளுக்கதற்ப தபயர்ச்சசால், விமனச்சசால் என்பனவாகப் பிரித்து தமாழிமயப் பிறர் ததளிவாகப் புரிந்து தகாள்ளும் வமகயில் மகயாளக் கற்று இருத்தல்.

CO2

தவற்றுமம உருபுகள் தசால்லின் தபாருமள மாறுபடுத்தும் பாங்கம நன்கு ததரிந்து அதற்கதற்ப உரிய உருபுகளப் பயன்படுத்தி இலக்கணக் கட்டமமப்புடன் எழுதவும் சரளமாகப் தபசவும் அறிந்திருத்தல்.

CO3

விமனச்சசாற்கள் தபயதர்ச்சங்களாகவும் விமனதயச்சங்களாகவும் விமனமுற்றுகளாகவும் அமமந்து ததாடர் அமமப்பில் சரியாக இடம் தபறும் தன்மமமயப் புரிந்து மவத்திருத்தல்.

CO4

ஒரு தசால்லானது பால், எண், இடம் ஆகியனவற்றிற்கதற்பப் தபாருள் நிமலயில் எவ்வாறு மாற்றம் அமடகிறது என்பமத உணர்ந்து தமாழியின் அழகியமல உணர்ந்து இருத்தல்.

CO5

தமாழிமய வழுவில்லாமல் எழுதுவதும் தபசுவதும் குறித்துத் ததளிவாக அறிந்திருப்பதாடு எமவதயல்லாம் மரபின் காரணமாக வழுவாக அமமயாமல் உள்ளன என்பமதயும் அறிந்து இருத்தல்.

CO6

தமாழியின் கட்டமமப்புக்கு இமடச்சாற்களும் உரிச்சாற்களும் எவ்வாறு இன்றியமமயாதனவாக இருக்கின்றன என்பமத அறிந்து இருத்தல்.

இரண்டாம் பருவம்

(பாடத்திட்டம்)

Course Title:

தமிழக வரலாறும் பண்பாடும் – 2

CO1

பிற்காலச் தசாழர்களின் எழுச்சி, வளர்ச்சி, வீழ்ச்சிமயயும் அரசர்கமளயும் அதற்கான காரணங்கமளயும் கற்றல்.

CO2

பிற்காலச் தசாழர்கலாத்தில் நிர்வாக முமற, சமயநிமல, நகரங்களின் அமமப்பு, தபண்கள் நிமல, பழக்கவழக்கங்கள், நம்பிக்கைகள், கமல, இலக்கியங்களின் வளர்ச்சி, மக்களின் வாழ்க்கைமுமற ஆகியன குறித்துக் கற்றல்.

CO3

பிற்காலப் பாண்டியர், கல்தான்கள், நாயக்கர்கள், மராட்டியர்கள் கால ஆட்சிமுமற, மக்களின் வாழ்க்கைமுமற, கமல, இலக்கியநிமல, சமூகநிமல ஆகியனவற்றைக் கற்றல்.

CO4

ஐதராப்பியரின் வரமவயும், அது தமிழக அரசியலிலும், சமூகநிமலயிலும் ஏற்படுத்திய தாக்கம் குறித்து ஆராய்தல்.

CO5

இருபதாம் நூற்றாண்டில் தமிழக ஆட்சிமுமற, இலக்கியங்கள், கமலகள், கல்வி, தபாருளாதாரம் தபான்றவற்றில் ஏற்பட்ட மாற்றங்கமளயும் அதன் நன்மம, தீமமகமளயும் பகுப்பாய்வு தசய்தல்.

CO6

சிறப்புற்று விளங்கிய தமிழ்ப் தபரரசுகள் விழுந்ததற்கான காரணங்கமளக் கண்டறிந்து வருங்காலத்ததத் தீர்மானித்தல்.


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இரண்டாம் பருவம்

(பாடத்திட்டம்)

Course Title:

இதழியல் – ஓர் அறிமுகம்

- CO1 தமிழர்கின் மதான்மமயான கருத்துடை் ஸ்ரிமாற்ற முமறமமகமை மாணவர்கை அறிந்துமகாடை்டைல்
- CO2 மாணவர்கை தங்கின் வமலமயாலி முதலான சமூக ஹைகங்களுக்குத் தாங்கயை மசய்திகமைத் திரை்டும் நிருடைர்கைகச மசயல்டைடுதல்
- CO3 தியாகிகை, விமையாடை்டு வீர்கை, தமலவர்கை முதலானவர்கமை யநர்காணல் மசய்யும் ஆற்றல் மைறுதல்
- CO4 கல்லூரிக்கு வருமகை புரியும் சிறை்பு விருந்தினர்கயையாடு கலந்துமரயாடுதல், அவர்கமைடை் ஸ்ற்றிய அனுடை்வங்கமை அவர்கைமிருந்து யசகரித்தல். யமமையில் சிறை்பு விருந்தினர்கமை அறிமுடைடை்த்தும் ஆற்றமல உருவாக்கி மகாடை்ளுதல்.
- CO5 சமூக ஹைகங்கில் பிறமர யநர்காணல் மசய்தல், மசய்தி வாசித்தல் முதலான ஸ்ணிகமை யமற்மகாடை்ளும் ஆற்றமல வைர்த்துமகாடை்ளுதல்
- CO6 யகலிச் சித்திரங்கமை வமரதல், மவையிடுதல் முதலான திறன்கமை மாணவர்கை வைர்த்து மகாடை்ளுதல், பிமழத்திருத்தம் மசய்யும் முமறமமகமை அறிந்துமகாடை்ளுதல்

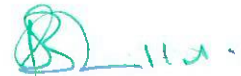
மூன்றாம் பருவம்

(பாடத்திட்டம்)

Course Title:

கை்தி இலக்கியமும் சிற்றிலக்கியமும்

- CO1 தமிழர்கின் வாழ்வியல் கை்தியயாடும் சார்ந்த வாழ்வியல் என்டைமத மாணவர்கை அறிந்துமகாடை்ளுதல்
- CO2 கை்தி இலக்கியங்கமை கற்டைன் மூலமாக அரசடை் ஸ்ணித் யதர்வுகளுக்கு தயாராதல்
- CO3 குறவஞ்சி, ஸ்டை்ள ஆகிய இலக்கியங்கமைக் கற்டைன் மூலமாக தமிழர்கின் நிலை ஸ்ாகுடை்ாடுகமையும் நிலை ஸ்ாகுடை்ாடு சார்ந்த வாழ்வியமலயும் மாணவர்கை அறிந்துமகாடை்ளுதல்
- CO4 தமிழ்விடு தூது என்னும் தூது இலக்கியத்மதக் கற்டைன் மூலமாகத் தமிழ் எழுத்துகின் எழுத்துக்கின் பிறை்பு, வமககை, ஸ்யன்டை்ாடு முதலானவற்ற மாணவர்கை அறிந்து மகாடை்ளுதல்
- CO5 மசவம், மவணவம், கிறித்துவம், இஸ்லாமியம் முதலான சமயங்கின் மகாடை்மககமை மாணவர்கை அறிந்துமகாடை்ளுதல்
- CO6 கை்தி சார்ந்த இதழ்கில் ஸ்ணியாடை்ராக ஸ்ணியயற்கும் வாயடை்மை மாணவர்கை மைறுதல்



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மூன்றாம் பருவம்

(பாடத்திட்டம்)

Course Title:

நம்பியகப்பபாருள்

CO1

அகப்பபாருள் வமககள், கூறும் முமறமம், ஐந்திமணக்குரிய முப்பபாருள்கள், மகதகாள் வமககள், களவுப் புணர்ச்சியின் வமககள், குறியிடங்கள், பிரிவின் வமககள், அறத்ததாடு நிற்றல் தபான்ற களவு, கற்புக்குப் தபாதுவான இலக்கணக் கூறுகமள அறிந்துதகாள்வதன் மூலம் அக இலக்கணம் குறித்த ததளிமவப் தபறுதல்.

CO2

களவுக்கு உரிய கிளவித் ததாமககளான இயற்மகப் புணர்ச்சி, வன்புமற, ததளிவு, பிரிவுழி மகிழ்ச்சி, பிரிவுழிக் கலங்கல், இடந்தமலப்பாடு, பாங்கற் கூட்டம், பாங்கிமதியுடம்பாடு, பாங்கியிற் கூட்டம், பாங்கமம பகற்குறி, பகற்குறி இமடயீடு, இரவுக்குறி, இரவுக்குறி இமடயீடு, வமரவு தவட்டமக, வமரவு கடாதல், ஒருவழித் தணத்தல், வமரவிமட மவத்துப்

தபாருள்வயிற் பிரிதல் ஆகியனவற்றை இக்காலச் சூழதலாடு ஒப்பிட்டு பண்மடத் தமிழரின் சிறப்பம் உணர்ந்துக் கற்றல்.

CO3

தமலவன் தமலவி இருவரும் திருமணம் தசய்துதகாள்ளும் பல்தவறு முமறமமகள் குறித்து வமரவியல் விளக்குகிறது. வமரவின் இலக்கணம், வமரவு மலிதல், அறத்ததாடு நிற்றல், உடன்தபாக்கு, மீட்சி, வமரதலின் வமககள் ஆகியவற்றைப் புரிந்துதகாள்ளல்.

CO4

தமலவன் தமலவி இருவரும் ஒழுக்க தநறிகளுடன் இனிதத இல்லறம் நடத்துதமலக் கற்பியல் கூறுகிறது. கற்பின் இலக்கணம், கற்பிற்கு உரிய கிளவித்ததாமக, இவ்வாழ்க்கமக பரத்மதயிற் பிரிவு, ஊடல் வமககள், அணிவழி உணர்த்தல் ஐவமகப் பிரிவுகள் ஆகியனவற்றை இக்காலச் சூழதலாடு ஒப்பிட்டுப் பார்த்துப் புரிந்துதகாள்ளல்.

CO5

பல்லவ, பாண்டியர் காலத்தில் பக்தி இயக்கமும் பக்தி இலக்கியமும் எவ்வாறு இமயந்து தசயல்பட்டன?, நாயன்மார்கள், ஆழ்வார்கள், அவர்களது பாடல்ததாருப்புகளான பன்னிரு திருமுறை, நாலாயிரத் திவ்வியப் பிரபந்தம், பிற்காலப் பக்தி இலக்கியங்கள், அவற்றைப் பாடிய அடியார்கள் தபான்ற விவரங்கமள நுட்பமாகத் ததறிந்து மவத்திருத்தல்.

CO6

எந்த இயலிலும் கூறப்படாத, ஆனால் அமனத்து இயல்களுக்கும் தபாதுவான தசய்திகள் அமனத்தும் இவ்வியலில் கூறப்படுகிறது. குறிப்பாக அகப்பாட்டு உறுப்புக்களான கூற்று, தகட்தபார், இடம், காலம், பயன், முன்னம், தமய்ப்பாடு, எச்சம், தபாருள்வமக, துமற தபான்ற உறுப்புகமளயும் உத்திகமளயும் அகப்பாடல்களாடு தபாருத்திப் பார்த்தல், பயன்படுத்துதல்.


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மூன்றாம் பருவம்
(பாடத்திட்டம்)
Course Title:
தமிழ் இலக்கிய வரலாறு – I

- CO1** சங்க இலக்கிய நூல்கள், புலவர்கள், அகப்புற மரபுகள், உள்ளுமற, இமறச்சி தபான்ற இலக்கிய உத்திகள், நிமலத்த உண்மமகள் ஆகியனவற்றை அறிந்திருப்பர்.
- CO2** சங்ககால அகப்புற மரபுகள் எவ்வாறு அதற்கடுத்தடுத்த காலகட்டத்திலும் தன்மனப் புணரமமத்துக்காண்டன் என்பதனை ஆராய்தல்.
- CO3** சங்க காலத்திலுள்ள ததாற்றம் தபற்ற நீதி கூறும் இலக்கியவக களப்பிரர் காலத்தில் எவ்வாறு பல்கிப் தபருகின்?, மருந்துப் தபயர்களாலான நூல்கள், பழதமாழிகள் மூலம் நீதி கூறும் நூல், ஆசாரத்த வலியுறுத்திக் கூறும் நூல், பிற்கால நீதி இலக்கிய வளர்ச்சி என நீதி நூல்கள் குறித்து நுட்பமாகத் ததறிந்து மவத்திருப்பர்.
- CO4** கமதகள் வழியாக இலக்கிய நயத்துடன் அறத்த வலியுறுத்தும் காப்பிய இலக்கியத்தின் ததாற்றம். வளர்ச்சி, பிற்காலக் காப்பியங்கள், காப்பிய வகைகள் ஆகியனற்றை ஆராய்தல்.
- CO5** பல்லவ, பாண்டியர் காலத்தில் பக்தி இயக்கமும் பக்தி இலக்கியமும் எவ்வாறு இமயந்து தசயல்பட்டன?, நாயன்மார்கள், ஆழ்வார்கள், அவர்களது பாடல்ததாக்குப்புகளான பன்னிரு திருமுறை, நாலாயிரத் திவ்வியப் பிரபந்தம், பிற்காலப் பக்தி

நான்காம் பருவம்
(பாடத்திட்டம்)
Course Title:

காண்பியம்

- CO1** தமிழ் மமாழியில் உருவான் காண்பிய மரபின் மதான்மமமய மாணவர்கை அறிந்துமகாண்புதல்.
- CO2** சமணம், மெளத்தம், மவதிகம், கிறித்துவம், இஸ்லாமியம் ஆகிய சமயங்கை சார்ந்த மகாண்புமககமை நுண்புமமன யவறுண்புமககமைன் மாணவர்கை அறிந்துமகாண்புதல்
- CO3** ஆசிரியர் ண்புமககமை யதர்வுகளுக்குரிய நுமழத்யதர்மவ எதர்மகாண்புமககமைன் ண்புமககமை
- CO4** காண்பிய உருவாக்கக் கூறுகமை அறிந்துமகாண்புதல் மூலமாக மத்திய, மாநில அரசுகை சார்ந்து நைத்தை மையும் யதர்வுகளுக்கு மாணவர்கை தயாராதல்
- CO5** மதாமலக்காண்புமககமை முதலான ண்புமககமைகளுக்கான மதாண்புமககமை உருவாக்கும் ண்புமககமை மாணவர்கை மைறுதல்
- CO6** கம்ண்புமககமை, யசக்கிழார் இலக்கிய அமமைபு, ஆன்மீக இலக்கிய அமமைபுகை முதலான அமமைபுகை நைத்தும் யைச்சு, கைடுமர முதலான யைண்புமககமை ண்புமககமை விருதுகை, ண்புமககமை மைறுதல்


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நான்காம் பருவம்

(பாடத்திட்டம்)

Course Title:

புறப்பாருள் பவண்பாமாகல

- CO1 ஆதிமரக் கவர்தல், ஆதிமர மீட்டல் ஆகிய தவட்சி, கரந்த தபார்முமறகளில் உள்ள பல துமறகமளயும் அதற்கான எடுத்துக்காட்டுப் பாடல்கமளயும் கற்றல்.
- CO2 மண்ணாமச காரணமாக மற்தறாரு நாட்டின்மீது பமடதயடுத்தல், தன் நாட்டின்மீது தபார் ததாடுக்க வந்த பமடகதளாடு தபாரிடுதல் ஆகிய வஞ்சி, கரந்த ஆகிய திமணகமளயும் அதன் துமறகமளயும் சான்றுப் பாடல்கதளாடு புரிந்துதகாள்ளுதல்.
- CO3 மற்தறாரு நாட்டின் தகாட்டமடயக் மகப்பற்றப் தபார் ததாடுத்தலும், பமகவர் தம் தகாட்டமடயக் மகப்பற்றுவமதத் தடுக்க எதிர்த் தாக்குதல் ததாடுத்தலும் ஆகிய உழிமஞ், தநாச்சி ஆகிய திமணகமளயும் அதன் துமறகமளயும் தற்காலத்திலும் உள்ள தகாட்டமட அமமப்புகமள ஒப்பிட்டுப் பார்த்து புரிந்துதகாள்ளுதல்.
- CO4 இரு திறத்துப் பமடகளும் ஓர் இடம் குறித்துப் தபாரிடுதலும், தபாரில் தபற்ற தவற்றிமயக் தகாண்டாடுதலும் ஆகிய தும்மப, வாமக ஆகிய திமணகமளயும் அதன் துமறகமளயும் சான்றுப் பாடல்கதளாடு புரிந்துதகாள்ளுதல்.
- CO5 ஆளும் தன்மமயுமடய ஒருவரின் வீரம், புகழ், தகாமட தபான்ற பண்புகமளப் புகழும் பாடாண் திமணமயயும் துமறமயயும் எடுத்துக்காட்டுப் பாடல்கதளாடு கற்றல்.
- CO6 சிற்றிலக்கியங்கள், தமிழ் இலக்கண வமககள், தத்துவ நூல்கள், உமர வமககள், இமச நாடக இலக்கியங்கள், தமிழ் வளர்ச்சிக்குப் பங்காற்றிய சமயங்கள், மறுமலர்ச்சி இலக்கியங்கள் ஆகியவற்றுக்கான ததாற்றம், வளர்ச்சி, நீட்சி, மாற்றம் தபான்றவற்றதத் ததளிவாக விளக்குதல்.

நான்காம் பருவம்

(பாடத்திட்டம்)

Course Title:

தமிழ் இலக்கிய வரலாறு – II

- CO1 சிற்றிலக்கியக் காலம், வமகததாமக, சிற்றிலக்கியங்களில் சிறப்புப் தபற்ற வமகமமகள், புலவர்கள், பிற்கால வளர்ச்சி ஆகியவற்ற நுட்பமாகக் கற்றல்
- CO2 தமிழின் ஏழு இலக்கண வமகமளயும் சமய தத்துவ இலக்கியங்கமளயும் உமரவமகமளயும் மதிப்பிடல்.
- CO3 பள்ளு, குறவஞ்சி, கீர்த்தமன, தநாண்டி நாடகம், சங்கரதாஸ் சுவாமிகள் நாடகம் தபான்ற இமச நாடகங்கமளயும் பல்தவறு சமயங்களும் தமிழ் வளர்ச்சிக்கு எவ்வாறு பங்காற்றின என்பது குறித்தும் ததளிவாக விளங்கிக் தகாள்ளுதல்.
- CO4 பத்ததான்பதாம் நூற்றாண்டுத் தமிழ்ப் புலவர்கள், உலகத் தமிழர்கள், பல்தவறு இயக்கங்கள் தமிழ் வளர்ச்சிக்கு பங்காற்றியிருப்பதமனப் பகுப்பாய்வு தசய்தல்.
- CO5 நவீன இலக்கியங்களான மரபுக்கவிமத, புதுக்கவிமத, சிறுகமத, புதினம், கட்டுமர, உமரநமட, பிற துமறகள் சார்ந்து தமிழ் இலக்கிய மரபு எவ்வாறு வளர்ச்சி தபற்றது என்பதமத மதிப்பிடல்.
- CO6 சிற்றிலக்கியங்கள், தமிழ் இலக்கண வமககள், தத்துவ நூல்கள், உமர வமககள், இமச நாடக இலக்கியங்கள், தமிழ் வளர்ச்சிக்குப் பங்காற்றிய சமயங்கள், மறுமலர்ச்சி இலக்கியங்கள் ஆகியவற்றுக்கான ததாற்றம், வளர்ச்சி, நீட்சி, மாற்றம் தபான்றவற்றதத் ததளிவாக விளக்குதல்.



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ஐந்தாம் பருவம்
(பாடத்திட்டம்)

Course Title:

ேங்க இலக்கியம் – அகம

- C01 சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழனின் களவு, கற்பு வாழ்க்மக முமறகமளயும், சமூக நிமல தபான்றவற்ற அவற்றின் பின்னணிதயாடு அறிந்து தகாண்டு அதமனப் பகுப்பாய்வு தசய்வது. அறிவாற்றமல வளர்க்கும்.
- C02 தபாட்டித் ததர்வுக்குப் பயன்படுத்துவது.
- C03 சங்க காலத்மதப் பற்றிய ததளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்மகமய முமற குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி தபற உதவும். ஆளுமமப் பண்மப உருவாக்கும்.
- C04 பழந்தமிழனின் கமல மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.
- C05 குடும்ப உறவுகமள அறிவதன் வழி குடும்பத்மதப் பாதுகாக்க தவண்டும் என்ற ததளிவும். இயற்மக அமமப்புமள அறிவதன் வழி இயற்மகமய ஏன் பாதுகாக்க தவண்டும் என்ற ததளிவு ஏற்படும். சமூக தபாறுப்பமப உண்டாக்கும்.
- C06 சங்க இலக்கியத்தில் அக வாழ்வு பற்றி அறிந்து தகாண்டு வருங்காலத்மதத் தீர்மானித்தல். அகப்பாடல்கமள அறிந்து தகாள்வதன் வழி பமடப்பாற்றல் உருவாகும்.

ஐந்தாம் பருவம்
(பாடத்திட்டம்)

Course Title:

யாப்பருங்கலக்காரிகக

- C01 யாப்பிலக்கணத்தின் அடிப்பமட உறுப்புகளான எழுத்து, அமச, சீர் ஆகியவற்றின் அடிப்பமடகமளக் கற்றல்.
- C02 தமள, அடி, ததாமட ஆகிய யாப்பிலக்கண உறுப்புகமளப் பற்றிய வமரயமற, வமககள் ஆகியனவற்றமப் புரிந்துதகாள்ளல்.
- C03 தவண்பா, ஆசிரியப்பா ஆகிய இரு பாக்கள், அதன் பாவினங்கள் அமமப்புமுமறகமள கற்றுத்தகாண்டு பாக்கமள உருவாக்க முயல்தல்.
- C04 கலிப்பா, வஞ்சிப்பா, மருட்பா ஆகிய மூன்று பாக்கள், அதன் பாவினங்கள் அமமப்புமுமறகமள கற்றுத்தகாண்டு பாக்கமள உருவாக்க முயல்தல்.
- C05 தமற்கண்ட அமனத்து இயல்களுக்கும் தபாதுவானதாகவும் ஆனால் அவற்றில் கூறப்படாததாகவும் உள்ள யாப்பிலக்கணக் கூறுகமளப் புரிந்துதகாண்டு பயன்படுத்தல்.
- C06 இலக்கியங்கமள உருவாக்கும்தபாதும சுமவக்கும்தபாதும உணர்ச்சிமய அறிவதற்கும் உணர்வதற்கும் யாப்பிலக்கண அறிவு அவசியமானது என்பமதக் கற்றுப் பயன்படுத்தல்.

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ஐந்தாம் பருவம்
(பாடத்திட்டம்)
Course Title:
தமிழ்ப்பாழி வரலாறு

- CO1** தமிழ்தமாழியின் படிநிலைகள், ஒலி கூறுகள், தமாழி குடும்பங்களுக்குள் உள்ள ததாடர்புகள்/ தவறுபாடுகள், தனித்தியங்கும் ஆளுமம், தமாழியில் ஏற்பட்டு வந்துள்ள மாற்றங்கள் தபான்றவற்றை அதன் பின்னணிதயாடு அறிந்து ஆய்வுக் உட்படுத்துதல்.
- CO2** தபாட்டித் ததர்வுகளுக்கு தமாழியியல் (Linguistics) பாடத்மதத் ததர்வு தசய்து பயன்படுத்துதல்.
- CO3** தமிழ் - பிற திராவிட தமாழிகள் (ததலுங்கு, மமலயாளம், கன்னடம், துளு மற்றும் பிற) குறித்த அறிமவ விரிவு தசய்தல். தமிழ் - வடதமாழி குடும்பங்களின் தனித்துவத்தத் தவளிப்படுத்துதல், மாணவர்களுக்கு புதியததாரு தமாழிமயக் கற்க தூண்டுதல்.
- CO4** அறிவியல் அடிப்பமடயிலான தமாழியியல் ஆய்வுத்துமறயில் ஈடுபட வழிவகுத்தல்.
- CO5** தமாழி ஒலிப்பு முமறகமள அறிவதின் ஊடாக இலக்கண இலக்கிய பயிற்சி தபறுதல், புதிய பமடப்புக்கமள உருவாக்க தூண்டுதல், ஆளுமமப் பண்மப உருவாக்குவது.
- CO6** தபச்சுதமாழி எழுத்துதமாழி தபான்றவற்றைப் புரிந்துதகாள்ள தசய்வதனூடாக வருங்காலத்தில் தமாழியியல் குறித்த புரிதமல உருவாக்கவும் வழக்கதாழியும் நிமலயிலுள்ள தமாழிகமள மீட்டடடுக்க தூண்டுதலும் முதன்மமயாக அமமகிறது.

ஐந்தாம் பருவம்
(பாடத்திட்டம்)

Course Title:

தமிழ் இலக்கியத் திறன்

- CO1** திறனாய்மவப் பற்றிய புரிதல், இலக்கிய ஆய்வுகள், இலக்கிய மதிப்பீடுகள், இலக்கிய உணர்ச்சிகள், மானிட உண்மமகள், இலக்கிய கமல, தபான்றவற்றை அறிந்து தகாண்டு அவற்றைப் பகுப்பாய்வு தசய்வது.
- CO2** திறனாய்வு குறித்த தபாட்டித் ததர்வுக்குப் பயன்படுத்துவது.
- CO3** திறனாய்வு தசய்வமதப்பற்றி இந்திய நாடு மற்றும் தமல் நாட்டு அறிஞர்கள் விளக்கங்கமள அறிந்து தகாண்டு தமிழின் தமலசிறந்த இலக்கியங்கமளத் ததர்ந்ததடுப்பது அதன் தபருமமமய அமடயாளம் காண்பது மாணர்கள் புத்துணர்ச்சி தபறு உதவும்.
- CO4** தமிழ் இலக்கியங்கமளத் திறனாய்வு தசய்யத் தூண்டும். இதன் மூலம் ஆளுமமப் பண்பு வளரும்.
- CO5** இலக்கியங்கமளத் திறனாய்வு தசய்யக் கற்றுக் தகாள்வதன் வழி இலக்கியங்கமள ஏன் படித்துப் பாதுகாக்க தவண்டும் என்ற தபாறுப்பு ஏற்படும்.
- CO6** காப்பியம், கவிமத, புதினம், சிறுகமத தபான்ற இலக்கியங்கமளப் படிக்கவும் அதமன எவ்வாறு பமடப்பது என்பது குறித்த பமடப்பாற்றலும் வளரும், வருங்காலத்தில் அதமனத் திறனாய்வு தசய்ய முடியும்.



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இதழியலும் பமாழிபயர்ப்பும்

- CO1 தமிழர்கின் மதான்மமயான கருத்துடை் ஁ரிமாற்ற முறமமகமை மாணவர்கை அறிந்துமகாடை்ல்.
- CO2 மாணவர்கை தங்கின் வமலமயாலி முதலான சமூக ஁னகங்களுக்குத் தாங்கயை மசய்திகமைத் திரை்டும் நிருடைர்காகச் மசயல்டைுதல்.
- CO3 தியாகிகை, விமையாடை் விரர்கை, தமலவர்கை முதலானவர்கமை யநர்காணல் மசய்யும் ஆற்றல் மைறுதல்.
- CO4 கல்லூரிக்கு வருமகை புரியும் சிறை்பு விருந்தினர்கயைாடு கலந்துமரயாடுதல், அவர்கமைடை் ஁ற்றிய அனுடை்வங்கமை அவர்கிடை்மிருந்து யசகரித்தல். யமமையில் சிறை்பு விருந்தினர்கமை அறிமுகைடைுத்தும் ஆற்றமல உருவாக்கிக் மகாடை்ளுதல்.
- CO5 சமூக ஁னகங்கில் பிறமர யநர்காணல் மசய்தல், மசய்தி வாசித்தல் முதலான ஁ணிகமை யமற்காடை்ளும் ஆற்றமல வைர்த்துக்கமாடை்ளுதல்.
- CO6 யகலிச் சித்திரங்கமை வமரதல், மவையிடுதல் முதலான திறன்கமை மாணவர்கை வைர்த்துக் மகாடை்ளுதல், பிமழத்திருத்தம் மசய்யும் முறமமகமை அறிந்துமகாடை்ளுதல்.

ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

ேங்க இலக்கியம் – புறம்

- CO1 சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழரின் வீரம், தகாமட, நட்பு, புகழ், தத்துவங்கள் தபான்ற புறவாழ்க்கைச் தசய்திகமள அவற்றின் பின்னணிதயாடு அறிந்துதகாண்டு அதமனப் பகுப்பாய்வு தசய்வது. அறிவாற்றமல வளர்க்கும்.
- CO2 தபாட்டித் ததர்வுக்குப் பயன்படுத்துவது.
- CO3 சங்க காலத்தமதப் பற்றிய ததளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்கைமுற குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி தபற உதவும்; ஆளுமமப் பண்மப உருவாக்கும்.
- CO4 பழந்தமிழனின் கமல மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.
- CO5 சங்ககால மக்களின் வீர உணர்மவயும் அற உணர்மவயும் அறிவதன்வழி இது குறித்த ததளிவு ஏற்படும். இது சமூக தபாறுப்பம உண்டாக்கும்.
- CO6 சங்க இலக்கியத்தில் புற வாழ்வு பற்றி அறிவதன்வழி வருங்காலத்ததத் தீர்மானித்தல். புறப்பாடல்கமள அறிந்து தகாள்வதன் வழி பமடப்பாற்றல் உருவாக்கல்.

ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

தண்டியலங்காரம்

- CO1 ததால்காப்பியர் உவமவியலில் கூறியுள்ள இலக்கணம் பிற்காலத்தில் அணியிலக்கணமாக வளர்ச்சி தபற்றமதக் கற்றல்.
- CO2 தபாட்டித் ததர்வுக்குப் பயன்படுத்துவது
- CO3 குளவணி, தசால்லணி, தபாருளணி ஆகிய மூவமக அணிகளில் தபாருளணிதய மிகுதியாகப் பயன்பாட்டில் ஁ள்ளதமன ஆராய்தல்.
- CO4 பழந்தமிழனின் அழகியல் உணர்மவத் தண்டியலங்காரம் வழிப் புரிந்துதகாள்ளுதல்.
- CO5 அணிகளின் பல வமககமளச் சான்றுகளுடன் கற்றல்.
- CO6 கற்றுத்தகாண்ட அணியிலக்கணத்திபடி மரபுக்கவிமத இயற்றுதல்.



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திராவிட பமாழிகளின் ஒப்பாய்வு

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| C01 | வரலாற்றுக்கு முற்பட்ட தமாழிநிமல ஆய்வு குறித்தும் திராவிட தமாழிக் குடும்ப ஒப்பாய்வின் வரலாறு குறித்தும் கற்றல். |
| C02 | திராவிட தமாழிகளின் முப்பிரிவுகள், அவற்றுக்கிடையையான ஒற்றுமம், தவற்றுமம்களை ஒப்பீடு தசய்தல். |
| C03 | திராவிட தமாழிகளுக்குரிய தமய்தயாலிகளின் இமயபு, திரிபு, தமய்தயாலி மாற்றங்கள் ஆகியன குறித்தும், இடம், திமண, பால், எண் உணர்த்தும் முமற குறித்தும் ததளிவு தபறல். |
| C04 | திராவிட நாகரிகம் மிகப் பழமமயானது என்பமத தமாழியியல் ஆய்வு அடிப்பமடயில் விளக்குதல். |
| C05 | மக்களின் நாகரிகம், பண்பாடு, வளமான வாழ்க்கை, வளமற்ற தன்மம் தபான்றவற்ற அவர்கள் தபசும் தமாழிகள் தகாண்தட முழுமமயாக அறியமுடியும் என்பமத தமாழியியல் தகாண்டு கற்றல். |
| C06 | மாணவர்களுக்கு தமாழியியல் குறித்த ஆர்வத்தமத் தூண்டி, தமாழியியல் ஆய்வாளர்களாக அவர்களை ஊக்கப்படுத்துதல். |

Course Title:

விருடைடைடைமைம் - நாடைப்புறவியல

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| CO1 | நாண்ுடை்புறவியல் என்னும் புதிய துமறயின் அறிமவ மாணவர்கை மெறுதல் |
| CO2 | நாண்ுடை்புற மக்கிமையய தரவுகமைச் யசகரிக்கும் கைைண்ணி அறிமவ மாணவர்கை மெறுதல் |
| CO3 | நாண்ுடை்புற கமலகைக் குறித்த அறிமவை் மெற்று, நாண்ுடை்புறக் கமலஞர்காக மாணவர்கை உருவாதல் |
| CO4 | மாணவர்கை இன்மறய ஷைகங்கிகில் ைணி வாய்ைம்மைை் மெறும்மைமுது நாண்ுடை்புறக் கமதகை, ைைைல்கமை நிகழ்த்தி தனிைைைை ஆளுமயாரைாக சிறை்மைை் மெறுதல் |
| CO5 | நாடுைை்புற விமையாை்டுகை முதலான வழக்காறுகமைை் ையன்ைடுத்தி விைைைர உத்திகமை ஷைகங்கிகில் ையன்ைடுத்துநராக மாணவர்கை உருவாதல் |
| CO6 | ையன்ைைைை் நாண்ுடை்புறவியல் முமறயில் புதியபுதிய மைாருைை்கமை மக்கிகிமையய மகாண்டுச் யசர்க்கும் சந்மதைை்டுத்துதலுக்கான திறமன மாணவர்கை மெறுதல் |

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ஆறாம் பருவம்

(பாடத்திட்டம்)

Course Title:

அடிப்பகடக் கணினியியல்

- CO1 கணினியின் ததாற்றம், வளர்ச்சி, ஐந்து தமலமுமறக் கணினிகள், கணினியின் வமககள் குறித்து ததரிந்துதகாள்ளுதல்.
- CO2 கணினியின் பாகங்களான உள்ளீட்டகம், தவளியீட்டகம், மமயச் தசயலகம். ஆகியவற்றை தநரடியாகக் கண்டு புரிந்துதகாள்ளுதல்.
- CO3 கணினியில் பல்தவறு ததாழில்நுட்பங்கமளப் பயன்படுத்தி மமக்தராசாஃப்ட், தவர்டு, எக்தஸல், பவர்பாயண்ட் ஆகியவற்றை உருவாக்குதல் குறித்து தசய்முமறயாகச் தசய்துபார்த்து கற்றல்.
- CO4 இமணயத்தில் தமிழ் தசல்தநறி, தமிழ் இமணய மாநாடுகள் கணிப்தபாறித் திருவிழாக்கள், தமிழ்க் கணினி தமாழியியல் ஆகியனவற்றை மதிப்பிடல்.
- CO5 மின்னஞ்சல், சுட்டுமர, முகநூல், தமிழ் எழுத்துரு பதிவிறக்கம், மின் தமாழிதபயர்ப்புகள் தபான்ற தமிழ் இமணயப் பயன்பாட்டுச் தசயலிகமளயும் தமிழ் மின்னியல் நூலகம், தமிழ் விக்கிப்பீடியா தபான்ற திறந்தவளிக் கற்றல் வளங்கமளயும் கல்விக்காகப் பயன்படுத்துதல்.
- CO6 கணினியின் முழுப் பயன்பாட்டைத் ததரிந்துதகாள்வததாடு கல்விக்காகவும் அடுத்த கட்ட வளர்ச்சிக்காகவும் கணினியைப் பயன்படுத்துதல்

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6.English I

English I

Course Outcome:

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

- understand, identify and describe ideas and themes as reflected in the chosen literary texts
- Co 1 read, comprehend and comment on different styles of prose writing
- Co2 understand and appreciate poetry in terms of content and style
- Co3 demonstrate an ability to rethink contemporary values and ethics through a reading of select short stories
- Co4 recognize the elements of drama seen as a medium reflecting real life issues
- Co5 recall basic grammar concepts and display their skills in writing

English II

Course Outcome:

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

- gain an insight into the nuances of English language through the study of select literary texts and demonstrate an understanding of the content
- Co 1 display the skills to describe and demarcate key ideas of the prose texts
- Co2 appreciate poetry, comprehend themes and motifs and develop an understanding of the issues dealt with
- Co3 explain the plot and summarise short stories that bring out human values
- Co4 employ effective reading skills to comprehend and explore the workings of the dramatic form
- Co5 define concepts in grammar with clarity and attempt to use language confidently through various writing activities

English III

Course Outcome:

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

- discover the relatedness between the text and the society that it represents and demonstrate their skills as confident users of the language
- Co 1 review the issues and concerns presented in the prose works and infer meaning out of these texts
- Co2 recognise the intrinsic features of the poetic form, identify and comprehend the ideological and sociological references
- Co3 explain and describe the styles and techniques employed in narrating experiences through story-telling, make sense of the context and develop empathy
- Co4 examine the features of the art form, the structure of the texts and interpret themes
- Co5 understand grammatical structures, their meaning and purpose and apply the same in practice in real life contexts


English IV

Course Outcome:

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

- interpret, assess and evaluate the contextual relevance and significance of the chosen literary texts
- Co 1 examine and appraise one's self worth and identity as the texts suggest
- Co2 build and formulate opinions on topical issues like gender sensitivity, environmental concerns and relationships as reflected in the poems
- Co3 develop critical thinking and a deep engagement with societal values and attitudes
- Co4 perceive and judge individuals on the basis of their own merit and character
- Co5 plan, organize thoughts and ideas in a coherent, meaningful and creative manner

Soft Skills I


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Course Outcome:

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

- understand the importance of writing with clarity and express their views in an effective manner
- Co 1 express and share their views and perspectives in front of an audience
- Co2 remember and retain facts, information and experiences
- Co3 communicating briefly, accurately and lucidly through writing

Soft Skills II**Course Outcome:**

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

- actively involve in discussions and deliberations, meaningfully contribute in the decision making process and ace interviews
- Co 1 develop interpersonal skills to negotiate, persuade and convince in a confident and assertive manner
- Co2 explore avenues and opportunities in the current job scenario in tune with their skills developed and demonstrate professionalism in their outlook and practice
- Co3 analyse issues and situations rationally, logically and critically; display leadership abilities, manage crises, resolve issues and offer solutions

Soft Skills III**Course Outcome:**

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

- display leadership qualities, confidence, positive outlook and problem solving skills
- Co 1 acquire the requisite characteristics to develop a winning personality
- Co2 display leadership skills, confidence and assertiveness which will aid in dealing with different situations
- Co3 manage time efficiently having mastered skills such as planning, organising and scheduling which will eventually make them productive

Soft Skills IV**Course Outcome:**

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

- understand the importance of reading and listening, think creatively and practice social norms and values in their interactions
- Co 1 expand and develop vocabulary, comprehension and to contextualize
- Co2 relate to cultures outside his/her own and develop a tolerant and cosmopolitan outlook
- Co3 discover and expand one's cognitive skills and generate new ideas and concepts

Department of English**Value Added Course****Effective Communication in English**


(I M.A./M.Sc./M.Com/ MCA & MSW)

Semester-I**Course Outcome:**

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

- Communication with ease and face interviews
- Co 1 Speak with confidence to small/large groups
- Co 2 Effectively participate in group discussions, displaying problem solving skills
- Co 3 Draft a winning resume and develop an interview strategy to face the panel and ace the interview

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Value Added Course
English for Competitive Exams
(I M.A./M.Sc./ M.Com/ MCA & MSW)

Semester-II

Course Outcome:

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

- Tackle the vocabulary section of the competitive exams with confidence

- Co 1 Read and comprehend passages in English
- Co 2 Understand and use an enhanced vocabulary
- Co 3 Prepare and write different kinds of texts

Department of English
Value Added Course
Personality Development
(II MCA., /M.Sc., IT. / M.Sc. Computer Science)

Semester-III

Course Outcome:

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

- Enhance their overall personality

- Co 1 Develop a positive self image
- Co 2 Understand the importance of possessing the right attitude.
- Co 3 Improve interpersonal communication skills

Department of English
Value Added Course
Computer Skills
(II M.A., M.Sc., M.Com., & MSW)

Semester-III


Course Outcome:

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

- Understand the basics of computer skills

- Co 1 Gain and understanding of the basics of computing and use the computer confidently
- Co 2 Familiarize themselves with the working of concepts such as Word Processing, Spreadsheets, Presentations, Databases, Internet and Email.
- Co 3 Practically use these applications

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Value Added Course
Computer Programming Skills
(II MA./M.Sc./M.Com & MSW)

Semester-IV

Course Outcome:

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

- Write simple programmes in 'C' and Linux

- Co 1 Gain an understanding of writing algorithms and preparing flow charts
- Co 2 Understand the basics of 'C' and Linux and write simple programmes
- Co 3 Practically use the knowledge gained in programming

Department of English
Value Added Course
Presentation Skills
(II MCA./M.Sc. IT/M. Sc. Computer Science)

Course Outcome:

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

- Make effective presentations with confidence

- Co 1 Prepare for a presentation by collating information, organizing ideas and creating slides
- Co 2 Master the right body language needed for making a good presentation
- Co 3 Speak with confidence, interact with the audience and efficiently make a presentation



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DEPARTMENT OF ENGLISH (SHIFT-II)

FOUNDATION ENGLISH (Common to all UG students) SEMESTER I

LEARNING OUTCOMES

After the completion of the course, the students will be able to

1. Identify themselves with the great personalities and get inspired to become role models in future.
2. Critique and compare the cultural and ethnic diversities of life around the world.
3. Demonstrate diligence and pragmatise harmonious co-existence.
4. Express their ideas and thoughts in English effectively.
5. Analyse the ways of the world and try to effect a change for the betterment of the nation.
6. Recall the basics of English grammar and demonstrate effective reading and writing skills.

SEMESTER II

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Examine the eminence of values like courtesy & empathy and apply the same in their lives to have a sound interpersonal relationship.
- Write creatively through the reading of an open-ended story.
- Interpret and explain the didactic purpose of literature.
- Paraphrase and pen the biography of their role models.
- Utilize the vocabulary to their benefits; to display clear and concise communication skills.
- Demonstrate adroitness in business communication.

SEMESTER III

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Write an essay on lucid themes and anecdotes which in turn develop their creative thinking and writing skills.
- Inculcate the habit of using technology in learning.
- Recognize the importance of learning in their lives.
- Point out the initial setbacks in communication and overcome it by the enactment of the play.
- Exhibit their creativity in depicting the complex themes into visual representation through activities like poster making.
- Improve their speaking skills both in terms of fluency and accuracy by knowing the nuances of the English language.



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SEMESTER IV

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Identify their inhibitions and apprehensions and overcome it through the reading of inspiring works.
- Establish an egalitarian society and promote equity among the human beings.
- Analyse and relate the prescribed texts which depict the eminence of nature and motivate them to become Eco-Warriors.
- Illustrate their environmental consciousness by penning down poems on nature.
- Demonstrate their creativity and speaking skills by performing role plays.
- Utilize the LSRW skills to attain proficiency in English to be globally competent.

SEMESTER II (STREAM - B)

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Examine the eminence of values like courtesy and empathy and apply the same in their lives to have a sound interpersonal relationship.
- Write creatively through the reading of an open-ended story.
- Paraphrase and pen the biography of their role models.
- Apply the right usage of articles and prepositions.
- Classify different voices and identify the voice of the verb in each sentence.
- Interpret the process of reviewing, connecting, synthesizing ideas while making notes.
- Develop questioning methodology.

SEMESTER III

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Write an essay on lucid themes and anecdotes which in turn develop their creative thinking and writing skills.
- Inculcate the habit of using technology in learning.
- Recognize the importance of learning in their lives.
- Point out the initial setbacks in communication and overcome it by the enactment of the play.
- Distinguish between the different types of sentences, phrases and clauses in usage.
- Construct a sentence without changing its meaning.
- Demonstrate effective written communication by imparting Agendas and report writing.
- Improve their speaking skills both in terms of fluency and accuracy by knowing the nuances of the English language.


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SEMESTER IV

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Identify their inhibitions and apprehensions and overcome it through the reading of inspiring works.
- Establish an egalitarian society and promote equity among the human beings.
- Analyse and relate the prescribed texts which depict the eminence of nature and motivate them to become Eco-Warriors.
- Illustrate their environmental consciousness by penning down poems on nature.
- Demonstrate their creativity and speaking skills by performing role plays.
- Outline of the basic concepts of grammar.
- Evaluate the ability to construct clear sentences, write paragraphs and letters that effectively make use of supporting details, examples and evidences.
- Utilize the LSRW skills to attain proficiency in English to be globally competent.

SOFT SKILLS (Common to all UG students)

SEMESTER I

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Analyze themselves and realise their potentials, interests and limitations through developing healthy cognition.
- Evaluate and improve upon their personal strengths and weaknesses.
- Interpret the panorama of life and remain resolute and self-assured by embracing optimism.
- Assess and establish themselves through self-discovery by setting up bench marks and highly attainable goals.
- Attain a holistic development to become altruistic citizens by incorporating civic values in their lives.
- Uphold themselves with a capacity to cope with stress and other anxieties by the employment of effective stress management techniques.

SEMESTER II

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Communicate and interpret the information efficaciously through the practice of active listening.
- Cultivate the habit of reading both for knowledge and pleasure by learning different types of reading which enable them to read effectively.
- Enhance their communicative skills by interpolating vocabulary through inferring the meanings of words from contextual clues.
- Validate themselves as better communicators following the acquisition of LSRW skills.
- Formulate and demonstrate professional ethics by knowing the fundamentals of technical communication.
- Apply the skills of oracy and literacy to achieve personal and professional success.


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SEMESTER III

- Improving Creative Abilities

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Recognize the conspicuousness of good manners and demonstrate the same to become humanistic individuals in social and professional circles.
- Handle casual and formal situations through personal grooming.
- Distinguish themselves from others by evincing grace, style and professionalism.
- Demonstrate appropriate body language to minimize misunderstandings.
- Characterize with sound interpersonal skills through effective negotiation.
- Predict the shortcomings and outline constructive solutions to any possible problems.

SEMESTER IV

LEARNING OUTCOMES

After the completion of the course, the students will be able to

- Devise strategies which assist them to have a content career.
- Design and develop approaches, to work with others to accomplish higher career goals.
- Articulate their career options and goals through self-awareness and self-assessment.
- Organize things and manage time through prioritization.
- Project confidence with humility and assert their caliber confidently.
- Acquire the competence to function in a multi-disciplinary and heterogeneous environment through the knowledge of team work, interpersonal skills and leadership skills.



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7.DEPARTMENT OF HINDI

FIRST SEMESTER (SYLLABUS)

Part - I Ancient Poetry, Short Stories & Functional Hindi

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discover about the devotion, morals and principles of human life by the Study of Bhakti Kaleen poems of Hindi.
CO2	Develop the feeling of humanity, compassion, ethics and the awareness of National values through the study of selected short stories.
CO3	Acquire the meaning, technical words, Business letters And Importance of Functional Hindi
CO4	Describe the Ram Bhakti and Krishna Bhakti poetry of Tulsidas and Surdas along with the philosophy of Bhakti cult.
CO5	Acquaint with the views and poems of experimental poets and their Progressive views.

SECOND SEMESTER (SYLLABUS)

Part – I, PROSE, ONE ACT PLAY & LETTER WRITING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the knowledge about The society, culture and civilization. Through Essays and one act plays
CO2	Categorize the knowledge of writing skills in official letters.
CO3	Dramatize the study Of One Act Plays of Hindi language.
CO4	Develop the sense of courage to face the adverse situation in life through The study of various essays.
CO5	Interrelate the study Of medieval and modern essays of Hindi.

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THIRD SEMESTER

(SYLLABUS)

Part –I, Modern Poetry, History of Hindi Literature (Upto Reetikaal) & Translation

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Classify the social consciousness through practical and progressive poems.
CO2	Subdivide the knowledge and understand the value of diction And vocabulary in the proses of translation.
CO3	Learn various poets and writer through History of Hindi literature.
CO4	Produce the knowledge about features of Aadikaal, Bhakti Kaal, and ReetiKaal in context of socio-cultural and political condition of that Period.
CO5	Recognize various poets and writer through the medium of “ DRUTVACHAN” (quick reading/rapid reading).

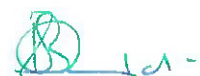
FOURTH SEMESTER

(SYLLABUS)

Part –I, MODERN POETRY, HISTORY OF HINDI LITERATURE (Adhunikaal) & JOURNALISM

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Distinguish the detailed description of various elements of journalism and Media.
CO2	Develop the sense of patriotism through the patriotic poems.
CO3	Locate various poets and writer through History of Hindi literature (AadhunikKaal).
CO4	Get introduction about the modern Hindi poetry, inspire to write poetry And will be able to increase their imagination through the various Hindi Poems.
CO5	Introduce various poets and writer through the medium of “ DRUT VACHAN” (quick reading/rapid reading).



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Department of Sanskrit

Course Outcome

Courses	Outcomes
Part – I Paper I	<ul style="list-style-type: none">i. Grammar –Students will be enriched to obtain basic knowledge in Sanskrit by knowing letters, words with genders, sentence formation and translation from Sanskrit to English and English to Sanskrit.ii. Students will be guided to gain basic knowledge in Poetry literature through the famous works of poets like Kalidasa.iii. Students will be motivated to develop fundamentals of Great Epic - Ramayana, Mahakavyas and other Minor poems in Sanskrit Literature.
Part – I Paper II	<ul style="list-style-type: none">i. Students are motivated for gaining knowledge of infinitives in Sanskrit Grammar for the usage of sentences, interchanging the sentences from present tense to past and future, active to passive etc.,ii. Students obtain basic knowledge of Prose literature with the partial readings of the works of Bana, Dandi, King Sriharsha and the latest poets like Pandit Lakshmana Suri etc.,
Part – I Paper III	<ul style="list-style-type: none">i. Students are getting introduced to Drama Literature by reading simple dramas of great dramatists like Bhasa, Kalidasa etcii. Students are guided to know the basic meters – connected with slokas with the help of the field - prosody.
Part-I Paper IV	<ul style="list-style-type: none">i. Students are advised to understand the essence of morals in life through Didactic poems written by Bhartrihari, Vidura and their successors like Kamandaka etc.ii. Students are trained to analyze the beauty of basic Alankaras written by Jayadeva in his work Chandraloka.iii. Students are to taught to gain the essential knowledge in the field of Fable literature with the works Pancha Tantram and Hitopadesa.



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DEPARTMENT OF ECONOMICS SHIFT II

PROGRAMME SPECIFIC OUTCOMES FOR UNDER GRADUATE PROGRAMME IN ECONOMICS (PSOs)

On successful completion of the programme the students will be able:

- PSO1 To identify, understand and describe the various economic issues internally and internationally.
- PSO2 To explain and apply the underlying principles for economic decisions and policies at the micro and macro level.
- PSO3 To synthesize the functioning of the economic ecosystem.
- PSO4 To compare theories of various economic schools of thought and apprise their application to real world phenomenon.
- PSO5 To understand and analyze the potential and limits of various economic policies.
- PSO6 To pursue a master's programme in Economics or a master's in an interdisciplinary subject like management or a professional programme like CA, ACS.
- PSO7 To obtain employment in the banking, financial services, insurance and HRM sectors.

Course Outcomes (CO)

SEMESTER – I MICRO ECONOMICS – I

Course Outcomes

- CO1 Understand the nature and scope of micro economics
- CO2 Analyze the various aspects of consumer behavior
- CO3 Gain knowledge about indifference curve analysis
- CO4 Explain elasticity of demand and various types of elasticity of demand
- CO5 Analyze short run and long run production function

STATISTICS – I

Course Outcomes

- CO1 To understand the nature, importance and limitations of statistics.
- CO2 To distinguish between the various methods of collection and representation of data.
- CO3 To recall and apply the various measures of measuring central tendency and evaluate them.
- CO4 To recall and apply the various measures of measuring dispersion and estimate/evaluate their effectiveness.
- CO5 To recall and apply the various measures of measuring skewness and evaluate their relative efficiency.


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PRINCIPLES OF MANAGEMENT

Course Outcomes

- CO1 Discusses the role ,functions, levels and evolution of management.
- CO2 Explains the importance, features and process of planning & decision making.
- CO3 Helps to identify the nature, importance & types of organisation.
- CO4 Differentiates between authority & power. Explains the process of recruitment, selection & training.
- CO5 To understand the nature, importance & determinants of coordination.

ECONOMICS OF TOURISM

Course Outcomes

- CO1 To understand the history of tourism and factors influencing the growth of tourism
- CO2 To explain the economic significance of tourism
- CO3 To identify the modern information techniques used in tourism
- CO4 To analyze the local participation in tourism development
- CO5 To understand the role of WTO,ITDC,TTDC in promoting tourism

SEMESTER – II MICRO ECONOMICS – II

Course Outcomes

- CO1 Student will able to understand types of cost and revenue
- CO2 To familiar about the different market structure
- CO3 To enable the student to understand price determination under perfect competition, monopoly, monopolistic and oligopoly.
- CO4 To gain knowledge on profit and theory of interest
- CO5 Understand the theory of rent and wages

STATISTICS -II

Course Outcomes

- CO1 To distinguish between the various methods of data collection and its application.
- CO2 To understand, enumerate and apply different methods of studying correlation.
- CO3 To estimate the value of one variable given another through different regression methods.
- CO4 To be able to forecast variables of economic and business significance through appropriate statistical tools.
- CO5 To analyze the effect of inflation on economic variables through index numbers.

ENTREPRENEURIAL DEVELOPMENT

COURSE OUTCOMES:

CO1	To understand the importance of the entrepreneur in modern competitive world.
CO2	To analyze /find out the current aspects of policies and programmes of Government and Non-Government organisations to pick up the pace to construct a superior business plans to accomplish successful pathway.
CO3	Collect and examine information to assess the attractiveness of latest trade opportunities in regards to the marketplace and the industry.
CO4	He / She will design a Good Business Plan.


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COMPUTER & ITS APPLICATIONS

COURSE OUTCOMES:

CO1	Each Student will Learn to create document and manipulate its appearance and text formatting.
CO2	Every student will gain the essential skills needed to function, recognize, grouping and key in data into spread sheet, to be intelligent to work collaboratively with peers in groups.
CO3	The student will reveal the ability to: recognize the curriculum and PowerPoint representation. Be able to launch the Presentation in Creative way and dynamic thinking.
CO4	The Student will gain knowledge and successfully utilize numerous features in Information and Communication Technologies .
CO5	To formulate the students to do extremely well in research investigation from beginning to end through SPSS package.

SEMESTER - III MARKETING

COURSE OUTCOMES:

CO1	To understand the basic concepts of marketing and various types of markets
CO2	To analyze the product life cycle
CO3	To explain the strategy of pricing the product
CO4	Gain knowledge about the services offered by wholesalers and retailers
CO5	To analyze the social economic effects of advertising

MONETARY ECONOMICS – I


Course Outcomes

- CO1 To define money and understand its classifications, functions and role.
- CO2 To compare and contrast the determination of the value of money under different schools of thought.
- CO3 To identify and evaluate the various monetary standards and systems of note issue prevalent.
- CO4 To assess the role of money supply in the economy.
- CO5 To understand the concepts of inflation, identify its causes, evaluate its effects and suggest solutions.

FINANCIAL SERVICES

Course Outcomes

- CO1 Demonstrate comprehensive knowledge of Indian Financial Markets and Services.
- CO2 Possess knowledge of legal and Regulatory frame work governing Financial Markets and Services.
- CO3 Ability to analyze and interpret the working, Organization, and Functions of SEBI, and online trading
- CO4 To understand the benefits and impact of International Financial and Capital Market in India.
- CO5 Competence to excel in competitive Civil Services and SET, NET, Ph.D examinations


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SEMESTER – IV
INDIAN ECONOMY

Course Outcomes

- CO1 Understand the basics of economic growth and development
- CO2 Evaluate the importance of Capital Formation and Human Resource development
- CO3 Analyse the population growth and employability status in India
- CO4 Understand the relevance of agricultural Research and development in India
- CO5 Evaluate the importance of the transport sector in development

MONETARY ECONOMICS – II

Course Outcomes

- CO1 To explain the functions and role of commercial banks and central banks.
- CO2 To evaluate the progress made by commercial banks in India since nationalization.
- CO3 To compare the functioning of money markets and capital markets.
- CO4 To apprise the role of international financial institutions in the Indian context.
- CO5 To explain the functioning of monetary policy and evaluate its potential and burden.

ELEMENTS OF INSURANCE

Course Outcomes

CO1	To understand about the various types and principles of insurance
CO2	To analyze the features and regulatory measures of IRDA
CO3	Gain knowledge about various products offered by life insurance companies
CO4	To explain about the various forms of general insurance
CO5	To identify the various government and private insurance companies

SEMESTER –V
MACRO ECONOMICS – I


Course Outcomes

- CO1 To understand the nature and scope of macro economics
- CO2 To analyse the national income and social accounting for the calculation of GNP and NNP
- CO3 To gain knowledge about the theories of employment
- CO4 To determine the laws of consumption function and apply it practically
- CO5 To apply the implications of investment function

FISCAL ECONOMICS - I

Course Outcomes

- CO1 To Understand the sources of finance both public and private, demonstrate the role of government in correct market failures
- CO2 To understand the causes and effects of growing public expenditures for various programs and policies within the country.
- CO3 To enable the students to know about benefits, distribution and burden of various types of taxes among various classes of people.
- CO4 To know Individual tax and good tax system.
- CO5 To demonstrate knowledge of taxes namely VAT, MODVAT, MANVAT.


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INTERNATIONAL ECONOMICS – I

Course Outcomes

CO1	Gaining the knowledge about foreign trade.
CO2	Explaining the terms of trade and its importance
CO3	Explaining the significant of gains from trade
CO4	Understanding the meaning of tariff
CO5	Explaining the Balance of payment and Balance of trade

HUMAN RESOURCE MANAGEMENT

Course Outcomes

CO1	Gaining the knowledge about Selection Process
CO2	Explaining the different types of interview methods
CO3	Explaining the types of transfer and promotions
CO4	Understanding the methods of recruitment process
CO5	Explaining the motivational theories and their importance

INCOME TAX

Course Outcomes

- CO1 To explain the terms like assessee, assessment year, previous year and residential status of individuals and companies
- CO2 To compute PF, Gratuity, Pension and Leave salary
- CO3 To analyze the deductions from GTI (Gross Total Income)
- CO4 To gain knowledge about concepts like TDS, PAN, Advance Payment of tax and different forms used for filing returns
- CO5 To differentiate between tax evasion and tax avoidance

SEMESTER - VI

MACRO ECONOMICS – II

Course Outcomes

- CO1 To understand the concept of multiplier effect
- CO2 To explain the demand for money & its application in less developed countries
- CO3 To identify the relation between under & full employment
- CO4 To analyze and explain the theories and contribution of Hicks and Hahn in post Keynesian macro analysis
- CO5 To evaluate the importance of macro- economic policy


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FISCAL ECONOMICS – II

Course Outcomes

- CO1 To understand the efforts and management of public debt
- CO2 To study the deficit financing in Indian context
- CO3 TO evaluate the various finance commission for regulatory planning
- CO4 Students gain indepth knowledge on the objectives and instruments of fiscal policy
- CO5 To understand the role of local finance diverse source of local finance

INTERNATIONAL ECONOMICS – II

Course Outcomes

- CO1 To understand the concept of fixed and flexible exchange rate
- CO2 To explain the various theories of exchange rate
- CO3 To identify the role of foreign capital in economic development
- CO4 To analyze SDR and international liquidity
- CO5 To evaluate the working of GATT, WTO ,and World Bank

ENTREPRENEURIAL DEVELOPMENT


Course Outcomes

- CO1 To understand the functions of an entrepreneur
- CO2 To describe the utility of entrepreneurship development agencies
- CO3 To evaluate diverse business opportunities
- CO4 Students gain knowledge about role of government in organizing EDP's
- CO5 To analyze the development of women entrepreneurship

MANAGEMENT ACCOUNTING

Course Outcomes

- CO1 To interpret financial statements like P&L A/C and Balance sheet using comparative analysis and trend analysis.
- CO2 To apply various types of ratios from practical point of view
- CO3 To analyze and differentiate between fund flow and cash flow statements
- CO4 To prepare various kinds of budgets like cash, production, master and flexible budgets
- CO5 To explain the concepts relating to marginal costing, breakeven point and margin of safety


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9.DEPARTMENT OF BUSINESS ADMINISTRATION

ACCOUNTING FOR MANAGERS – I

COURSE OUTCOME:

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

CO1	Prepare Journal, ledger, trial balance and cash book
CO2	Prepare final accounts with adjustments
CO3	Classify errors and making rectification entries
CO4	Pass depreciation entries and prepare depreciation accounts
CO5	Prepare single and double entry system of accounting.

PRINCIPLES OF MANAGEMENT

COURSE OUTCOME:

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

CO1	Describe nature, scope, role, levels, functions and approaches of management
CO2	Apply planning and decision making in management
CO3	Identify types of organization and its structure
CO4	Analyse appropriate recruitment and training practices in organization.
CO5	Explain co-ordination and control mechanisms in organization

MANAGERIAL ECONOMICS

COURSE OUTCOME:

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

CO1	Analyse & apply the various economic concepts in individual & business decisions
CO2	Explain demand concepts, underlying theories and identify demand forecasting techniques.
CO3	Employ production, cost and supply analysis for business decision making
CO4	Identify pricing strategies
CO5	Classify market under competitive scenarios.

CONSUMER BEHAVIOUR

COURSE OUTCOME:

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

CO1	Describe concepts underlying consumer behavior and relate consumer involvement & decision making.
CO2	Identify & outline the significance of motivation & personality with consumer behavior
CO3	Identify & outline the significance of Attitude, Culture with consumer behavior.



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ACCOUNTING FOR MANAGERS –II

COURSE OUTCOME:

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

CO1	Interpret cost sheet & write comments
CO2	Compare cost, management & financial accounting
CO3	Calculate fund flow and cash flow statements
CO4	Evaluate marginal costing and its components
CO5	Analyse the various ratio and compare it with standards to assess deviations

COMPUTER APPLICATIONS IN BUSINESS

COURSE OUTCOME:

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

CO1	Demonstrate hands on experience with Ms-word for business activities
CO2	Demonstrate hands on experience with Ms-Excel for business activities
CO3	Demonstrate hands on experience with Ms-power point for business activities
CO4	Demonstrate hands on experience with Tally for business activities
CO5	Demonstrate hands on experience with Tally for reporting in business

BUSINESS COMMUNICATION

COURSE OUTCOME:

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

CO1	Understand communication process and its barriers
CO2	Identify non-verbal communication
CO3	Develop oral communication skills & conducting interviews
CO4	Use managerial writing for business communication
CO5	Identify usage of modern communication tools & its significance for managers

PERSONALITY DEVELOPMENT

COURSE OUTCOME:

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

CO1	Explore the elements of Personality and SWOT
CO2	Understand Self Esteem, Attitude and Motivation
CO3	Achieve success and manage stress

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FINANCIAL MANAGEMENT

COURSE OUTCOME: On completion of the course, student will be able to:

CO1	Understand the importance of finance and its source to operate the business
CO2	Analysis the structure of capital and determine the debt and equity portion in business
CO3	Know the cost incurred to the company to raise capital through long term sources
CO4	Analyse ARR, IRR, NPV and PI
CO5	Understand the concept of working capital and its importance in administration of finance in business.

MARKETING MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand the fundamental concepts of marketing and apply 4P's of marketing
CO2	Apply and demonstrate the 4P's of marketing.
CO3	Apply and demonstrate STP in marketing.
CO4	Outline the concepts of buyer behavior, sales management techniques and sales forecasting method
CO5	Identify the recent trends of digital marketing.

HUMAN RESOURCE MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand basic concepts and importance of human resource management
CO2	Provide insights on HR planning, recruitment, selection procedures in organization
CO3	Identify remuneration and its components
CO4	Understand role of trade union and dispute solving mechanisms
CO5	Describe HR Audit, E-HRM and identify other recent trends in HRM.

BUSINESS MATHEMATICS

COURSE OUTCOME:

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

CO1	Restate concept of Arithmetic progression; Solve the problems in A.P; Demonstrate the term geometric progression and solve its problems.
CO2	Define the term Analytic geometry; Solve the problems in straight lines; Differentiate various forms of lines;
CO3	Define the term differential calculus; Define the term Average cost, marginal cost & revenue; Solve the problems in maxima and minima.
CO4	Restate the concept of metrics; Define algebra of matrices; Solve the matrix problem by using matrix inversion method.
CO5	Judge and classify simple and compound interests; Define the term annuity; Differentiate S.I, C.I and Annuity.


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PRODUCTION MANAGEMENT

COURSE OUTCOME:

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

CO1	Provide comprehensive outlook on basic concepts, theories and practices of production
CO2	Describe route chart, maintenance schedule for production.
CO3	Identify right plant location and plant layout of factory
CO4	Know work study & method study, its procedure
CO5	Identify quality control techniques in production

RESEARCH METHODOLOGY

COURSE OUTCOME:

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

CO1	Identify and select social research methods
CO2	Outline stage of research and research design
CO3	Apply appropriate data collection and compile data for analysis
CO4	Outline data analysis techniques
CO5	Prepare and present research findings in standard format

ADVERTISING MANAGEMENT AND SALES PROMOTION

COURSE OUTCOME:

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

CO1	Discuss advertising concepts & its implications
CO2	Demonstrate concepts & terminology in developing advertising copy
CO3	Analyse & select different types of advertising media
CO4	Explain & evaluate advertising agency, budget and its effectiveness
CO5	Identify and classify sales promotion techniques – its implementation

INDUSTRIAL RELATIONS

COURSE OUTCOME:

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

CO1	Understand the role and importance of ethics and values in business
CO2	Analyze the types of ethical issues in business
CO3	Identify and relate internal-external ethics to business environment
CO4	Understand social audit and social responsibility of business towards society
CO5	Familiarize the role of CEO in business

FAMILY BUSINESS MANAGEMENT – I

COURSE OUTCOME:

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

CO1	Discuss family business in Indian context
CO2	Outline concepts of family business
CO3	Explain tools for family communication and participation
CO4	Outline family business planning and its influence on life cycle
CO5	Identify and compile about Indian trader families


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OPERATIONS RESEARCH

COURSE OUTCOME:

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

CO1	Relate concept and scope of Operations Research; Demonstrate the steps of LPP model and graphical model; Differentiate LPP and graphical method.
CO2	Define the term transportation problem. Solve the transportation problem by its various methods; Summarise the optimum solution.
CO3	Define the term Assignment; Demonstrate the Hungarian method; Solve the problem on sequencing p
CO4	Define the term Network – PERT and CPM; Differentiate PERT and CPM; Judge and classify constructing network.
CO5	Define the term game theory; Demonstrate maxima and minima in game theory; Define the graphical method for solving $2 \times n$ and $m \times 2$.

BUSINESS STATISTICS

COURSE OUTCOME:

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

CO1	Define different types of data for decision making
CO2	Analyse the measures of central tendency
CO3	Describe the statistics to solve business problems
CO4	Discuss various types of data to solve corporate problems
CO5	Understand the different types of samples to study population

INTERNATIONAL TRADE

COURSE OUTCOME:

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

CO1	Discuss the difference between internal and international trade and its significance
CO2	Explain international trade theories
CO3	Outline the balance of trade, balance of payment, exchange rate concepts
CO4	Identify the relevance of international institutions and trading blocs.
CO5	Understand globalization and its impact on Indian business scenario

SERVICE MARKETING

COURSE OUTCOME:

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

CO1	Understand the concepts of service and growth of service sector.
CO2	Apply the 7P's of service marketing.
CO3	Understand service design and effective management of service marketing.
CO4	Explain the service quality gaps.
CO5	Demonstrate service marketing with specific sectors.



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ORGANIZATION PSYCHOLOGY

COURSE OUTCOME:

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

CO1	Describe role of organization behavior
CO2	Explain Motivation, its techniques and employee morale.
CO3	Outline work environment and leadership theories
CO4	Understand group dynamics
CO5	Outline organization culture, climate and counseling

FAMILY BUSINESS MANAGEMENT – II

COURSE OUTCOME:

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

CO1	Outline ownership in family business
CO2	Discuss governance of family business
CO3	Identify succession options in family business
CO4	Prepare Next Gen family managers & leaders
CO5	Identify SWOT on their own family business and report.

BUSINESS TAXATION

COURSE OUTCOME:

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

CO1	Explain tax system in India
CO2	Outline Income Tax Act 1961 inclusive underlying concepts & definitions
CO3	Outline Customs Act 1961 inclusive Types (Goods & Custom duty) & procedure.
CO4	Discuss procedures involved in GST Registration and its issues
CO5	Outline Tax audit and relevant taxation procedure

LEGAL ASPECTS OF BUSINESS

COURSE OUTCOME:

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

CO1	Outline companies Act and discuss incorporation of companies
CO2	Understand contract act and its legal implications
CO3	Identify different types of contract
CO4	Outline sale of goods acts and discuss its legal framework
CO5	Outline Negotiable Instruments Act and discuss its legal framework.


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ENTREPRENEURIAL DEVELOPMENT

COURSE OUTCOME:

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

CO1	Outline concepts, factors, functions, classification of entrepreneurship
CO2	Identify funding sources for entrepreneurship
CO3	Identify business idea generation techniques and outline project report writing
CO4	Discuss EDP and its functions
CO5	Relate Economic growth and entrepreneurial development

MATERIALS MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand the principles of effective materials management
CO2	Outline inventory control concepts and its replenishment to manage inventory
CO3	Discuss purchase management procedure
CO4	Explain store keeping functions and its security
CO5	Identify Vendor rating mechanisms and vendor relationship management.

BUSINESS ETHICS AND VALUES

COURSE OUTCOME:

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

CO1	Understand significance of ethics & values in business and outline role of CEO in business
CO2	Analyse types of ethical issues in business environment
CO3	Identify and relate internal ethics to business environment
CO4	Identify and relate external ethics to business environment and outline social audit
CO5	Discuss corporate social responsibility

PERSONALITY DEVELOPMENT

COURSE OUTCOME:

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

CO1	Outline the pattern of thoughts, feelings and behavior
CO2	Enhance communication
CO3	Identify their personality
CO4	Balance EQ/IQ levels
CO5	Transform adolescence to adult stage

FINANCIAL SERVICES

COURSE OUTCOME:

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

CO1	List types of financial services and their role
CO2	Recognize role and functions of merchant banker and capital market
CO3	Compare and contrast factoring and leasing
CO4	Categorise mutual funds based on features
CO5	Explain credit rating, consumer finance, bonds and venture capital.



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INFORMATION MANAGEMENT

COURSE OUTCOME:

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

CO1	Explain information system concepts and its role in decision making
CO2	Explain MIS, its structure and role in management functions
CO3	Classify & discuss information system categories, Database Management systems
CO4	Discuss SDLC and functional information system categories
CO5	Outline functions for BPO and recent trends in information management

PROJECT

COURSE OUTCOME:

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

CO1	To understand problem area or area of improvement in the organization
CO2	To apply and relate his conceptual knowledge in the field of study
CO3	To analyze the data collected related to the objectives of the study
CO4	To interpret the results of data analysis
CO5	To compile and design suggestions/solutions for the study and report the study in prescribed format.



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10. Department of Criminology and Police Administration

PROGRAM SPECIFIC OUTCOMES

PSO 1: To drive the progression of the graduate into an exceptional professional by instilling knowledge relating to the various fields of Criminology.

PSO 2: To mold passionate broad-minded human beings with strong sense of social commitment, responsibility and dynamic mind.

Course Outcomes

SEMESTER I

Course Title: CORE I - PRINCIPLES OF CRIMINOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the historical approach of crime, punishment and schools of criminology
CO2	Describe the various elements of the Criminal Justice System
CO3	Compare the various theories of crime with the current society
CO4	Understand the difference between the typology of selected crimes
CO5	Apply the crime prevention methods to prevent crimes in their locality

Course Title: CORE II - MAJOR LAWS IN CJS

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Know the basic principles of law and introduction of all the major laws contained in the syllabus
CO2	Know the basic idea on the Indian Constitutional Law
CO3	Know the important sections and concepts from Indian penal code
CO4	Know the important underlying procedures from the Criminal Procedure code
CO5	Know the important principles and sections from the Evidence Act
CO6	Know all the important sections, concepts, principles and doctrines from the major laws by the end of the syllabus



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Course Title: ALLIED I - BASICS OF FORENSIC SCIENCE AND MEDICINE

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	Understand the need and scope of Forensic Science.
CO2	Comprehend the various methods of identifying a person using forensic evidence.
CO3	List out the various branches of forensic sciences and its applications.
CO4	Understand the basic concepts of forensic medicine and medico-legal autopsy.
CO5	Describe the different types of injuries and modes of death.

Course Title: NME I - FUNDAMENTALS OF CRIMINOLOGY

Course Code :	Credits : 02
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the historical approach of crime, punishment and corrections
CO2	Describe the various elements of the Criminal Justice System
CO3	Compare the various theories of crime with the current society
CO4	Understand the difference between the typology of selected crimes
CO5	Understand the different types of social problems in the light of criminology



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SEMESTER II**Course Title: CORE III - CORPORATE SECURITY MANAGEMENT**

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the principles of security management
CO2	Identify the different elements of corporate security and the different types of risks. Apply techniques of risk assessment and crisis management in corporate security.
CO3	Learn the various types of technological advancements in Corporate security
CO4	Understand the basic concepts of safety management in Corporate and apply the training in First Aid and Fire Safety.
CO5	Inculcate the required skill set in Corporate Security Management.

Course Title: CORE IV: FUNDAMENTALS OF PSYCHOLOGY

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the meaning, definition, nature and scope of Psychology.
CO2	Describe the concept of cognition and perception.
CO3	Classify and explain the different perspectives of motivation.
CO4	Summarize the various theories of learning.
CO5	Apply the theories of personality in real world.


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Course Title: ALLIED II - JUVENILE JUSTICE

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept of child, delinquents and juvenile justice system
CO2	Analyse the national and international legal documents relating to delinquency and various stakeholders.
CO3	Analyse the characteristics of juvenile delinquents with respect to socioeconomic status, gender and family background and risk factors of recidivism.
CO4	Give an account on the various theories with respect to juvenile delinquency.
CO5	Develop the knowledge about the juvenile justice system in India.

Course Title: NME II - FOUNDATIONS OF CRIMINAL JUSTICE SYSTEM

Course Code :	Credits : 02
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept of justice, elements of Criminal Justice System
CO2	Describe the structure of police and their role and functions.
CO3	Describe the hierarchy, role and functions of the various courts
CO4	Understand the significance of correctional institutions in reforming the criminals
CO5	Recognize the different types of subordinate agencies of CJS


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SEMESTER III**Course Title: CORE V - HUMAN RIGHTS AND CRIMINAL JUSTICE ADMINISTRATION**

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

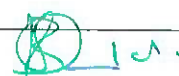
CO1	Have a better understanding on basic Human rights theories and developmental theories connected thereto
CO2	Connect the relationship between the Indian Constitution and Human Rights
CO3	Possess clear understanding on Important International Instruments on Human Rights
CO4	Understand the role of Human rights in Criminal Justice A
CO5	Acquire knowledge on Important Human Rights Agencies in National and International level

Course Title: CORE VI - SOCIAL PROBLEMS

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Have an introduction on Social problems and the special laws connected thereto the social problems
CO2	Understand the principles of Sociology along with the important founding concepts
CO3	Understand the various institutions in our society
CO4	Know about the various special laws related to women and children
CO5	Know about the various special laws related to social problems



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Course Title: ALLIED III - RESEARCH METHODS AND STATISTICS

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the basic concepts and of research methods and its significance.
CO2	Demonstrate the difference between the various types of research and design and formulate hypothesis.
CO3	Understand the process, methods, types involved in data collection
CO4	Explain the use of basic statistics in the application of research.
CO5	Understand the application of inferential statistical methods in criminological research

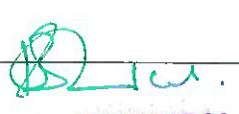
Course Title: ALLIED PAPER IV: PRACTICAL I – FIELD VISITS

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Recollect the list of multiple institutions of Criminal Justice System.
CO2	Explain the functioning of multiple institutions of Criminal Justice System.
CO3	List out the hierarchy and structure of governmental and non-governmental institutions.
CO4	Make rapport with various professionals of Criminal Justice System.
CO5	Evaluate the effectiveness of major social institutions.

SEMESTER IV


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Course Title: CORE VII - PRISON ADMINISTRATION

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the various approach of crime and punishment in ancient, medieval and modern times
CO2	Analyze the application of correctional theories in the contemporary society
CO3	Recognize the various types of correctional methods and typology of prisons, prisoners
CO4	Understand the significance of different acts dealing with prison administration
CO5	Realize the significance of aftercare program


Course Title: CORE VIII - METHODS OF INVESTIGATIONS

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the difference between Police and Private investigation, understand the process of investigation and assimilate the traits of an investigator
CO2	Identify the psychological aspects of crime, apply the Physio-psychological analysis in interviewing witnesses and interrogating suspects.
CO3	Apply crime scene investigative techniques in surveying, collecting and documenting evidences.
CO4	Understand the basic concepts of digital and cyber forensics and to use them in cyber crime investigations
CO5	Describe the different types of private investigations

Course Title: CORE IX - COUNSELING AND GUIDANCE


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Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the scope of counseling and guidance
CO2	Describe the stages and conditions of counseling.
CO3	Explain the various important principles of counseling.
CO4	Elucidate the variations in the difference in counseling.
CO5	Apply the techniques of counseling in communication and interpersonal conversation in personal and professional setups.

Course Title: ALLIED COURSE V: PRACTICAL II –OUTDOOR TRAINING

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Do physical exercises which keep them healthy.
CO2	Do basic drill movements.
CO3	Play various games which require physical strength.
CO4	Follow commands properly and coordinate with team mates.
CO5	Showcase life saving skills and self defense tactics.



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SEMESTER V**Course Title: CORE X - POLICE ADMINISTRATION AND MANAGEMENT**

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Recall the historical development of India Police
CO2	Recognize the different types of Indian police organization and its structure
CO3	Distinguish the difference between the different levels of police recruitment
CO4	Realize the significance of different records maintained at the police station
CO5	Remember the daily routine of the police station and understand the importance of modernization of police.

Course Title: CORE XI - ADVANCED PSYCHOLOGY

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the importance of Forensic Psychology and various branches of it.
CO2	Describe the importance of Investigative Psychology and basic concepts in it.
CO3	Describe the importance of Criminal Psychology and its application.
CO4	Define, identify and classify mental disorders which result in deviant behaviour.
CO5	Apply certain psychological tool in various set ups of Criminal Justice System.

**PRINCIPAL**

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Course Title: ALLIED COURSE V: PRACTICAL II –OUTDOOR TRAINING

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Do physical exercises which keep them healthy.
CO2	Do basic drill movements.
CO3	Play various games which require physical strength.
CO4	Follow commands properly and coordinate with team mates.
CO5	Showcase life saving skills and self defense tactics.

Course Title: ELECTIVE I - FOUNDATIONS OF VICTIMOLOGY

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the origin and development of Victimology
CO2	Identify the different types of Victimology, victims and victimization
CO3	Apply theoretical explanations in understanding crime victimization.
CO4	Understand the necessity of victim assistance in the Criminal Justice System
CO5	List out the different policies and societies that promote victim oriented justice



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Course Title: ELECTIVE II - COMMUNITY POLICING

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the historical approach of crime prevention
CO2	Compare the various crime prevention methods adopted around the world
CO3	Distinguish the difference between conventional and community policing methods
CO4	Recognize the various community policing methods adopted in the various parts of the county.
CO5	Recognize the various community policing methods adopted in the various parts of the state.

SEMESTER VI

Course Title: CORE XIII - PREVENTION OF CRIME

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the historical approach of crime prevention
CO2	Describe the various theories dealing with crime prevention
CO3	Recognize the role of CJS in crime prevention
CO4	Analyze the importance of community policing in crime prevention
CO5	Explain the various organization involving in community policing

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Course Title: CORE IV - CONTEMPORARY FORMS OF CRIMES

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the difference between traditional and contemporary forms of crimes
CO2	Describe the various forms of Economic and Financial Crimes
CO3	Learn about organized crimes the problems and difficulties in identification, preventing Organized crimes
CO4	Understand the history, origin and various forms of Terrorism and Communal Violence
CO5	Comprehend the various types of cyber crimes

Course Title: CORE XV: PRIVATE DETECTIVE AND INVESTIGATION

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the basics of Private Investigation.
CO2	Give examples of the different types of surveillance.
CO3	Showcase skills required for different kinds of investigation.
CO4	Use audio and video recording devices covertly.
CO5	Conduct interviews and interrogations.

Course Title: ELECTIVE III - POLICE AND COMMUNITY


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Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Recall the historical development of India Police
CO2	Recognize the different types of Indian police organization and its structure
CO3	Distinguish the difference between the different levels of police recruitment
CO4	Distinguish the difference between conventional and community policing methods
CO5	Recognize the various community policing methods adopted in the various parts of the county.

Course Title: ELECTIVE PAPER IV: PROJECT

Course Code :	Credits : 04
L:T:P:S : 4:0:0:0	CIA Marks : 40
Exam Hours : 03	ESE Marks : 60

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the basic concepts of research in Criminology
CO2	Write extensively about a particular topic.
CO3	Analyze literature, collect data and interpret it.
CO4	Choose a problem and conduct a scientific enquiry on it.
CO5	Create knowledge and give it to the society.

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11.B.A. DEGREE COURSE IN SOCIOLOGY

Vaishnav College

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Course Outcomes

PRINCIPLES OF SOCIOLOGY I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of sociology and identify its relationship other social sciences. (K1)
CO2	Illustrate the relationship between the individual and society and explain the theories of society. (K2)
CO3	Explain the features of different social institutions and illustrate its types.(K2)
CO4	Classify the different social groups and differentiate its characters. (K4)
CO5	Criticize the theories of socialization and evaluate its agencies. (K5)

INDIAN SOCIETY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	List out the cultural and ethnic composition of Indian society.(K1)
CO2	Classify the roots of Hindu social organizations (K2)
CO3	Explain the features of class and caste in india. (K3)
CO4	Point out the characteristic features of marriage and family. (K4)
CO5	Compare the social changes in India. (K5)

SOCIAL PYSCHOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Recall the importance and methods of social psychology .(K1)
CO2	Illustrate the types and traits of personality.(K2)
CO3	Explain the functions and characteristics of leadership. K3)
CO4	Explain the types and causes of prejudice and aggression. (K4)
CO5	Compare and criticize the principles and techniques of propaganda. (K5)

PRINCIPLES OF SOCIOLOGY-II

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Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Define the basic concepts of social processes(K1)
- CO2 Illustrate the factors and agencies of social control(K2)
- CO3 Explain the forms of social stratification (K3)
- CO4 Point out the features and forms of social mobility (K4)
- CO5 Criticize the factors of social change (K5)

SOCIAL PROBLEMS IN INDIA

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Recall the causes and types of social problems(K1)
- CO2 Classify the types and causes of Unemployment(K2)
- CO3 Solve the problems of women and children(K3)
- CO4 Analyse the origin and development of Terrorism in India(K4)
- CO5 Evaluate the extent of crime in India (K5)

SOCIAL ANTHROPOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the scope of social anthropology (K1)
- CO2 Classify the cultural elements in primitive society (K2)
- CO3 Explain the kinds of marriage and kinship (K3)
- CO4 Analyse the political organization of primitive society(K4)
- CO5 Evaluate the origin and development of religion (K5)

CLASSICAL SOCIAL THINKERS-I

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Explain the relevance and importance of classical social theories in contemporary society (K3)
- CO2 Criticize the concepts explained by classical social thinkers(K5)
- CO3 Hypothesize new theories by combining the thoughts of different social thinkers(K6)
- CO4 Differentiate the different types of authority (K4)
- CO5 Evaluate the concepts of class, status, power and bureaucracy (K5)

SOCIAL MOVEMENTS IN INDIA

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the characteristics of social movements (K1)
- CO2 Explain the impact of Socio-Religious movements (K2)
- CO3 Evaluate the movements of sub-altern groups.(K3)
- CO4 Appraise and criticize the movements in marginalized groups (K5)
- CO5 Analyse the contemporary social movements.(K4)



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SOCIAL DEMOGRAPHY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Recall the importance of Social Demography (K1)
- CO2 Classify the sources of population data(K4)
- CO3 Explain the different population theories(K3)
- CO4 Illustrate the population processes and structure(K2)
- CO5 Evaluate the population policies and programs(K5)

CLASSICAL SOCIAL THINKERS-II

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Compare and contrast the notions proposed by different social thinkers (K4)
- CO2 Explain the contribution of social thinkers (K2)
- CO3 Explain the relevance and importance of social theories in contemporary society(K3)
- CO4 Recall and Criticize the concepts explained by social thinkers(K5)
- CO5 Analyse the functions and dysfunctions of social phenomenon(K4)

RESEARCH METHODOLOGY AND STATISTICS

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the steps involved in social research (K1)
- CO2 Classify the types of research design (K4)
- CO3 Explain the different techniques of data collection (K3)
- CO4 Illustrate the sampling methods (K2)
- CO5 Evaluate the social statistics(K5)

POLITICAL SOCIOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Recall the contribution of Karl Marx and Max Weber in Political Sociology(K1)
- CO2 Illustrate the Aristotle's classification of political system(K2)
- CO3 Evaluate the merits and demerits of Political system (K5)
- CO4 Distinguish between power and authority(K4)
- CO5 Explain the different ways of acquiring legitimacy(K3)

RURAL SOCIOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the importance of rural sociology(K1)
- CO2 Explain the characteristic feature of village pattern and settlement(K3)
- CO3 Analyse the changing features of village social structure (K5)
- CO4 Evaluate the role and functions of rural social institutions (K5)
- CO5 Criticize the problems faced by the rural society (K6)

URBAN SOCIOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Recall the importance of urban sociology
- CO2 Classify the types and forms of cities and towns
- CO3 Explain the ecological theories
- CO4 Analyse the principles and agencies involved in urban planning
- CO5 Evaluate the urban social problems

INDUSTRIAL SOCIOLOGY



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Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the approaches of industrial sociology
- CO2 Identify the evolution of industries
- CO3 Analyse the role and structure of Industrial organizations
- CO4 Explain the relationship between organization of labour and labour welfare
- CO5 Classify the causes and consequences of Industrial conflict

SOCIOLOGY OF DEVELOPMENT

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Distinguish economic growth and development
- CO2 Identify the relationship between culture and development
- CO3 Analyse the importance of social movements in development
- CO4 List out the different kinds of developmental disparities
- CO5 Evaluate the economic development and social opportunities

MEDICAL SOCIOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Identify the relationship between medicine and sociology
- CO2 Differentiate communicable and non-communicable diseases
- CO3 Analyse the socio-cultural practice bearing on health in India
- CO4 Evaluate the relationship between population and health in India
- CO5 Point out the health and social problems

COMMUNICATION, MEDIA AND SOCIETY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the sociological approaches to communication
- CO2 Explain the theories and models of communication
- CO3 Classify the different forms of communication skills
- CO4 Analyse the impact of mass media
- CO5 Evaluate the effects of media on social change

NME I INTRODUCTION TO SOCIOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 List out the relevance of Sociology in contemporary society
- CO2 Identify the relationship between individual and society
- CO3 Explain the contribution of sociological thinkers about social institutions
- CO4 Recall the characteristic features and functions of culture
- CO5 Classify the stages and agencies of socialization

NME II SOCIAL PROBLEMS

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Knowing about the basic concept of Social Problems
- CO2 Identify the causes and consequences of Poverty
- CO3 Explain the results of unemployment and its types
- CO4 Analyze the problems of women
- CO5 Explore the problems of children



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Electives
Sociology of Tourism

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic knowledge on tourism. (K1)
CO2	Illustrate the lessons on social aspects of tourism (K2)
CO3	Explain the features of understanding tourism as a socio-economic force in social development. (K2)

Sociology of Sanitation

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of sociology of sanitation and its scope. (K1)
CO2	Illustrate the programmes and policies of sanitation. (K2)
CO3	Explain the social construction of health and sanitation. (K4)

Sociology of Work and Industry

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of work, occupation and alienation. (K1)
CO2	Explain the gender and work in the informal sector. (K4)
CO3	Illustrate the nature and types of industrial hazards and its vulnerability. (K5)

Social Welfare in India

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of social welfare and identify its agencies. (K1)
CO2	Exemplify the welfare measures of SCs, STs OBCs and minorities. (K4)
CO3	Enlighten the social welfare in Education and Health sector. (K5)



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Sociology of Gender and Sexuality

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of gender and identify its social construction. (K1)
CO2	Outline the gender differences and inequalities in society. (K4)
CO3	Analyze the resistance of power and subordination towards the gender. (K5)

Disaster and Social Crisis

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of disaster and identify its emergency and relief system. (K1)
CO2	Classify the types, causes and effects of disaster. (K4)
CO3	Explain the features of social crisis and illustrate its management. (K3)

Sociology of Consumer Behaviour

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of consumer behaviours and its importance. (K1)
CO2	Describe the factors influences the consumer behaviour. (K5)
CO3	Analyze the different types of buying behavior and decision process. (K4)



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B.A. DEGREE COURSE IN JOURNALISM

Program Specific Outcomes

PSO1: Students will emerge as a self-disciplined professional with adequate knowledge and competency to excel in the media industry

PSO2: Adopt critical thinking in interpreting various social, political, economic and cultural issues from different perspectives and infer its implications in the society

PSO 3: Engage in self-evaluation and lifelong learning to acquire knowledge in the area of Journalism and attain different skill sets including reporting, writing, editing the news, designing layout and taking news worthy photographs

PSO4: Practice professional ethics and values in dispersing their duties and be a conscious and socially responsible person

PSO5: Rise as a team player with leadership and inter personal skills to create an amicable work atmosphere

PSO6: Will employ creative, technical and communication skills in understanding and developing solution for societal problems by creating appropriate content for Journalism

Semester

I

Subject

CORE I – BASIC JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

CO1 Describe different types of news, formats and organization of a news room

CO2 Distinguish news sources and news values

CO3 Explain news judgment and story selection

CO4 Utilize the knowledge gained to make decisions while in action

CO5 Make use of ethical practices in profession

CO6 Create news stories

Semester

I

Subject

CORE II – HISTORY OF THE PRESS IN INDIA

Course Outcomes:

At the end of the Course, the Student will be able to:

CO1 Elucidate about the advent of printing press in India

CO2 Evaluate the role of press in reform movements and social awakening

CO3 Analyse the press during independence struggle and nationalist movement

CO4 Illustrate the development of vernacular press

CO5 Assess the growth of the press in post independent India

CO6 Develop knowledge in different printing technologies, processes and recent trends in publishing industry



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Semester
Subject

I
ALLIED I – DESKTOP PUBLISHING
(P)

Course Outcomes: At the end of the Course, the Student will be able to:

- CO1 Create a DTP work using Adobe InDesign and Photoshop
- CO2 Apply the basics of DTP with Desktop publishing software
- CO3 Analyse different types of layouts in newspaper, newsletter, magazine, etc.
- CO4 Identify image editing software
- CO5 Outline hardware orientation (printers, scanners and digital camera)
- CO6 Make use of suitable elements of design for attractive layout

NON- MAJOR ELCTIVES FOR SEMESTER – I

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline the spread of printing technology in Asia
- CO2 Evaluate press system in SAARC countries
- CO3 Summarize early attempts in daily newspaper Journalism in Asia
- CO4 Examine the press system in South East Asia
- CO5 Explain the rise of print culture in Asia during 20th century
- CO6 Examine colonialism and its impact on printing technology

Non-Major Elective – 2: History of Journalism in USA

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline the spread of printing technology in USA
- CO2 Evaluate the role of USA press during cold war era
- CO3 Summarize early attempts in daily newspaper Journalism in USA
- CO4 Examine the raise of penny press
- CO5 Explain the rise of print culture in USA during 19th & 20th century
- CO6 Examine the impact of printing technology in the 19th and 20th century

Non-Major Elective – 3: History of Journalism in Europe

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline the spread of printing technology in Europe
- CO2 Evaluate press system in Eastern, Western and Scandinavian regions of Europe
- CO3 Summarize early attempts in daily newspaper Journalism in Europe
- CO4 Examine the press system and its impact on European society
- CO5 Explain the rise of print culture in Europe during 20th century
- CO6 Examine the role of European press system during cold war era.

Non-Major Elective – 4: History of Journalism in Tamil Nadu

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Illustrate the history of early printing presses in Tamilnadu
- CO2 Summarize early attempts in daily newspaper Journalism in Tamilnadu
- CO3 Examine colonialism and its impact on printing technology
- CO4 Evaluate the role of Tamil newspapers during freedom struggle
- CO5 Explain the rise of print culture in Tamilnadu during 20th century
- CO6 Examine the trends in contemporary Tamil Journalism



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Semester
Subject

II
CORE III REPORTING &
WRITING

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Identify the roles and responsibilities of reporter
- CO2 Analyse the structure of news reports
- CO3 Make use of language proficiency in writing reports
- CO4 Adopt good writing skills and create news reports
- CO5 Compose news stories with acquired editing skills
- CO6 Employ ethical values in fact checking the content of the news story

Semester
Subject

II
ALLIED II – SOCIAL ISSUES IN
INDIA

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Assess social issues in India
- CO2 Review on various social problems and its implications
- CO3 Evaluate on various causes for social problems
- CO4 Explain various forms in which social problems occur
- CO5 Create news reports on social issues
- CO6 Discuss social problem and its complexities while writing news stories

Semester	II
Subject	ALLIED III – WEB PAGE DESIGN (P)

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Create a web page design using Dream Weaver and Photoshop
- CO2 Apply the Principles of Designing to create striking webpages
- CO3 Analyse different types of templates and its purpose in publication industry
- CO4 Identify the elements of webpage design and its role in creating impact
- CO5 Make use of different types of layout for attractive design
- CO6 Compare and evaluate different formats of web page design

Syllabus for NON-MAJOR ELECTIVE - Semester II

History of Indian Art

Course outcomes:

At the end of the course students will be able to

- CO1 Elucidate Indian art and architecture from pre historic period
- CO2 Recognise the features of Buddhist and Jain architecture
- CO3 Categorise the features of Indian architecture
- CO4 Compare Buddhist & Jain architecture with Hindu architecture
- CO5 Identify the features of Mughal architecture
- CO6 Realise the importance of Ajantha and Ellora paintings



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History of Western Art

Course outcomes:

At the end of the course students will be able to

- CO1 Illustrate western art and architecture and its features
- CO2 Distinguish the features of Byzantine art, Romanesque art and Gothic style art
- CO3 Distinguish the features of Early Renaissance and High Renaissance art of Italy
- CO4 Classify the English and other European art
- CO5 Recognise the modern trends in Western art
- CO6 outline the major milestones in the history of western art and architecture.

History of South Indian Art

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Compare the architecture of Pallava and Chola period
- CO2 Discuss the major milestones in the Pandiya period
- CO3 Interpret the art of Vijayanagar period
- CO4 Explain the significance of art in Nayaka period
- CO5 Criticise the destruction of art and architecture during war
- CO6 Appraise the importance of Brihadishwara temple

Great Artists

Course outcomes:

At the end of the course students will be able to

- CO1 Relate historical context to understand the work of the artist
- CO2 Appraise the creative skills embedded in the artistic work
- CO3 Interpret the art work
- CO4 Identify and appreciate the nuances of an art
- CO5 Recognise the contribution of artist and uniqueness in their work
- CO6 Summarise the biography of the artist

Semester	III
Subject	CORE IV BROADCAST JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Exoplain the unique features of broad cast media
- CO2 Create news suitable for broadcast media
- CO3 Assess the future trends in broadcast journalism
- CO4 Apply ethical values and legal procedures while creating live reporting from the field
- CO5 Make use of editing skills in constructing news for Television and Radio
- CO6 Engage in team work to produce appropriate content for media

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Semester	III
Subject	CORE V – POLITICAL ISSUES IN INDIA

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline the evolution of political thoughts in India
- CO2 Analyse the democratic process and organization of political system in India
- CO3 Interpret the issues of governance and governability
- CO4 Evaluate marketing politics, themes and issues
- CO5 Relate media and politics
- CO6 Make use of ethics and values in understanding the formation of public opinion and its implications

Semester	III
Subject	ALLIED IV – PHOTO JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Make use of the knowledge of lighting while shooting indoor and outdoor photography
- CO2 Create photo essay and photo feature for specific themes
- CO3 Apply the technical knowledge while operating camera for the desired result
- CO4 Construct a suitable composition in photograph to convey the intended message
- CO5 Apply the principles of photography to create appealing photographs
- CO6 Relate ethical values in taking news photographs for publication

Semester	IV
Subject	CORE VI – ECONOMIC ISSUES IN INDIA

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Sketch the development of Indian Economy
- CO2 Evaluate on various economic issues and its implications
- CO3 Elaborate on various causes for economic problems
- CO4 Analyse liberalisation, globalisation and its consequences on Indian society
- CO5 Create news stories on economic issues
- CO6 Evaluate economic reform policies and its success rate



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Semester	IV
Subject	ALLIED V – INDIAN CONSTITUTION AND LEGAL SYSTEM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline the historical evolution of Indian Constitution
- CO2 Appraise the special provision of Indian constitution relating to mass media
- CO3 Analyse various constitutional amendments
- CO4 Explain the judicial process, procedure and structure
- CO5 Identify the need for reforming constitution
- CO6 Discuss judicial activism and its implications

Semester	IV
Subject	ELECTIVE I FILM APPRECIATION/HUMAN RIGHTS REPORTING (P)

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Appraise the technical, creative and aesthetic aspects of film production
- CO2 Recognise the film language
- CO3 Appraise films in terms of style and mise-en-scene.
- CO4 Evaluate films in their historical context.
- CO5 Examine motion pictures as a technology, business, cultural product, entertainment medium and industrial art form.
- CO6 Recognise film forms, narratives and genres

HUMAN RIGHTS REPORTING

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Inculcate human rights approach in their Journalistic pursuits.
- CO2 Relate provisions in Indian Constitution for human rights issues
- CO3 Evaluate the role of Human rights activist
- CO4 Recognise various forms of Human rights issues
- CO5 Aware of Civil, Political, Economic and social rights of the citizen.
- CO6 Create articles on Human Rights Issues



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Semester	V
Subject	CORE VII – PRESS LAWS AND ETHICS

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Outline historical evolution of laws relating to press in India
- CO2 Remember the important acts relating to mass media
- CO3 Analyse the ethical issues in media
- CO4 Explain the laws and constitutional provisions pertaining to human rights in India
- CO5 Agree on the need for ethical practices while carrying out Journalistic duties
- CO6 Analyse the state of implementation of press laws

Semester	V
Subject	CORE VIII ONLINE JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Recognize the distinct characters of online Journalism
- CO2 Familiarize with MOJO and Data Journalism
- CO3 Trace the development of internet and online Journalism
- CO4 Identify writing styles suitable for online Journalism
- CO5 Distinguish different tools to interact with audience
- CO6 Use multimediality and interactivity while creating content for online Journalism

Semester	V
Subject	CORE IX INTERNSHIP

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Evaluate news sources for their credibility
- CO2 Select and organise the news according to news values
- CO3 Meet the deadline pressures
- CO4 Adopt reporting, writing and editing skills for news creation
- CO5 Acquire technical skills in producing the news
- CO6 Realise the value of team work to get desirable outcomes



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Semester	V
Subject	ELECTIVE II Writing for Media (Interdisciplinary Elective)

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Analyse the structure of news reports
- CO2 Make use of language proficiency in writing reports
- CO3 Adopt good writing skills and create news reports
- CO4 Acquaint with different writing styles for different formats of news
- CO5 Familiarise different writing styles for different media
- CO6 Apply creativity in writing for the media

Semester	V
Subject	ELECTIVE III DOCUMENTARY/NEWS PRODUCTION (P)

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Acquire technical skills to produce a documentary
- CO2 Employ creativity in producing a documentary
- CO3 Realise the importance of team work
- CO4 Choose topic which is relevant and select an inspiring angle
- CO5 Adopt good writing skills in narrating the story
- CO6 Conceptualise the topic to suit the target audience

NEWS PRODUCTION FOR TELEVISION/RADIO

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Acquire the technical skills to produce news for broadcast media
- CO2 Organize the news according to news values for broadcasting
- CO3 Realise the need for accuracy
- CO4 Acquire good writing skills while writing for news bulletins
- CO5 Employ ethical values in fact checking to produce the content of the news story
- CO6 Meet deadline pressures



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Semester	VI
Subject	CORE X – MASS COMMUNICATION THEORIES

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Analyse the determinants of news content
- CO2 Create news stories knowing the power and reach of media
- CO3 Relate media society relationship
- CO4 Discuss the importance of studying theory
- CO5 Illustrate the evolution of mass media theories
- CO6 Categorize and relate various events in the society to mass communication theories

Subject	CORE XI – MEDIA ORGANISATION
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Course Outcomes:

At the end of the Course, the Student will be able to:


- CO1 Assess the conceptual issues in media organization
- CO2 Interpret media as business and social institution
- CO3 Examine the behaviour in media organization and organizational behavior
- CO4 Explain the work flow in news media
- CO5 Discuss organizational structures and functions of different departments in printing and publishing industry
- CO6 Discuss the economics of media

Subject	ELECTIVE IV Environmental Journalism/Advocacy Journalism (P)
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Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Aware of the laws related to Environment
- CO2 Realise the need to disseminate information about the current state of environment in order to protect it
- CO3 Employ language proficiency in writing articles to create awareness about conservation
- CO4 Follow ethical guidelines in reporting human-environment interactions
- CO5 Do fact checking
- CO6 Make use of info graphics to present the data collected


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ADVOCACY JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Distinguish Advocacy Journalism from Opinionated Journalism
- CO2 Write articles knowing their bias
- CO3 Follow Journalistic Standards and ethics while reporting
- CO4 Analyse the effectiveness and reach of Government policies
- CO5 Relate to historical context while addressing an issue
- CO6 Aware of contemporary issues in the society

Semester	VI
Subject	ELECTIVE V DEVELOPMENT JOURNALISM/CULTURAL JOURNALISM (P)

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Aware of the problems related to the concept of Development
- CO2 Critically evaluate government policies related to Development and its impact
- CO3 Analyse the role of International Agencies towards Development
- CO4 Create content suitable for different formats
- CO5 Approach the issue in various angles
- CO6 Examine the reach of Development policies

CULTURAL JOURNALISM

Course Outcomes:

At the end of the Course, the Student will be able to:

- CO1 Analyse the impact of technology on Culture
- CO2 Relate culture as a social institution
- CO3 Examine the relationship between culture and politics
- CO4 Study the relationship between culture and Economics
- CO5 Recount the significance of culture in freedom of expression
- CO6 Analyse the role of culture in solving social problem and transmitting values

Semester	VI
Subject	PRACTICAL WEB MAGAZINE / TABLOID

Outcomes:

At the end of the course students will be able to

- CO1 Acquire technical skills to produce Tabloid/Web magazine
- CO2 Employ creativity in producing the Tabloid/Web magazine
- CO3 Realise the importance of team work in meeting the dead line pressures
- CO4 Create contents suitable for different formats
- CO5 Adopt ethical values in selecting and disseminating news
- CO6 Discuss various perspectives of the news story before writing for publication



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B. Com(General)

PROGRAM SPECIFIC OUTCOMES

PSO-1	Equip the Graduates to meet the industry expectations in the field of Accounting, Auditing, Legal Compliance, Marketing, Taxation, Banking and Financial Services
PSO-2	Students are being trained to adapt to Entrepreneurship and Engage in Entrepreneurial Ventures.
PSO-3	Graduates are skillfully trained in association with professional training institutions.
PSO-4	Students are inspired to pursue professional courses- CA, CMA, ACS, Law and Management Courses.

CORE-I FINANCIAL ACCOUNTING-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Explain basic accounting concepts and conventions Prepare final accounts of Trading & Non- Trading Organizations 	K1&K2
CO2	<ul style="list-style-type: none"> Identify, classify and rectify errors in the process of recording transactions and to prepare Suspense accounts Analyze bank book (Cash Book) and pass book and prepare bank reconciliation statement 	K4&K5
CO3	<ul style="list-style-type: none"> Discuss the Need, Importance and Causes of Depreciation Prepare Asset Accounts by applying various methods of Depreciation. 	K2
CO4	<ul style="list-style-type: none"> Compute the insurance claims for Loss of Stock & Consequential Loss Apply Average Clause to compute the Amount of Claim 	K3
CO5	<ul style="list-style-type: none"> Identify and apply single entry and double entry system of accounting according to the nature of business. 	K5
CO6	<ul style="list-style-type: none"> Compute Average Due date and prepare account current for account settlement 	K3&K4

CORE-II

Course Title: BUSINESS ECONOMICS

Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Develop an understanding on the nature of economics, and explain the wealth, welfare and scarcity definition of economics. 	K2&K4
CO2	<ul style="list-style-type: none"> Categorize and explain various types of cost and different principles in economics. 	K2
CO3	<ul style="list-style-type: none"> Get a good insight into law of demand, determinants of demand and various methods in forecasting the demand. 	K3&K4
CO4	<ul style="list-style-type: none"> Learn the fundamentals of law of supply and the behavior of consumers through various theories like Law of diminishing marginal utility, Law of Equi-marginal utility. 	K1&K2
CO5	<ul style="list-style-type: none"> Develop an understanding about the production function through the law of variable proportion and law of returns to scale and explain the economies and diseconomies of scale 	K5&K2
CO6	<ul style="list-style-type: none"> Analyze the performance of firms under different market conditions like perfect competition, monopoly, monopolistic competition and oligopoly. 	K4



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CORE - III FINANCIAL ACCOUNTING - II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Prepare branch trading and P/L account for independent and wholesale branch	K1 & K2
CO2	<ul style="list-style-type: none">• List out the basis of Allocation of Departmental Expenses.• Equip the students to prepare Department Account with Transfers at Cost Price and Invoice Price	K2
CO3	<ul style="list-style-type: none">• Differentiate Hire Purchase from Installment• Record Hire Purchase Agreement & Calculate Interest & Prepare Hire Purchase Trading a/c, Stock and Debtors System	K1 & K3
CO4	<ul style="list-style-type: none">• Understand the importance of Investments and prepare Investment Accounts from an Organisation.	K2
CO5	<ul style="list-style-type: none">• Record Journal Entries in the Books of the Consignor & Consignee & Prepare relevant Ledger Accounts to record transactions relating to consignment• Prepare Journal Entries for Joint Ventures & Ascertain Profit or Loss from the transaction	K5
CO6	<ul style="list-style-type: none">• Prepare accounting treatment relating to Admission, Dissolution and Insolvency of partnership.	K2 & K4

CORE- IV BUSINESS LAWS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Enumerate the essential elements of a valid contract• Classify contracts• Discuss the Rules relating to Offer, Acceptance & Consideration in contract	K2, K3, K4
CO2	<ul style="list-style-type: none">• Analyze the capacity of a person to enter into a valid contract• Differentiate Misrepresentation from Undue Influence, Fraud & Coercion	K3
CO3	<ul style="list-style-type: none">• Describe the Importance of Legality of object in a contract• List out the business purposes that are opposed to public policy	K3, K5
CO4	<ul style="list-style-type: none">• Define Quasi Contract & Contingent Agreements• Analyze the remedies for breach of contract and termination of agency• List the rights and duties of a bailor & Pawnor	K2, K4
CO5	<ul style="list-style-type: none">• Demonstrate the rules for performance of a contract & reciprocal promises	K2, K5
CO6	<ul style="list-style-type: none">• State the provisions relating to Sale of Goods• Differentiate sale from agreement to sell• Discuss the conditions & Warranties• Discuss the Doctrine of caveat emptor & Rights of an unpaid seller	K1, K4, K5



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Non Major Elective – I (For Non Commerce Students)

FUNDAMENTALS OF BANKING LAW AND PRACTICE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Develop an understanding on the Structure of Indian Banking and Financial SystemIdentify the Role & Functions of Central bank and Commercial banks in Economic Development	K1
CO2	<ul style="list-style-type: none">Discuss the procedure for opening a bank account and the KYC NormsDescribe Negotiable Instruments & the procedure relating to Crossing & Dishonour of Negotiable Instruments	K2
CO3	<ul style="list-style-type: none">Classify the Banks based on the nature of servicesIllustrate the services offered by various banks	K3
CO4	<ul style="list-style-type: none">List the Factors determining credit score of individuals and the Procedure for applying Loans in commercial banks.Recall the RBI guidelines for disclosure of credit score	K3
CO5	<ul style="list-style-type: none">Use electronic banking services effectivelyDiscuss the impact of Demonetization on Digital Payment Methods	K3
CO6	<ul style="list-style-type: none">Analyze the grievances and rights of the customersDescribe the role of banking ombudsman in the grievance redressal mechanism	K2

Non Major Elective –II (For Non Commerce Students)

PERSONAL INVESTMENT PLANNING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the terminologies in Savings and Investment Options for Individual Investors	K1
CO2	<ul style="list-style-type: none">Classify the Long Term and Short Term Financial GoalsPrepare Cash Budgets to plan for Short term and Long Term Cash requirements	K2
CO3	<ul style="list-style-type: none">Enumerate the Importance of Risk Coverage & Sketch Insurance plans (both Life and General)Describe Social Security measures available for Individuals based on their social class	K3
CO4	<ul style="list-style-type: none">Plan for Retirement and old age needs and healthcare insurance	K2 & K3
CO5	<ul style="list-style-type: none">List out various sources of generating Income	K1 & K2
CO6	<ul style="list-style-type: none">Prepare Form 16 and File Returns of Individuals	K3



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CORE - V CORPORATE ACCOUNTING - I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define a company and State the various types of shares and debentures. Identify the role of underwriters. List out the types of underwriting.	K-1
CO2	<ul style="list-style-type: none">Discuss the provisions of redemption of preference shares and redemption of debentures. Explain the different types of redemption of preference shares.Give examples of ex-interest and cum-interest quotationsDescribe the significance of profits prior to incorporation.	K-2
CO3	<ul style="list-style-type: none">Preparation of company final accounts.Demonstrate the role of managers and prepare the computation of managerial remuneration.	K-3
CO4	<ul style="list-style-type: none">Construct the revised balance sheets after alteration of share capital and internal reconstruction.Analyze the factors affecting goodwill.Categorize the various methods of valuation of shares and valuation of goodwill.	K-4
CO5	<ul style="list-style-type: none">Differentiate amalgamation, absorption and external reconstruction.Outline the various methods of purchase consideration calculation.Compare the types of amalgamation.	K-4 & K5
CO6	<ul style="list-style-type: none">Discuss the provisions of the Certificate of Incorporation & minimum subscription.Develop the ability to prepare Consolidated Accounts for a Corporate Group	K-2

CORE - VI

BANKING & FINANCIAL SERVICES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Classify various kinds of banks with their functions and identify the services provided by themExplain the Role of Central Bank in Administering, Controlling and Directing the Monetary ActivitiesApply the traditional services provided by banks in real life by visiting the banks	K1
CO2	<ul style="list-style-type: none">Discuss the Features of Various Negotiable InstrumentsExplain the need for Endorsement and various types of Endorsement	K4
CO3	<ul style="list-style-type: none">Describe the basic concepts of financial system and its role in economic environmentApply E-banking, internet banking and mobile banking for fund transfer	K3
CO4	<ul style="list-style-type: none">Identify various financial services that can be used as an alternative measure for short term and long term financial needs	K1
CO5	<ul style="list-style-type: none">Explain and Relate the importance of financial services like Factoring and Leasing	K4, K1
CO6	<ul style="list-style-type: none">Evaluate various types of Mutual Funds and the working mechanism	K-6



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CORE - VII PRINCIPLES OF MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the basic concepts of Management and Identify various contributions made towards Management Thought.	K2,K1
CO2	Propose, Design all the procedures involved in planning and Construct good decisions in business Scenario.	K6
CO3	Categorize various types of Organisation and Demonstrate allocation of employee's workload.	K4,K5
CO4	Apply different leadership styles and provide Solutions for the obstacles faced in delegating the authority in the business.	K3,K6
CO5	Explain and Relate the techniques of Control and importance of Co-ordination in strengthening human efforts.	K2,K3
CO6	Develop overall managerial skills & leadership skills among students	K6

CORE - VIII BUSINESS COMMUNICATION

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Demonstrate the principles of effective communication.	K3
CO2	<ul style="list-style-type: none">Identify the barriers involved in Business communication and the way to resolve the same.	K1,k3
CO3	<ul style="list-style-type: none">Assess the structural and contextual difference among different kinds of business letters.	K4,k3
CO4	<ul style="list-style-type: none">Compare and contrast the forms of communication involving traditional and modern methods of communication.	K4
CO5	<ul style="list-style-type: none">Demonstrate the ability to generate different kinds of report based on the requirement.	K2
CO6	<ul style="list-style-type: none">To develop overall communication skill & ability of the students.To stimulate their critical thinking by designing and developing clean & lucid writing skills.	K-6

CORE - IX CORPORATE ACCOUNTING II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the mandatory accounting standards issued by the ICAI and other financial reporting statements related to Corporate Accounting. <p>Explain Inflation Accounting.</p>	K1,k2
CO2	<ul style="list-style-type: none">Know the preparation of consolidated balance sheet of Holding subsidiary companies, profit calculation and treatment of dividend.	K3
CO3	<ul style="list-style-type: none">Analyze the final statements of banking companies (New Provisions) and by visiting into banks to know how they prepared their books of accounts in real life.	K4
CO4	<ul style="list-style-type: none">Classify the accounts of Insurance companies and to know their final statements as per IRDA regulation 2002.	K4
CO5	<ul style="list-style-type: none">Classify and compare the various modes of winding up and analyze the role of liquidator while distributing money as per the law.	K4
CO6	<ul style="list-style-type: none">Preparation of Accounting price level changes/ Inflation AccountingDevelop the ability to analyse complex issues.Formulate well reasoned arguments & to reach well considered conclusions	K3


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CORE - IX CORPORATE ACCOUNTING II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the mandatory accounting standards issued by the ICAI and other financial reporting statements related to Corporate Accounting.Explain Inflation Accounting.	K1,k2
CO2	<ul style="list-style-type: none">Know the preparation of consolidated balance sheet of Holding subsidiary companies, profit calculation and treatment of dividend.	K3
CO3	<ul style="list-style-type: none">Analyze the final statements of banking companies (New Provisions)and by visiting into banks to know how they prepared their books of accounts in real life.	K4
CO4	<ul style="list-style-type: none">Classify the accounts of Insurance companies and to know their final statements as per IRDA regulation 2002.	K4
CO5	<ul style="list-style-type: none">Classify and compare the various modes of winding up and analyze therole of liquidator while distribution money as per the law.	K4
CO6	<ul style="list-style-type: none">Preparation of Accounting price level changes/ Inflation AccountingDevelop the ability to analyse complex issues.Formulate well reasoned arguments & to reach well considered conclusions	K3

CORE XI PRINCIPLES OF MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define marketing and Explain evolution of marketing orientation.Develop an idea about Marketing and its functionsExplain the innovations in Modern Marketing.	K1& K6
CO2	<ul style="list-style-type: none">Enhance the knowledge of the student on marketing segmentation.Demonstrate the consumer behavior. Illustrate various theories on Motivation.	K3
CO3	<ul style="list-style-type: none">Make student understand about various product and pricing decisionExplain Product life cycle and sales forecasting.	K2
CO4	<ul style="list-style-type: none">To equip the student to take effective distribution decision.To analyse various promotion mix strategies for products and services	K4
CO5	<ul style="list-style-type: none">Demonstrate awareness about current trends in marketing environment toenable them to take practical measures.Explain about social responsibility and marketing ethics.Summarize market research and MIS	K3 & K2
CO6	<ul style="list-style-type: none">Develop a market research plan and conduct basic research using primary andsecondary sources	K6



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CORE - XII PRACTICAL AUDITING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the terminologies related to auditing to equip the students to identify the basic concepts of auditing.	K1
CO2	Identify, Classify and vouching documents related to financial transactions	K2
CO3	Analyze the Impact of ERP in auditing environment	K3
CO4	Apply the provisions of companies act in relation to appointment of company auditor	K3
CO5	Apply the standards related to auditing in real auditing scenario	K3
CO6	Develop students cognitive skills	K4

CORE XIII COST ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the meaning of Cost Accounting, Financial Accounting and Management AccountingList the objectives of cost accounting, Uniform costing and Inter-firm comparisonList out the requirements of installing a costing system and the stages in installationIdentify the significance of reconciliation of statementsDefine material control by different methods of price computationState the meaning of Inventory turnover and Economic ordering QuantityIdentify the methods of calculating stock levels	K1 & K2
CO2	<ul style="list-style-type: none">Describe the methods of calculating Labour turnover and also reducing itExplain the different types of bonus Plans with examples	K2
CO3	<ul style="list-style-type: none">Demonstrate the importance of Overhead costs and their classificationPrepare apportion Overheads and re-distribute it to various departmentsPrepare statement showing Machine Hour Rate	K3
CO4	<ul style="list-style-type: none">Analyze the meaning and features of process costing with its advantages and disadvantagesCategorize the various types of process lossesDifferentiate process accounts into those with process losses and scrap value and those with abnormal loss and gainOutline the procedure involved in computing inter-process profits	K3
CO5	<ul style="list-style-type: none">Construct the format of a Contract accountDevelop the different stages of contract costing based on different phases of completionInterpreting the computation of Notional profit and settlement of Contract agreement with Escalation clause	K4
CO6	<ul style="list-style-type: none">Analysing the techniques of cost control & discussing the steps to overcome the difficulties.	K4



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CORE - XIV
PRINCIPLES OF FINANCIAL MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate understanding of capital structure, its source and leverage concepts.	K1,K2
CO2	Solve the given problems on capital budgeting and investment decision.	K1,K2,K3
CO3	Compute cost of individual source of capital and also their overall averages based on specific information.	K1,K2,K3, K4
CO4	Explain the concept of dividend policy, its relevance and various models associated with dividend policy.	K1,K2
CO5	Determine factors affecting working capital and calculation of working capital based on given information.	K1,K2,K3, K4
CO6	Enable students to strengthen their knowledge on the important concepts of financial management.	K4

CORE - XV
ENTREPRENEURIAL DEVELOPMENT


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Define entrepreneur, understand the several theories of entrepreneurship and recognize the entrepreneurial development in India. 	K1,K2
CO2	<ul style="list-style-type: none"> Conceive new business ideas and identify project opportunities together with problems to be faced. 	K6,K2,K1
CO3	<ul style="list-style-type: none"> Analyze and select the types of organization and interpret about the growth, expansion, diversification and strategies. 	K4,K2
CO4	<ul style="list-style-type: none"> Find the sources of finance and integrate the knowledge about government incentives, subsidies policies, tax concession to SSI units. 	K1,K3
CO5	<ul style="list-style-type: none"> Acquire the awareness about the role and scope of women entrepreneur, rural entrepreneur and NGO's. 	K2
CO6	<ul style="list-style-type: none"> Develop entrepreneurship skills. 	K6

CORE XVI
INCOME TAX LAW AND PRACTICE –I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the term Income, Person, Assessment Year, Previous Year, Assessee. Describe the provisions connected with Residential status of Individual, Firm & Company.	K1,K2
CO2	Explain the meaning of Salaries under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO3	Discuss House Property income under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO4	Describe the meaning of Capital Gains under Income Tax Act 1961 and apply the provisions to solve problems	K1,K2,K3
CO5	Analyse the role of Income Tax Authorities.	K4
CO6	Enable students to fill FORM 16 & to file the returns.	K5


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ELECTIVE-I
Open Elective Paper I – Economic &
Corporate Laws (Course offered to other
Department Students Shift I & Shift II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Describe the Foreign Exchange Management Act, 1999 contraventions and penalties.	K1
CO2	• Discuss the role of financial intermediaries in Prevention of Money Laundering, Penalties and the adjudication procedure	K2
CO3	• Explain the meaning and importance of Prohibition of Benami transactions & re-transfer of property by benamidar and Penalties & Prosecution	K3
CO4	• Discuss the provisions relating to the Competition Act 2002 in correspondence with the duties, powers and functions of the competition commission.	K3
CO5	• Understand Environment Protection Act and its role in managing and controlling environment concerns and issues.	K3
CO6	• Describe Constitutional Obligation & Fundamental Right to live in Healthy Environment	K2

Open Elective Paper I – E-Commerce
(Course offered to other Department Students Shift II)

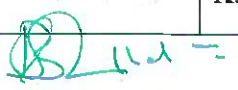
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Explain the Role of Internet and Web in E-Commerce	K1
CO2	• Understand various E-commerce business models and concepts, the internet and World Wide Web: Ecommerce Infrastructure and its Role of Automation & Artificial Intelligence in E-Commerce	K3
CO3	• Elaborate Building an ecommerce web site, Security and payment	K3
CO4	• Analyse marketing concepts Online retailing and services	K3
CO5	• Explain Social networks, auctions & Implementation of E-commerce	K3
CO6	• Evaluate the Efficiency of E-Commerce portals and the relative merits & limitations	K2

Open Elective Paper I – Marketing of
Services (Course offered to other
Department Students Shift II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Define and Discuss the Components of Service Marketing Mix	K1
CO2	• Explain the Factors influencing Consumer Behaviour for various services & Discuss the Service Quality dimensions	K2
CO3	• Describe the Service Delivery Process and Illustrate the Customer Retention Strategies & its Benefits	K3
CO4	• Discuss the Strategic Issues in Services Marketing & importance of Segmentation, Targeting and Positioning	K3
CO5	• Identify the Challenges of Services Marketing	K3
CO6	• Apply the Concept of Services Marketing at Industry Level	K5



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CORE - XVII MANAGEMENT ACCOUNTING**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Understand the meaning of management accounting and will analyse and interpret the financial statements	K1
CO2	Interpret the financial position of a company by preparing Find Flow Statement and Cash Flow Statement.	K2,K3
CO3	Understand the significance of budget preparation and also will prepare budgets.	K2
CO4	Understand the concept of marginal costing and also will apply the concept in decision making.	K3
CO5	Understand the various concepts of standard costing and will also analyse the variances.	K3
CO6	Ensure students to acquire and strengthen their fundamental knowledge in management accounting concept.	K4

CORE - XVIII INDUSTRIAL LAW**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none"> Define Factory as per Factories Act, 1948 Deliberate the details of various welfare, Safety and Health measures available to workers in a factory Working hours of Adults, Holiday rates, Employment of young persons, employment of women. 	K2 & K3
CO2	<ul style="list-style-type: none"> Discuss procedure for Registration of Trade Unions Understand the need for raising General Funds Immunity from civil and criminal liability and penalties and procedures. 	K3
CO3	<ul style="list-style-type: none"> Deliberate the Importance of Minimum Wages Act, 1948. Explain the components of Minimum wages &, Fixation and revision of wages. 	K3
CO4	<ul style="list-style-type: none"> Discuss the reasons for Industrial Disputes Elaborate the objectives of 'The Industrial Disputes Act, 1947' Distinguish strikes, Lockouts, Layoff and Retrenchment 	K3
CO5	<ul style="list-style-type: none"> Deliberate the Nature and scope, definitions, rules of 'The workmen's compensation Act 1923 Differentiate Permanent, partial and temporary disablement. and the compensation 	K4
CO6	<ul style="list-style-type: none"> Importance of Social Security Schemes and the Role of Employer and Employee as per, The Employees Provident Fund Act 1952 Explain the contribution to the Fund, advances and withdrawals from PF Act 1952. Explain the Eligibility & Coverage of ESI & Benefits of the ESI Act, 1948 	K5


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CORE-XIX
INCOME TAX LAW AND PRACTICE – II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	• Discuss the meaning of Business Income & Professional Income under Income Tax Act 1961 and apply the provisions to solve problems.	K1,K2,K3
CO2	• Describe Income from Other Sources under Income Tax Act 1961 and apply the provisions to solve problems.	K2,K3
CO3	• Explain the provisions of Set off, Carry Forward of losses & Clubbing of Income under Income Tax Act 1961.	K3
CO4	• Elaborate the provisions of Chapter VI A of Income Tax Act 1961 and solve simple problems.	K3
CO5	• Analyse the different assessment procedures and define TDS, E>Returns & PAN.	K4
CO6	• Preparation of Form 16 and Filing Individuals Tax Returns by enabling Provision for TDS and Clubbing of Income	K5

Elective II
HUMAN RESOURCE MANAGEMENT
(Intra Department Elective – Shift I & II)


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Compare and Contrast Human resource Management and Personnel Management.	K4
CO2	Analyse the implication of planning and selection and the process pertaining to it.	K4
CO3	Demonstrate a holistic view of training and training methods associated with the same.	K3
CO4	Develop a need based career planning for the employee in an Organization.	K6
CO5	Conceptualize the various theories of Motivation and its implication and relevance in the current scenario.	K2,K3
CO6	Enable students to take up Human Resources as a profession.	

Elective II FUNDAMENTALS OF INSURANCE
(Intra Department Elective – Shift I & II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate a holistic view of principles of Insurance and apply them to practical situations	K4
CO2	Analyse the implication of Insurance Laws and regulations governing thereon.	K4
CO3	Analyse and understand the principles of Life Insurance and its relevant products	K3
CO4	Analyse and understand the Principles of General Insurance and its relevant products	K6
CO5	Conceptualize the need for group insurances, social security insurance and its relevance to modern days	K2,K3
CO6	Enable students to take up Insurance Consultancy & Advisory services as a profession	K4


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ELECTIVE III
INDIRECT TAXES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Compare Tax vs Duty, Direct Tax vs Indirect Tax, explain powers of union/states, varieties of indirect taxes.	K1
CO2	Explain first principles of valuation, procedure for assessment and payment of Customs duty, types of Customs duty and warehousing.	K2
CO3	Discuss an overview of Goods and Service Tax (GST).	K1
CO4	Describe CGST Act 2017.	K2
CO5	Apply IGST Act.	K2
CO6	Ensures students to study the challenges in implementation of GST and ways to overcome them.	K6

B.Sc (Mathematics) – I SEMESTER
Course Title: Allied Paper – FINANCIAL ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Define the Meaning of various terminologies used in accounting. Explain accounting concepts and conventions Distinguish Book-Keeping from Accounting Record the Journal Entries, Prepare Ledger Accounts and Prepare Trail Balance Prepare single, double and triple column cash book 	K1
CO2	<ul style="list-style-type: none"> Prepare final accounts of a sole trading concern and also formulate trading a/c, profit and loss a/c and balance sheet of a business. 	K2
CO3	<ul style="list-style-type: none"> Identify, classify and rectify various errors in the process of recording business transactions. 	K2&K3
CO4	<ul style="list-style-type: none"> Analyze and evaluate cash book and passbook and Prepare bank reconciliation statement. 	K4
CO5	<ul style="list-style-type: none"> Discuss the Need, Importance and Causes of Depreciation Prepare Asset Accounts by applying various methods of Depreciation. 	K3
CO6	<ul style="list-style-type: none"> Identify and apply single entry and double entry system of accounting according to the nature of business. 	K3&K5



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B.Sc (Mathematics) – II SEMESTER

Course Title: Allied Paper – COST AND MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">List the basic concepts of cost accountingPrepare cost sheet and quotationsAnalyse the reasons for difference in the profits arrived by cost and financial accountant and prepare Reconciliation Statements	K1& K3
CO2	<ul style="list-style-type: none">Define the basic concepts of management accounting and appreciate the differences between cost accounting and Financial Accounting	K2& K3
CO3	<ul style="list-style-type: none">Prepare various functional budgets such as Production, Material Purchase, Material Consumption, Cash and Flexible Budget	K3&K4
CO4	<ul style="list-style-type: none">Analyse corporate financial statements using Common Size Statements, Comparative Statement and Trend Percentages	
CO5	<ul style="list-style-type: none">Define Variable and Fixed cost and prepare Marginal Cost Statement.Apply the basic concepts of Marginal Costing, Absorption Costing and CVP Analysis and identify Break Even Point	K4&K5
CO6	<ul style="list-style-type: none">Analyse the financial statements by using the tool of ratio analysis and interpret the ratios	K5&K6

BCA – III SEMESTER

Course Title: Allied Paper – FINANCIAL ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">Define the Meaning of various terminologies used in accounting.Explain accounting concepts and conventionsDistinguish Book-Keeping from AccountingRecord the Journal Entries, Prepare Ledger Accounts and Prepare Trail BalancePrepare single, double and triple column cash book	K1
CO2	<ul style="list-style-type: none">Prepare final accounts of a sole trading concern and also formulate trading a/c, profit and loss a/c and balance sheet of a business.	K2
CO3	<ul style="list-style-type: none">Identify, classify and rectify various errors in the process of recording business transactions.	K2&K 3
CO4	<ul style="list-style-type: none">Analyze and evaluate cash book and passbook and Prepare bank reconciliation statement.	K4
CO5	<ul style="list-style-type: none">Discuss the Need, Importance and Causes of DepreciationPrepare Asset Accounts by applying various methods of Depreciation.	K3
CO6	<ul style="list-style-type: none">Identify and apply single entry and double entry system of accounting according to the nature of business.	K3&K 5

BCA – IV SEMESTER

Course Title: Allied Paper – COST AND MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:



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CO1	<ul style="list-style-type: none"> List the basic concepts of cost accounting Prepare cost sheet and quotations Analyse the reasons for difference in the profits arrived by cost and financial accountant and prepare Reconciliation Statements 	K1&K3
CO2	<ul style="list-style-type: none"> Define the basic concepts of management accounting and appreciate the differences between cost accounting and Financial Accounting 	K2&K3
CO3	<ul style="list-style-type: none"> Prepare various functional budgets such as Production, Material Purchase, Material Consumption, Cash and Flexible Budget 	K3&K4
CO4	<ul style="list-style-type: none"> Analyse corporate financial statements using Common Size Statements, Comparative Statement and Trend Percentages 	
CO5	<ul style="list-style-type: none"> Define Variable and Fixed cost and prepare Marginal Cost Statement. Apply the basic concepts of Marginal Costing, Absorption Costing and CVP Analysis and identify Break Even Point 	K4&K5
CO6	<ul style="list-style-type: none"> Analyse the financial statements by using the tool of ratio analysis and interpret the ratios 	K5&K6



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B.COM (BANK MANAGEMENT)

PROGRAM SPECIFIC OUTCOMES

PS01	To guide and channelize the transformation process of every bank management graduate by providing in depth knowledge of banking and financial system
PS02	To ignite a passion for problem solving among students by fostering analytical and critical thinking
PS03	To impart ethics and a sense of social commitment and to make them strive towards personal victory and value creation to society
PS04	To create future managers in Banking and Financial sector
PS05	To create future entrepreneurs

SEMESTER I -CORE PAPER 1 PRINCIPLES OF FINANCIAL ACCOUNTING

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the accounting concepts and accounting conventions and prepare journals
CO2	Identifying the errors and rectifying it and to make them reconcile the Bank Pass Book and Cash Book
CO3	Understand and analyze the Average Due date and Account current
CO4	Make them prepare the final accounts of manufacturer and trader
CO5	Understand the concept of depreciation and calculate depreciation
CO6	Treatment of goodwill in partnership accounts and how to prepare account books while admitting partners

BUSINESS COMMUNICATION SEMESTER I – CORE PAPER 2

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the Principles and barriers of communication
CO2	Prepare various types Letters, Quotation etc
CO3	Understand the communication in Insurance sector
CO4	Understand the types of report in communication
CO5	Understand the various forms of communication
CO6	Analyse the impact of technology in business communication


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SEMESTER I
NON-MAJOR ELECTIVE - I

BASICS OF BANKING AND INSURANCE- PAPER I

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the various functions of commercial banks and the services provided.
CO2	Analyse the Banking Procedure and various types of relationships.
CO3	Examine the types of Crossing.
CO4	Classify the various rights of banker and aspects of Endorsement.
CO5	Categorise the various principles of Insurance
CO6	Understand the concept of subrogation and contribution

SEMESTER II – CORE
PAPER 3 ADVANCED
FINANCIAL ACCOUNTING

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Prepare the accounts for partnership firm when a partner retires
CO2	Prepare the accounts when the partnership firm is dissolved
CO3	Prepare the Departmental Trading Accounts
CO4	Prepare the Branch Accounts
CO5	Prepare the Hire Purchase Accounts
CO6	Prepare the Instalment Purchase Accounts

SEMESTER II – CORE
PAPER 4 THEORY OF MONEY
AND BANKING-

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the main elements of the money supply in India.
CO2	Functions of money and role of money in capitalistic and socialistic economic system
CO3	Apply both inflation and deflation in the areas of money and banking.
CO4	Understand the rationale behind nationalization of banks and also the impact of liberalization on banks
CO5	Understand the concept of bank account and how to deal with special types of customers
CO6	Express their view about the relationship between banker and customers and evaluate the effectiveness of such policies.



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SEMESTER II
NON- MAJOR ELECTIVE – II BASICS OF BANKING AND
INSURANCE- II

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Analyse the various aspects of ATM
CO2	Examine the procedures of Online Banking.
CO3	Understand the various aspects of Pass Book, Demonetization and Core Banking.
CO4	Classify the functions of RBI and its credit control.
CO5	Understand the concept of life assurance
CO6	Understand the concept of general assurance

SEMESTER III – CORE
PAPER 5CORPORATE
ACCOUNTING

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the Various Kinds of Shares and Debentures and also will Understand the Difference Between lien and Forfeiture of Shares and also Underwriting of shares
CO2	Calculate managerial remuneration and prepare company final accounts
CO3	Prepare final accounts of banks
CO4	Calculate profits prior to incorporation
CO5	Understand the concept of goodwill and calculate goodwill
CO6	Understand the concept of life insurance and prepare final accounts of insurance companies

SEMESTER III – CORE
PAPER 6LEGAL
SYSTEMS IN BUSINESS

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the concepts of contract and various types of offers and acceptances.
CO2	Understand the performance of contract and remedies for breach of contract
CO3	Understand the differences between sale and agreement to sell and between conditions and warranties
CO4	Understand the various types of companies
CO5	Understand the differences between Memorandum and Articles , Concept of Prospectus, Meetings, shares and debentures
CO6	Understand the functions of SEBI



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**SEMESTER III – CORE
PAPER 7 BANKING THEORY,
LAW AND PRACTICE**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the Role of Reserve Bank of India and its impact on the economic development.
CO2	Categorize the various functions performed by commercial banks and its various aspects.
CO3	Analyse the various types of deposits provided by commercial banks and understand the Concept of Banking Ombudsman and various solutions provided for Customer Grievances.
CO4	Classify the various types of Borrowings and the knowledge of Precautionary measures adopted on the disbursement of loan.
CO5	Examine the various types of Negotiable Instruments
CO6	Examine the role of paying banker and collecting banker

**SEMESTER III – CORE
PAPER 8 BUSINESS
MANAGEMENT**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the basic concepts of management and also will understand the importance of scientific management
CO2	Analyze the various steps and processes in planning and decision making.
CO3	Understand the organizational structure and will know the differences between authority and responsibility and departmentalization and decentralization.
CO4	Analyze the concept of directing ,motivation and various theories of motivation
CO5	Understand the concept of Leadership
CO6	Understand the concept of control and co-ordination



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**SEMESTER III – ALLIED
PAPER 3 COMPUTER
APPLICATIONS IN BUSINESS**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the Basic Concept of Tally and also will Understand its Features and Configuration.
CO2	Provide a Practical Knowledge Exposure to Accounting Vouchers in Tally
CO3	Provide a Practical Knowledge Exposure to Preparing Trial Balance, Profit and Loss A/c and Balance sheet in Tally.
CO4	Introduce the Students about SPSS.
CO5	Provide a Practical Knowledge Exposure to Measures of Central Tendency in SPSS.
CO6	Provide a practical knowledge to measures of Skewness in SPSS

**SEMESTER IV– CORE PAPER
9 ADVANCED CORPORATE
ACCOUNTING**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand about Price Level changes and also will Understand Social responsibility and Human Resource Accounting
CO2	Understand about reduction of share capital and internal reconstruction
CO3	Understand the concept of Amalgamation and Absorption
CO4	Understand the concept of External Reconstruction
CO5	Understand the concept of Holding Company and Subsidiary company
CO6	Understand the concept of liquidation and prepare liquidator's final statement

**SEMESTER IV – CORE PAPER 10
FINANCIAL SERVICES AND
BANCASSURANCE**

COURSE CODE:

CREDITS:4

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the basic concepts of financial services and economic services and also will understand the importance of players in financial services sector
CO2	Analyse the various types of underwriters and various steps and process in SEBI in public issue management and functions of merchant banking under the capital market
CO3	Understand the leasing and hire purchase and also features of leasing and factoring and also understand the differences between factoring and bills discounting
CO4	Analyse the concepts of credit rating, venture capital companies and consumer finance and also understand the different types of loans
CO5	Understand how banking institutions are selling life assurance and other insurance products and services
CO6	Understand the tools for integrating insurance and banking



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SEMESTER IV– CORE
PAPER 11 ENTREPRENEURIAL
DEVELOPMENT

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	Define basic terms in entrepreneurship
C02	Analyze the classification of entrepreneurs
C03	Develop successful business ideas
C04	Prepare a project report after analyzing their feasibility
C05	Understand the concept of business planning
C06	Understand the role of entrepreneur in economic growth

SEMESTER IV– CORE
PAPER 12 MARKETING OF
BANKING SERVICES

COURSE OUTCOMES:

At the end of the course, the student will be able to


C01	Understand the basic marketing concepts that are applied in the banking industry.
C02	Understand the competition and develop bank marketing strategies
C03	Analyses the need of the customers and the factors affecting consumer behavior
C04	Develop a product design according to the market segmentation.
C05	Understand the concept of marketing research and the process involved in it
C06	Understand the concept of situation analysis

SEMESTER IV- ALLIED
PAPER 4BUSINESS
ECONOMICS

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	To understand the basic concepts of economics
C02	To create awareness about the concept of cost and profit
C03	To understand the concept of demand elasticity of demand and demand forecasting
C04	To understand the Law of supply and Law of Diminishing Marginal Utility
C05	To understand the concept of production and law of returns to scale
C06	To understand the concept of pricing in different markets.


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**SEMESTER V- CORE PAPER
13 COST AND MANAGEMENT
ACCOUNTING**

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	To understand the concept of cost, cost sheet, tender , quotation and labour
C02	To calculate the cost of material and understand the concept of inventory control
C03	To understand the concept of overheads
C04	To prepare common size and comparative financial statements
C05	To understand the concept of marginal costing
C06	To analyse and prepare budgets and cash flow statements

**SEMESTER V- CORE
PAPER-14 INVESTMENT
MANAGEMENT**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the basic concepts of investment and speculation
CO2	Analyse the various investment avenues under the investment schemes
CO3	Understand the SEBI guidelines on primary and secondary market and procedure for buying and selling of shares
CO4	Analyse the economic, industry and company aspects and also will understand the features of credit rating like CRISIL, CARE and ICRA.
CO5	Understand the technical analysis under the investment
CO6	Understand the concept of portfolio management

**SEMESTER V – CORE
PAPER 15
INDIRECT**

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	Understand the basic concepts about direct and indirect taxes.
C02	Identify the factors of levy of customs duty and analyze the drawbacks of warehousing
C03	Understand the concept and significance of goods and service tax in India and benefits to the economy.
C04	Analyze the functions performed by goods and services tax network and e-way bill compliance
C05	Evaluate the challenges faced by Government after implementation of GST and mechanism of IGST
C06	Understand the concept of input tax credit



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SEMESTER V–
ELECTIVE 1 INCOME TAX
LAW AND PRACTICE -I

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Understand the meaning of important terms used in income tax
CO2	Understand the concept of Income from salary
CO3	Understand the concept of Income from House Property
CO4	Understand the concept of Income from Business or Profession
CO5	Understand allowable deductions and provisions from depreciation
CO6	Understand the concept of TDS and will also learn how to file return

RURAL
BANKING SEMESTER V –
OPEN ELECTIVE 1

COURSE OUTCOMES:

At the end of the course, the student will be able to

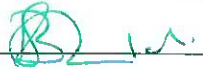
CO1	To understand the concept of rural banking
CO2	To have awareness about the latest welfare schemes
CO3	To learn about the various institutional sources of finance
CO4	To understand the concept of credit planning
CO5	To understand the lead bank scheme
CO6	To learn about the institutions reporting rural development.

SEMESTER V – OPEN
ELECTIVE 2
CONSUMER
AFFAIRS

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	To understand the concept of consumer
C02	To understand the nature of markets particularly Indian market
C03	To understand the consumer protection law in India
C04	To have a thorough understanding of the Grievance Redressal Mechanism
C05	To elaborate the role of Industry regulators in consumer protection
CO6	To know about the consumer movement in India


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**SEMESTER VI – CORE
PAPER 16
PRACTICAL
AUDITING**

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	To understand the meaning of auditing, scope and classification of audit
C02	To understand the concept of audit planning Programme and working papers
C03	To understand the differences between vouching verification & valuation
C04	To understand the recent trends in auditing
C05	To understand the concept of appointment, removal, qualification & disqualification of auditors
C06	To understand the concept of Information System Audit.

**SEMESTER VI– CORE PAPER 17
HUMAN RESOURCE MANAGEMENT**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Appreciate the importance of human resource management as a field of study and as central management function
CO2	Understand the implication of human resource management and qualities of human resource managers
CO3	Know the elements of the HR function recruitment, selection, training and development and are familiar with each elements key concept.
CO4	Understand the methods of performance appraisal system, promotion and transfer
CO5	Apply the principles and techniques of job analysis and measuring the quality of work life of an employees
CO6	Analyse the quality of work life and evaluate the measures taken to overcome the obstacles.


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**SEMESTER VI – CORE
PAPER 18 FINANCIAL
MANAGEMENT**

COURSE OUTCOMES:

At the end of the course, the student will be able to

C01	To understand the meaning and sources of finance
C02	To understand the capital structure planning theories
C03	To work problems pertaining to capital techniques
C04	To understand the cost of capital concepts
C05	To have a basic understanding of dividend policies and the factors affecting it
C06	To analyse the factors influencing working capital and how to forecast it.

SEMESTER 6 – CORE PAPER 19

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Define the term of contemporary banking developments and explain the importance of ATM, Mobile banking, Plastic cash, WAN, LAN, VSAT.
CO2	Understand the importance of document storage and retrieval systems in digital signature system
CO3	Understand Electronic clearing system
CO4	Understand the impact of technology
CO5	Understand cyber laws
CO6	Understand Prevention of Money Laundering act

**SEMESTER VI –
ELECTIVE 2
INCOME TAX LAW AND PRACTICE – II**

COURSE OUTCOMES:

At the end of the course, the student will be able to

CO1	Calculate Income from Capital gains
CO2	Calculate Income from Other Sources
CO3	Club various sources of income
CO4	Set-off and carry forward of losses
CO5	Understand Permissible Deductions from Gross Total Income
CO6	Assess Firm's Tax Liability


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12. DEPARTMENT OF COMMERCE (HONOURS)

PROGRAMME SPECIFIC OUTCOME (PSO)

1. Student can able to possess comprehensive professional knowledge in the area of Accounting, Marketing, Taxation and Management.
2. Students can be an Acumen (Quick Decision Maker).
3. Students can be able to possess skills which are required for employment in Government and Non Government Organization.
4. Enable the students to equip characteristics such as professional skills facing up of challenges, creativity and ethical values.
5. Students will have ability to work in team with team spirit.
6. Students will possess good communication skill and also have aptitude to convince others.
7. Enable the students to initiate start up programme.
8. Students will be able to prove proficiency with the ability to engage as professionals like CA, CMA, CS and other courses.
9. Sensitize the students in the area of research.
10. Able to apply professional competence by acquiring knowledge as per industry requirements.

Semester	I
Subject	FINANCIAL ACCOUNTING – I


Course Outcome

CO1	Students can able to prepare financial statements of sole trading concern and Non Profit Organization in accordance with appropriate manner.	K3
CO2	Students can compute the value of depreciation under different methods and compare the same.	K5
CO3	Students can able to ascertain the profit and loss of a business (when it doesn't have complete accounting data).	K5
CO4	Students can assess the amount of claim to be made to the insurance company on the occurrence of fire.	K5

Semester	I
Subject	FINANCIAL ANALYTICS & CONTROL [CMA1A]

Course Outcome

CO1	Students will be able to define cost behaviour and types of costs	K1
CO2	Students will be able to classify costing systems and compare different types of costs.	K2&K4
CO3	Students will be able to solve problems in supply chain management	K3
CO4	Students will be able to conclude and criticise on the basis of internal auditing	K5
CO5	Students will be able to develop and create a business continuity plan	K6
CO6	Students will be able to understand information systems and data control	K2
CO7	Students will be able to understand data analytics and visualization	K2


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Semester	I
Subject	MODERN BANKING

Course Outcome

CO1	Students can able to apply the knowledge of banking in practical life.	K3
CO2	Students can able to identify the various sources of lending and also know the procedure to apply for it.	K3
CO3	Students can able to measure the credit control techniques used by RBI.	K5
CO4	Students can able to know how to utilize the various types of Negotiable instruments.	K3
CO5	Students can able to lodge grievances and also know the proceedings of it.	K3 & K6
CO6	Students can able to select and apply appropriate E-banking techniques based on the nature of transactions.	K5

Semester	I
Subject	BUSINESS ECONOMICS

Course Outcome

CO1	Students can able to explain basic economic philosophies relating wealth, welfare, scarcity and growth developed by various economists.	K2
CO2	Students can able to analyze how households (Demand) and business (Supply) interact in various market structure to determine price and quantity of good produced.	K4
CO3	Students can able to apply the utility analysis in practical situations.	K3
CO4	Students can able to analyze the impact of cost in production.	K4
CO5	Students can able to determine the price and output level to maximize profit under different competitive market structure.	K5

Semester	I
Subject	CORPORATE COMMUNICATION

Course Outcome

CO1	Students can able to know how to overcome the barriers while communicating	K2
CO2	Students can able to utilize modern tools of communication.	K3
CO3	Students can able to draft letters for the business correspondence.	K5
CO4	Students can able to present themselves appropriately in a public domain.	K3

Semester	I
Subject	INTERNSHIP

Course Outcome

CO1	Students can explore career alternatives prior to graduation
CO2	Students can assess interest & ability in their field of study
CO3	Students can able to develop work habits and attitudes necessary for job success
CO4	Students can acquire employment contacts which leads directly to a full time job post graduation from college.



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CO5	Students can able to apply their theoretical knowledge in practical.
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Semester	II
Subject	FINANCIAL ACCOUNTING – II

Course Outcomes

CO1	Able to assess the amount of interest to be paid while purchase made on Hire purchase system and Instalment.	K4
CO2	Able to prepare different Branch account for different types of branches.	K6
CO3	Able to reconstitute the Books of accounts during Admission, Retirement, Death of a Partnership Firm.	K5
CO4	Knowing the procedures that students can able to make the settlement to the external and internal liability as per the Indian Partnership Act, 1932.	K2

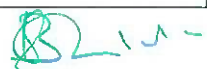
Semester	II
Subject	FINANCIAL PLANNING & PERFORMANCE [CMA1B]

CO1	Students will be able to understand strategic planning and budgeting and recall the models of strategic planning with the process	K2
CO2	Students will be able to classify forecasting techniques and demonstrate the budget	K2 &K3
CO3	Students will be able to make use of budget to prepare an annual profit plan	K3 &K6
CO4	Students will be able to analyze performance by using flexible budgets and compare actual results to planned results	K4
CO5	Students will be able to explain the importance and use of standard cost systems	K2
CO6	Students will be able to propose performance measures and discuss key performance indicators	K3 &K6

Semester	II
Subject	PRINCIPLES OF MANAGEMENT

Course Outcome

CO1	Students can discuss and communicate the evolution and philosophies of management.	K2
CO2	Students can able to practice the process of core management functions viz planning, Organizing, leading, controlling etc.,	K3
CO3	Students can able to use the motivational theories in their business to evoke the best performance of the employees.	K3
CO4	Students can evaluate the various leadership styles & adopt the best one in their business at different situation.	K5


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CO5	Students can outline the latest management techniques which help them to select and apply best technique to manage their business effectively and efficiently.	K2/K5
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Semester	II
Subject	BUSINESS POLICY & ENVIRONMENT

Course Outcomes

CO1	Students can able to apply the knowledge of business policy, and also enable them to understand the importance of looking at the organization as a unified whole.	K3
CO2	Students can able to forecast the environment which affects the future trends of the business.	K3/K4
CO3	Students can able to discuss and define the factors that shape the SWOT analysis of a firm and develop an environment appraisal that will lead to formulation of strategic plans.	K2/K6
CO4	Students can able to give Managerial Response to Changes in the External Business Environment.	K5
CO5	Students can able to apply ethical principles to commit professional ethics and responsibilities in accordance with the norms of business policies.	K3
CO6	Students can able to suggest the management to utilize the driving forces optimally to enter into foreign country to expand the business.	K5

Semester	II
Subject	CUSTOMER RELATIONSHIP MANAGEMENT


Course Outcomes

CO1	An outline and revision on concepts regarding CRM.	K1
CO2	Students can segment their customers and also maintain long-term relationship with their customers by using success chain formula.	K5
CO3	Students can plan to build loyalty among the customers through best campaigning methods.	K4
CO4	Students can design and implement fair reward system in their business.	K6
CO5	Integrate and implement various technology utilized for the development of CRM.	K4

Semester	II
Subject	INTERNSHIP

Course Outcomes

CO1	Students can explore career alternatives prior to graduation
CO2	Students can assess interest & ability in their field of study
CO3	Students can able to develop work habits and attitudes necessary for job success
CO4	Students can acquire employment contacts which leads directly to a full time job post


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	graduation from college.
CO5	Students can able to apply their theoretical knowledge in practical.


SEMESTER	III
SUBJECT	BUSINESS MATHEMATICS

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Restate the set notation, elementary set theory. explain the connection between set operations and logic. Classify the different types of functions and properties of injections, surjections, bijections, compositions and inverse functions. Categorize the different types of relations. 	K1, K2, K4
CO2	<ul style="list-style-type: none"> Demonstrate and solve certain real time business problems using ratios, proportion, variations, permutations and combinations. 	K3
CO3	<ul style="list-style-type: none"> Explain the different types of series such as Binomial series, exponential series and logarithmic series and illustrate with examples. Distinguish and solve the arithmetic progression, Geometric progression and Harmonic progression. 	K3, K4
CO4	<ul style="list-style-type: none"> Point out the derivative of an algebraic, exponential and logarithmic function using the addition rule, product rule, quotient rule and chain rule. Point out the applications of differentiation to business situations. Identify the extrema of a function and classify them as minima and maxima 	K1, K4
CO5	<ul style="list-style-type: none"> Explain the meaning of simple interest, compound interest and annuity through secondary data. Restate the matrix and explain the different types of matrices using examples. Solve the system of linear and equations by matrix method. 	K1, K3

SEMESTER	III
SUBJECT	FINANCIAL REPORTING [CMA1C]

CO1	Students will be able to understand the line items of financial statements and prepare financial statements according to US GAAP and IFRS.	K2 & K3
CO2	Students will be able to apply the accounting standards in measuring assets	K3
CO3	Students will be able to apply the accounting standards in measuring liabilities	K3
CO4	Students will be able to develop conceptual understanding on equity transactions	K3 & K6


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CO5	Students will be able to develop conceptual understanding on revenue recognition principles	K3 & K6
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Semester	III
Subject	STRATEGIC FINANCIAL MANAGEMENT I [CMA 2A]

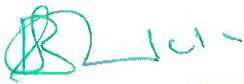
Course Outcomes

CO1	Students will be able to understand a Common size financial statement and recall and relate the financial ratios	K1& K2
CO2	Students will be able to identify the relationship between risk and return and utilize the knowledge of long term financial management.	K2
CO3	Students will be able to examine financial markets and regulations and analyse working capital management	K4
CO4	Students will be able to explain mergers and acquisitions, bankruptcy, and corporate restructuring	K2

Semester	III
Subject	BUSINESS LAW

Course Outcomes

CO1	Students can able to identify essential elements required for a valid contract.	K3
CO2	Students can able to discuss about the capacity of parties to entering a contract.	K2
CO3	Students can able to explain the various modes involved in discharging of contract.	K2
CO4	Students can able to explain the relationship between principal and agent relating to agency contract, use information technology for entering into a contract.	K2& K3
CO5	Students can able to differentiate the sale from the hire purchase & instalment sale, identify and explain condition and warranty relating to sale of goods.	K4


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Semester	III
Subject	E – ACCOUNTING

Course Outcomes

CO1	Students can outline the latest management techniques which helps them to select and apply best technique to manage their business effectively and efficiently.	K1
CO2	Students can able to make journals in proper heads & ledgers in proper group. They also can create and alter group as per organizations requirements.	K6
CO3	Students can able to make vouchers and prepare financial statements of an organization by using accounting software.	K6
CO4	Students can reconcile bank statement with cash book and rectify the errors if any.	K6
CO5	Students can able to prepare stock report using accounting software.	K6
CO6	Students can able to calculate professional tax as per slab deductions and payment procedures.	K6
CO7	Students can able to create employee database.	K6
CO8	Students can able to design bill at the time of sale.	K6

Semester	III
Subject	GREEN BUSINESS

CO1	Students will be able to discuss the concept of green business, and also able to justify the importance of Environment audit of the business.	K2
CO2	Students will be able to apply sustainability approach in the business environment and also able to evaluate the negative impact of business on ecology and environment-health and safety issues.	K3
CO3	Students will be able to apply CSR compliance for business	K3
CO4	Students will be able to use the eco friendly method effectively to design environmentally sustainable products & services.	K3&K4


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C05	Students will be able to plan and execute the green business strategies effectively and also to evaluate the challenges and opportunities of green business.	K6
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Course Outcomes INTERNSHIP

CO1	Students can explore career alternatives prior to graduation
CO2	Students can assess interest & ability in their field of study
CO3	Students can able to develop work habits and attitudes necessary for job success
CO4	Students can acquire employment contacts which leads directly to a full time job post graduation from college.
CO5	Students can able to apply their theoretical knowledge in practical.

BUSINESS STATISTICS & OPERATIONS RESEARCH

Course Outcomes: At the end of the Course, the Student will be able to

CO1	<ul style="list-style-type: none"> Identify the strength and direction of a linear relationship between two variables by using correlation and regression analysis Solve real time problems based on primary and secondary data. 	K1, K3
CO2	<ul style="list-style-type: none"> Explain the meaning of the terms namely hypothesis, Null & Alternative hypothesis, Type I and Type II error, one tail test, two tail test, level of significance, Number of degrees of freedom, accept region, reject region, small sample, large sample, non-parametric test. Summarize the logic and framework of the inference of hypothesis testing. Solve problems on large sample test for a specified mean, test for equality of two means, test for a single proportion and test for equality of two proportions. 	K2, K3
CO3	<ul style="list-style-type: none"> Demonstrate the various types of small samples tests viz. t test, F test, Chi square test and analysis of variance with given illustrations. 	K2, K3
CO4	<ul style="list-style-type: none"> Identify and explain the mathematical background of LPP to develop operational research models from the verbal description to the real system. Explain basic concepts of optimization, modelling and linear modeling. Distinguish the feasible solution, optimal solution and basic feasible solution. Formulate a given simplified description of a suitable real-world problem as a linear programming model in general, standard and canonical forms. Solve a two-dimensional linear programming problem graphically. Explain the theory of Simplex Algorithm and approach. Use the Simplex method to solve linear programming models for 2 decision variables and 3 decision variables. 	K1,K2,K3,K4
CO5	<ul style="list-style-type: none"> Identify the special features of the transportation balanced and unbalanced problems for minimization and maximization cases. Demonstrating the optimal solution by Modified Distribution (MODI) 	K1,K2,K3,K4



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	<p>Method.</p> <ul style="list-style-type: none"> Point out the importance of degeneracy situations in transportation model. Restate the Assignment mathematical model. Explain the theory of assignment problem and Uses Hungarian method for solving assignment problem. Distinguish between a transportation and an assignment problem with suitable examples. 	
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Semester	IV
Subject	STRATEGIC FINANCIAL MANAGEMENT II [CMA 2B]


Course Outcome

CO1	Students will be able to define marginal, sunk and opportunity costs and recall cost volume profit analysis.	K1
CO2	Students will be able to demonstrate understanding of pricing methodologies	K3
CO3	Students will be able to demonstrate understanding of enterprise risk management	K3
CO4	Students will be able to identify a system of investment decision and develop stages of capital budgeting	K2
CO5	Students will be able to understand the importance of ethics for management accounting and financial management professionals	K2

Semester	IV
Subject	HUMAN RESOURCE MANAGEMENT

Course Outcome

CO1	Students can able to analyze the role of human resources in supporting organizational strategy.	K4
CO2	Students can able to design best recruitment and selection policy to achieve the organizational goal.	K6
CO3	Students can able to evaluate the performance of human resources in the context of organizational strategy.	K5
CO4	Students can able to articulate method for human resources to participate in organizational planning and implementation.	K6
CO5	Students can able to evaluate the various training and development programme followed by the corporate and also able to select the best program / design a new program for their business.	K5 / K6
CO6	Students can able to create a system that comply with the provisions of union and state employment laws for the management of labour relations.	K6
CO7	Students can apply their innovative skills towards the key functional areas of human resources.	K3


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Semester	IV
Subject	COMPANY LAW

Course Outcomes

CO1	Students can able to list out the various documents required for the commencement of the business.	K3
CO2	Students can able to design the essential documents – MOA, AOA, Prospectus as per the provisions of Companies Act, 2013.	K6
CO3	Students can able to discuss legal provisions relating to raising up of capital, membership and meetings of a company.	K3
CO4	Students can able to explain various modes of winding up and also the significance of company law tribunals towards winding up.	K2

Semester	IV
Subject	FINANCIAL SERVICES


Course Outcomes

CO1	Students can able to apply the knowledge of financial services in day to day's life.	K3
CO2	Students can able to analyze and investigate the contemporary issues pertaining to debit and credit cards usage.	K5
CO3	Students can able to locate various types of consumer finances and also know how to use it effectively.	K3
CO4	Students can able to use effectively the factoring concept in the business.	K3
CO5	Students can able to compare and contrast the various schemes of mutual funds.	K5
CO6	Students can able to plan for better portfolio management.	K6

Semester	IV
Subject	INDIRECT TAXATION

Course Outcome

CO1	Students can able to suggest various documents requires for GST registration.	K4
CO2	Students can able to identify the different types of supply relating to GST.	K4
CO3	Students can able to advice the assessee regarding the essential documents to be maintained by them.	K5


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CO4	Students can able to calculate the GST payable and also able to set off input tax credit.	K3
CO5	Students can able to file GST returns.	K6
CO6	Students can able ascertain the duty payable under customs act by understanding the provisions of such act.	K4
Semester	IV	
Subject	INTERNSHIP	

Course Outcomes

CO1	Students can explore career alternatives prior to graduation
CO2	Students can assess interest & ability in their field of study
CO3	Students can able to develop work habits and attitudes necessary for job success
CO4	Students can acquire employment contacts which leads directly to a full time job post graduation from college.
CO5	Students can able to apply their theoretical knowledge in practical.

Semester	V
Subject	COST ACCOUNTING


Course Outcomes

CO1	Students can able to discuss the concepts on costing.	K2
CO2	Students can able to fix the selling price by preparing a cost sheet and also be able to quote the best possible price for the tender.	K6
CO3	Students can able to ascertain different inventory level and also to prepare stock ledger.	K3& K4
CO4	Students can able to apply most feasible labour payment policy in their business.	K3
CO5	Students can able to determine overhead cost for the various departments.	K3& K4

Semester	V
Subject	DIRECT TAXATION – I

Course Outcomes

CO1	Students can able to determine the Individual's (Person's) residential status and also able to calculate the taxable income for different types of resident	K4
CO2	Students can able to identify the taxable and exempted incomes.	K2
CO3	Students can able to calculate Income from salary, house property, Business & Profession with respective deductions.	K5


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CO4	Students can analyze and determine the best possible way of showing self occupied& let out house property.	K4
CO5	Students can able to outline the powers of assessing officer and central board of direct taxes.	K1

Semester	V
Subject	CORPORATE ETHICS & GOVERNANCE

COURSE OUTCOME

CO1	Students can able to compare the importance of ethical behaviour with role of business ethics	K5
CO2	Students can able to differentiate between Morals & Ethics	K2
CO3	Students can able to summarize recent corporate scandals /scams and the regulatory body reaction	K1
CO4	Students can able to identify the key players in corporate governance and their responsibilities	K4
CO5	Students can able to identify the significance of other drivers in corporate governance such as capital market, SEBI, shareholders, Accountant, Auditors	K4

Semester	V
Subject	ENTREPRENEURIAL DEVELOPMENT

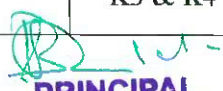
Course Outcome

CO1	Students can able to Discuss and explain the concept of entrepreneurship and its classification.	K1 /K2
CO2	Students can able to Identify and understand the problems faced by women entrepreneurs. Suggest various remedial measures through micro financing.	K2/ K3
CO3	Students can able to prepare a business plan.	K6
CO4&5	Students can able to Compare and utilize the services rendered by various institutions like IDBI, IFCI, IIBI, SIPCOT etc.	K4/ K5

Semester	V
Subject	RESEARCH METHODOLOGY

Course Outcome

CO1	Students can able to apply the knowledge of research in various/different fields.	K3
CO2	Students can able to formulate hypothesis for the identified research problem and select the most appropriate sampling technique.	K3 & K4


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CO3	Students can able to adopt different styles for research data collection.	K3
CO4	Students can able to use the appropriate statistical tool for analyzing the data.	K3 & K4
CO5	Students can able to draft a research report based on the outcome of the research.	K6

Semester	V
Subject	STRATEGIC PLANNING & MANAGEMENT


Course Outcomes

CO1	Student can able to understand the strategic decisions that organisations make and have an ability to engage in strategic planning.	K2
CO2	Student can able to explain the importance of implementation of corporate policy	K2 & K3
CO3	Student can able to analyze and evaluate critically real life company situations and develop creative solutions, using a strategic management perspective.	K5
CO4	Student can able to integrate and apply knowledge gained in basic courses to the formulation and implementation of strategy from holistic and multi-functional perspectives.	K2 & K3
CO5	Student can able to evaluate the strategic performance with the target or bench marking performance.	K5

Semester	V
Subject	LOGISTICS & SUPPLY CHAIN MANAGEMENT

Course Outcomes

CO1	Students can analyze and improve supply chain process in their business	K4
CO2	Students can critically examine the role of logistics as it relevance to transportation and warehouse.	K5
CO3	Students can able to apply knowledge to evaluate and manage supply chain.	K5
CO4	Students can identify and analyze the competitive advantage of logistic management.	K2 & K4
CO5	Students can able to align the management of supply chain with corporate goal and strategy.	K3


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Semester	V
Subject	INTERNSHIP

Course Outcomes

CO1	Students can explore career alternatives prior to graduation
CO2	Students can assess interest & ability in their field of study
CO3	Students can able to develop work habits and attitudes necessary for job success
CO4	Students can acquire employment contacts which leads directly to a full time job post graduation from college.
CO5	Students can able to apply their theoretical knowledge in practical.

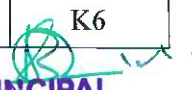
Semester	VI
Subject	PRACTICAL AUDITING

Course Outcomes

CO1	Students can able to prepare audit plan, strategy and program for their audit work.	K3
CO2	Students can able to apply their knowledge towards maintenance of audit note book, audit working paper, Audit file etc.	K3
CO3	Students can able to evaluate the significance of internal control system in audit.	K5
CO4	Students can able to analyze the reliability of audit result when the audit evidence are acquired through sampling technique.	K4
CO5	Students can able to examine the process of maintaining the books of accounts of a company.	K5

Semester	VI
Subject	DIRECT TAXATION - II

CO1	Students can able to calculate the short & long term capital gains and income from other sources by considering the relevant deductions.	K3
CO2	Students will be able to compile all 5 heads of income and set off the losses.	K6


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	Also able to club the income of family members as per income tax act 1961	
CO3	Students can able to assess the net tax liability to be payable by an assessee (Individual)	K5
CO4	Students can able to demonstrate and follow the assessment procedure while filling returns	K2
CO5	Students can communicate about various types of filing returns & their due dates	K2

Semester	VI	
Subject	INTERNATIONAL TRADE	
CO1	Students can able to Compare and contrast various International Trade related theories.	K4
CO2	Students can able to Understanding the concepts of BOT& BOP in order to correct the disequilibrium caused when formulating the fixed and floating exchange rates.	K2
CO3	Students can able to Prepare and compute necessary export documentation and its procedures.	K6
CO4	Students can able to Discussing the different IEO and its functions.	K2
CO5	Students can able to Evaluate critically the position of WTO, TRIPS and TRIMS in the functioning of Indian Patent Laws.	K5

Semester	VI	
Subject	MARKETING	
Course Outcome		
CO1	Students can able to apply modern and trending marketing mix in their business.	K3
CO2	Students can able to analyse the target market and classify them based on branding, packing and labelling & design the pricing strategies in order to promote the product using destructive promotion mix.	K4 & K6
CO3	Students can able to formulate the efficient distribution channels to reach the ultimate customers effectively.	K5& K6
CO4	Students can able to explain the nature and scope of service marketing and also to differentiate between the product marketing and service marketing	K2
CO5	Students can able to introduce / create a specialized services in banking/ financial/ Hospitals/ Insurance/ Tourism.	K6

Semester	VI	
Subject	ORGANIZATIONAL BEHAVIOUR	
Course Outcome		
CO1	Students can able to describe the concept of organizational behaviour and discuss its relevance to the workplace	K1 / K2
CO2	Students can able to make psycho analysis on individual's perception, attributions and attitude.	K4

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CO3	Students can able to cultivate and integrate group decision making with proper communication process.	K3 / K6
CO4	Students can able to discuss strategies for managing conflict and negotiation in the workplace	K2
CO5	Students can able to explain the importance of managing stress and emotions in the workplace	K2

Semester	VI
Subject	INSURANCE & RISK MANAGEMENT


Course Outcome

CO1	Students can able to identify various risk faced by the business and also know how to manage it.	K1 / K2
CO2	Students can able to explain the concept of insurance and various principles pertaining to it.	K2
CO3	Students can analyze the role of actuaries in risk management.	K4
CO4	Students can explain the concept of life and general insurance	K2
CO5	Students can analyze various policies under life and general insurance	K4

Semester	VI
Subject	PROJECT WORK

COURSE OUTCOME

CO1	Students can able to analyse the practical applications of theoretical models in commerce, economics, business administration etc.	K4
CO2	Students can able to differentiate clearly about qualitative & quantitative methods of research while drafting research report	K4& K5
CO3	Students can able to acquire the skills of writing bibliography of research citing reference from various sources.	K3
CO4	This course develops logical reasoning skill & confidence among the students while answering any question on their topic.	K6
CO5	Students can able to use statistical technique for a real world problem to bring solution for it.	K3


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B.COM (ACCOUNTING & FINANCE)

PROGRAM SPECIFIC OUTCOMES

PSO1	To develop the intellect, executive personality and management skills of the students through appropriate integration of commerce, business and general education.
PSO2	To develop an understanding about the economic and financial background of our country
PSO3	To provide necessary knowledge, skills and competence to identify and comprehend various problems & empower them to develop viable alternatives to effectively make business decisions through analytical and reflective thinking.
PSO4	Be abreast with the latest policies and practices in the areas of business & banking laws, accounting standards, taxation laws and gain knowledge on the operational aspects of a business.
PSO5	Learn about the business entities, ease of doing business in India, financial products and services and ability to start entrepreneurial activities.

SEMESTER I

Course Title: CORE I – FINANCIAL ACCOUNTING - I

Course Outcomes: At the end of the course, the student will be able to:

CO1	Recall the principles, concepts and conventions of accounting. (K1)
CO2	Identify the reasons for the preparation of bank reconciliation statement and its application. Develop the knowledge about various accounting errors disclosed and not disclosed by the trial balance and the process of rectification (K1,K2, K3)
CO3	Prepare final accounts of a sole trader's concern and a non-profit organization. (K3)
CO4	Build knowledge regarding meaning, causes and various methods of depreciation and its accounting procedure. (K3)


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CO5	Understand the meaning, purpose and computation of average due date and the preparation of account current. (K2, K3)
CO6	Articulate the concept of fire insurance and apply them in the computation of claims under different circumstances. (K2,K3)
CO7	Create ledger, voucher entry, generate Profit and Loss and Balance Sheet computerized accounting software in addition to calculating GST, TDS and Security of data (K3)



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Course Title: CORE II: ECONOMICS FOR FINANCE

Course Outcomes: At the end of the course, the student will be able to:

CO1	Articulate the concept of National Income and Identify the challenges in National Income computation.(K2)
CO2	Examine the functional framework and various instruments of fiscal policy and application of fiscal policy tools. Understand the role of government in an economic system(K2)
CO3	Define money and describe the different determinants of money demand and supply (K1,K2,K3)
CO4	Define monetary policy and its objectives. Elucidate different components of monetary policy framework and explain the operating procedures and instruments of monetary policy (K1,K2)
CO5	Understand the concept of exchange rate, analyze the difference between nominal and real exchange rate and describe the impact of exchange rate fluctuation on domestic economy (K2,K4)

Course Title: ALLIED I - BUSINESS MATHEMATICS - I

Course Outcomes: At the end of the course, the student will be able to:

CO1	Restate the definition of sets. Differentiate the elements and sets. Demonstrate relation and functions of sets.
CO2	Define the term ratio. Demonstrate the importance of proportions. Solve the problems on ratios, proportion and variance.
CO3	Distinguish between permutation and combination. Solve the problems on binomial theorem. Summarize the concepts of exponential and logarithmic series.
CO4	Define the term interest. Explain the difference between Simple interest and Compound interest. Calculate the future and present values of Annuities. Point out the important term of banker's discount.
CO5	Distinguish between H.C.F & L.C.M of numbers. Demonstrate the importance of Average and Percentage. Solve real-life problems based on time & work.



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**Course Title: NME PAPER I: INTRODUCTION TO SUPPLY
CHAINMANAGEMENT**

Course Outcomes: At the end of the course, the student will be able to:


CO1	Outline the key concepts relating supply chain management and logisticsmanagement(K1, K2)
CO2	Identify the main drivers of supply chain performance and explain their role in supply chain (K2)
CO3	Recommend the best mode of transportation under various situation and determine the various factors affecting transportation (K2, K5)
CO4	Explain the role of warehouse and the various types of warehouses (K2)
CO5	Determine the importance of material handling and list out the various tools and equipment used for material handling (K1, K2)
CO6	Summarize the role of information technology in SCM (K2)

SEMESTER II

Course Title: CORE III - FINANCIAL ACCOUNTING - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Articulate the need for preparing branch accounts and prepare books of accounts at both cost and invoice price. (K2,K3)
CO2	Explain the concept of hire purchase system and instalment system, default and repossession, and its accounting treatment in the books of both parties. (K2,K3)
CO3	Cite the concept of departmentalization and articulate its accounting process by allocating and apportioning various expenses on a suitable basis. (K2,K3)
CO4	Understand the concept of Investment Account and the accounting procedure for recording the investment transactions. (K2)
CO5	Understand the concept of partnership in business and prepare accounting books for dissolution of partnership, and insolvency by the Application of Garner Vs Murray's rule and Piecemeal Distribution(K2, K3)
CO6	Explain the concept of lease accounting and royalty and prepare the books of accounts for lessee and lessor (K2, K3)


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**Course Title: CORE IV- MANAGEMENT
CONCEPTS & ORGANIZATIONAL
BEHAVIOUR**

Course Outcomes: At the end of the course, the student will be able to:

CO1	Define the skills that a manager is expected to possess (K2)
CO2	Restate the essentials of planning in management and sketching the organizational structure adopted in any organization (K2)
CO3	Analyze the role of recruitment, selection and training and articulate the managerial aspects of controlling and coordinating (K2, K3, K4)
CO4	Analyze the organizational and individual behaviour (K3, K4)
CO5	Understand & evaluate the importance of leadership skills and motivational needs (K2, K4, K5)

Mapping of Course Outcomes to Program Outcomes:

Course Title: ALLIED II – BUSINESS MATHEMATICS - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Restate the definition of plane analytical geometry. Demonstrate the Cartesian co-ordinate system. Demonstrate gradient of straight line.
CO2	Distinguish between arithmetic mean and geometric mean. Solve the problem on arithmetic mean and harmonic mean.
CO3	Define the term interpolation. Explain the concept of binomial method. Judge and classify the concepts of Newton and Lagrange interpolation method).
CO4	Define the term matrix. Point out the important term of matrix inversion, solution to linear equation.
CO5	Understand the difference between rational and irrational numbers and perform operations with Surds and Indices. Calculate the profit and loss of a real-life problem. Find the ratio between two or more ingredients at their respective prices



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Course Title: NME II - E-COMMERCE

Course Outcomes: At the end of the course, the student will be able to:

CO1	Develop an in-depth knowledge about the concept of E-Commerce and spell out the benefits and limitations of the same. (K1)
CO2	Distinguish traditional Commerce and E- Commerce and determine the resources required for successful implementation of E-Commerce (K1, K2)
CO3	Make use of various E-Commerce applications like E-Marketing, E-Shopping, E-Advertising, etc. (K1, K2, K3)
CO4	Assume the role played by Electronic Data Inter-change in the modern world (K1)
CO5	Maximize the usage of electronic payment systems like payment using credit cards, debit cards, electronic purses etc. (K1,K2)
CO6	Identify and make use of E-Marketing techniques (K1, K2, K3)

SEMESTER III

Course Title: CORE V - CORPORATE ACCOUNTING – I

Course Outcomes: At the end of the course, the student will be able to:

CO1	Get an insight on the Accounting Standards and International Financial Reporting Standards (IFRS). Determine the Profit earned prior to incorporation (K2)
CO2	Understand the accounting procedures relating to issue and underwriting of shares and debentures (K2, K3, K4)
CO3	Determine the accounting procedures for redemption of preference shares and debentures (K2,K3)
CO4	Develop knowledge about corporate accounting practices in conformity with the provisions of the Companies Act, 2013 and the latest amendments. Apply Revised Schedule VI formats in preparation of company final accounts(K1,K2,K3)
CO5	Understand the need for valuation of goodwill and shares and their valuation procedures (K2, K3)



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Course Title: CORE VI - BUSINESS LAW

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the basic requirements of the Indian contract Act, 1872 (K2, K3)
CO2	Illustrate how parties can discharge their contract by agreement. (K2)
CO3	Understand the general principles and the nature of obligations underlying Contracts of Indemnity & Guarantee and bailment & pledge. (K2)
CO4	Point out transactions involving Sale of Goods Act, 1930 (K2, K3)
CO5	Categorize and understand the various nuances of Intellectual Property Rights and Competition Law in India (K2)

Course Title: CORE VII: BANKING THEORY AND PRACTICE

Course Outcomes: At the end of the course, the student will be able to:

CO1	Explain the conceptual framework of banking and the role of RBI (K2)
CO2	Recall and understand the various functions of commercial banks and its loan system (K3)
CO3	Develop the knowledge on various aspects of retail banking and customer grievances and redressal (K2)
CO4	Understand the various services provided by banks under wholesale banking (K2)
CO5	Know the laws governing the banks under the Negotiable Instruments Act (K2)

Course Title: CORE VIII: FINANCIAL MANAGEMENT - I

Course Outcomes: At the end of the course, the student will be able to:

CO1	Demonstrate an understanding of the overall role and importance of the finance function and gain basic knowledge of financial management. (K1, K2)
CO2	Gain an insight on the goals of the finance manager and identify funding sources, instruments and markets. (K1, K2)
CO3	Demonstrate knowledge about the value of money over time, its uses and application. (K1, K2, K3, K4)
CO4	Identify the firm's business and financial risk and study the impact of leverage on the expected return, expected EPS and the risk borne by the shareholders' through its application. (K1, K2, K3)
CO5	Appraise the risk profile of firms, understand the influences of economic and political factors on the cost of various sources of funds, and estimate the specific costs of capital being debt, preference and equity capital and the overall cost of capital, using financial data. (K2, K3, K4)


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**Course Title: ALLIED III - BUSINESS STATISTICS &
OPERATIONSRESEARCH - I**

Learning Objectives:

Course Outcomes: At the end of the course, the student will be able to:

CO1	Explain about classification and tabulation of statistical data. Plot the diagrammatic and graphical representation of data
CO2	Explain about central tendency and calculate various measures. Explain how mean, median, mode are related in symmetric and skew symmetric distributions. Explain about dispersion and calculate various measures. Estimate the coefficient of variation using standard deviation. Investigate the uniformity or consistency of a data using coefficient of variation. Interpret the concept of skewness and methods to calculate its coefficient
CO3	Define correlation and its types. Calculate and interpret correlation between two variables. Apply regression equations to estimate the values of unknown variables using the given data. Rank the given data and examine the rank correlation
CO4	Define the nature and features of operations research. Explain the term various terms in LPP. Formulate and model a linear programming problem. Solve an LPP using graphical and simplex method. Identify a feasible solution and optimal solution using simplex method
CO5	Explain basic components of network analysis and critical path. Define CPM and PERT. Construct the network using CPM and PERT techniques to plan, schedule and control project activities

SEMESTER IV

Course Title: CORE IX: CORPORATE ACCOUNTING - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Gain knowledge on meaning, process and accounting of internal reconstruction. Distinguish Amalgamation, Absorption and External Reconstruction, estimate the value of purchase consideration and determine the accounting procedures to be followed (K2, K3)
CO2	Distinguish holding and subsidiary company and gain knowledge on the accounting procedures to be followed in the preparation of the consolidated Balance Sheet of a holding company (K2, K3)
CO3	Gain knowledge on the accounting procedures of banking companies and its application (K2, K3)
CO4	Apply the provision of the law in the preparation of the final accounts of insurance companies, life insurance as well as general insurance including fire insurance and marine insurance (K2, K3)
CO5	Determine the liquidator's remuneration payable in the event of liquidation (K2, K3)
CO6	Show how the assets are realized and liabilities are settled in the event of liquidation (K2, K3)



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Course Title: CORE X - FINANCIAL MANAGEMENT - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the factors that influence capital structure decisions of a business organization and their impact on the market value of the firm. (K2, K3, K4)
CO2	Understand the importance of capital budgeting and application of the various techniques for the evaluation of long term projects, their pros and cons and the basis of selection criteria of projects. (K2, K3, K4)
CO3	Understand the concept of working capital and its importance in a business, the factors that determine its quantum, the meaning and determination of operating cycle, and the computation of working capital. (K2, K3)
CO4	Explain the key strategies and techniques used for managing cash, the determination of the best collection period for accounts receivables and techniques for effective management of inventory. (K2, K3, K4)
CO5	Understand the concept of dividend and justify the dividend strategies that support wealth maximization. (K2, K3, K4)

Course Title: CORE XI - CORPORATE LAW

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the procedures relating the formation of a company and raising share capital. (K2)
CO2	Explain the process of profit distribution and maintenance of accounts. (K3)
CO3	Demonstrate the importance of meetings and the quorum required for a meeting and the resolutions that has to be taken depending upon the business decisions. (K3)
CO4	Get an insight over Limited Liability Partnership Act, 2008 (K2)
CO5	Understand the framework of Insolvency and Bankruptcy Code Act. (K2)

Course Title: CORE XII - BUSINESS COMMUNICATION

Course Outcomes: At the end of the course, the student will be able to:

CO1	Apply communication tools, strategies and principles to make communication more effective (K3)
CO2	Develop an understanding about appropriate verbal skills of communication and presentation skills (K2)
CO3	Prepare various forms of business letters, reports, business proposals and forms of internal communication tools (K3)
CO4	Explain and illustrate the various interpersonal communication including etiquette and netiquette (K1,K2)
CO5	Groom and prepare themselves for placements through various stages (K3)

Course Title: ALLIED IV- BUSINESS STATISTICS &

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OPERATIONSRESEARCH - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Explain the term time series Classify the various components of time series Analyze the seasonal and cyclical pattern in series of time.
CO2	Interpret indices to identify trends in a data set. Construct simple and weighted price, quantity and value indices. Use the consumer price index to determine the purchasing power
CO3	Explain basic probability axioms and rules. Calculate probabilities by using addition and multiplication law, with the terms independent and mutually exclusive events. Apply Baye's Theorem to solve real world events
CO4	Explain the Transportation problem and formulate it as LPP and solve the problem Determine that an assignment problem is a special case of LPP and evaluate using Hungarian Method
CO5	Define various terms and rules used in the Theory of Games. Identify strategic situations and represent them as games. Compute general solution of $m \times n$ rectangular games. Demonstrate graphical solution for $m \times 2$ and $2 \times n$ games

SEMESTER V

Course Title: CORE XIII - BASICS OF COST ACCOUNTING

Course Outcomes: At the end of the course, the student will be able to:

CO1	Demonstrate the basic concept of cost and how costs are presented in financial statements. (K2)
CO2	Compute the cost of a product by preparing a cost sheet and quotation for a production industry. (K3)
CO3	Discover the need for fixing stock levels for production and its computation. Prepare stores ledger to value of closing stock and the cost of goods sold or sent for production (K1, K3)
CO4	Understand the different wage payment systems and their computation, the concept of labour cost and labour turnover and their computation. (K2)
CO5	Develop knowledge regarding overheads and the concept of allocation and apportionment of overheads to various departments on a suitable basis. (K2, K3)
CO6	Create cost ledger and identify the reasons for disagreement of profit and prepare the reconciliation statement (K3)


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Course Title: CORE XIV- INCOME TAX LAW AND PRACTICE - I

Course Outcomes: At the end of the course, the student will be able to:

CO1	Examine the basic concepts of schedules rate of tax liability, the basic concepts of income tax, total income and different heads (K2, K4)
CO2	Apply and practice the computation of salary income (K2, K5)
CO3	Produce annual value of house property and computation under different circumstances. (K2, K5)
CO4	Define the allowable and non allowable expenses and provisions relating to income from business profession are dealt with. (K2, K4)
CO5	Define income tax authorities and their role (K1, K2)

Course Title: CORE XV - PRACTICAL AUDITING

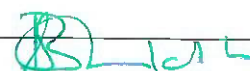
Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the basic auditing principles, concepts, planning an audit and due diligence (K1, K2)
CO2	Illustrate the steps required to perform internal control and internal check, vouching, verification and valuation of assets and liabilities. (K1, K2)
CO3	Understand the concept of depreciation & provisions and special audit for different entities (K2)
CO4	Pronounce the qualification for a company auditor and procedure for his appointment and removal. (K1, K2)
CO5	Apply auditing in a computerized environment and its utility in practical business. (K3)
CO6	Understand the concept of management audit and operational audit. (K3)

Course Title: CORE XVI: CUSTOMS AND GST

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the concept of Indirect Tax and Custom Laws and exemption of duties (K2)
CO2	Build knowledge on concepts of GST and the implementation of GST in India(K2)
CO3	Classify the Goods and services exempted from tax and understand the procedures of registration and collection of tax (K2)
CO4	Develop knowledge about Input Tax credit, tax credit in special circumstances and Reverse Charge Mechanism (K2)
CO5	Understand the taxability procedure on goods and services and advanced ruling and e-invoice (K2)



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Course Title: ELECTIVE I (OPEN): INTERNATIONAL BUSINESS

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the international business environment and justify the need for globalization (K2,K5)
CO2	Identify the modes of entry into international business and explore the international business opportunities (K2, K3)
CO3	Describe the international trade theories, concepts and functional framework of international business organizations(K2)
CO4	Develop in depth knowledge regarding export-import policies and carry out the documentation process (K2,K3)
CO5	Organize the information for international finance and identify the modes of payment in international trade (K4,K2)

Course Title: CORE XVII: MANAGEMENT ACCOUNTING

Course Outcomes: At the end of the course, the student will be able to:

CO1	Recall the importance of Management accounting and Imbibe critical thinking skills to analyze financial statements. (K1)
CO2	Evaluate the financial position of the business by using ratio analysis. (K5)
CO3	Apply the financial statement like cash flow statement and funds flow statement in decision making process. (K3)
CO4	Analyze Cost-volume-Profit techniques to determine Optimal managerial decisions like make or buy decisions, shut down or continue. (K4)
CO5	Provide knowledge about budget, budgetary control and Standard costing to prepare various forms of budget for the business and to achieve a desired cost objective. (K3, K5)
CO6	Enhance the knowledge to prepare various reports that are required by the companies to make the right decision. (K3)

Course Title: CORE XVIII: COSTING METHODS AND TECHNIQUES

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the job costing procedures and determine the economic batch quantity (K2)
CO2	Identify the operating costing procedures in various service industries and Apply the operating cost techniques (K2, K3)
CO3	Analyze the various industries using a process costing and prepare process accounts (K2, K3)
CO4	Understand the contract costing system and ascertain notional profits for various contracts (K3)



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CO5	Build knowledge regarding new costing techniques and apply those techniques for effective cost management (K2, K3)
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Course Title: CORE XIX: INCOME TAX LAW AND PRACTICE - II

Course Outcomes: At the end of the course, the student will be able to:

CO1	Identify short term and long term capital gains and their related deductions (K2, K5)
CO2	Explain the concept of income from other sources like gift, Dividend etc and their computation (K2, K4)
CO3	List the procedures for set off and carry forward of losses (K2, K3)
CO4	Apply and practice the permissible deductions from gross total income as per 80 C to 80 U and computation of tax liability(K1, K2, K5)
CO5	Define TDS and deductions of filing IT return(K1, K2)
CO6	State the assessment procedures. (K1, K2)

Course Title: ELECTIVE II: INVESTMENT MANAGEMENT


Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the differences between Investment and Speculation and list out the essentials of a good investment programme (K1, K2)
CO2	Analyze the relationship between risk & return and determine the methods for minimizing risk (K2)
CO3	Identify the various investment alternatives available and understand the advantages and disadvantages of these investment alternatives (K2)
CO4	Improve their knowledge relating capital markets and the role of regulatory authorities in capital market(K2)
CO5	Analyze the factors determining the suitability of an investment. (K1, K2)
CO6	Understand the concept of mutual fund and insurance, various mutual fund and insurance schemes and its advantages and disadvantages (K1, K2)

Course Title: ELECTIVE II: CORPORATE FINANCE

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the various sources of corporate finance and its importance in the corporate world. Describe the underlying principles of corporate finance (K1, K2)
CO2	Determine the main constituents and the benefits of corporate governance and determine the ethical issues in finance (K2)
CO3	Summarize and elaborate the importance of Corporate Social Responsibility in business and determine the provisions relating CSR under Companies Act. (K2, K4)


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CO4	Explain the need and importance of corporate financial planning and determine the factors affecting financial plans (K2)
CO5	Outline the various methods of corporate restructuring and financial restructuring and point out their benefits and drawbacks (K1, K2)
CO6	Explain the functioning of International Financial Market and gain knowledge about the various financial instruments traded in International Financial Market (K2)

Course Title: ELECTIVE II: CORPORATE GOVERNANCE AND ETHICS

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the concept of business ethics and its relevance in management and business(K2)
CO2	Understand the concept of corporate Governance, the disclosure practices and its connection with globalization (K2)
CO3	Develop knowledge about corporate governance reforms (K2)
CO4	Introduce and understand the concept of corporate social responsibility and managing ethical dilemma (K1 & K2)
CO5	Explain the contemporary practices in corporate governance (K2)

Course Title: ELECTIVE III: ENTREPRENEURIAL DEVELOPMENT
AND START UP

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the basic concepts of entrepreneurship (K2)
CO2	Develop a B-Plan by the evaluation of business ideas and conduct of feasibility study(K6)
CO3	Understand the various institutions providing support to entrepreneurial ventures (K2)
CO4	Analyze the favorable environment required to run the venture successfully and the role of the government (K3)
CO5	Criticize the challenges faced by women and rural entrepreneurs (K5)

Course Title: ELECTIVE III: MARKETING MANAGEMENT

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the concepts and approaches in marketing and analyze the role of marketing in economic development (K1,K4)
CO2	Identify the various factors influence consumer behaviour and locate Market Information system (K2)

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CO3	Determine the elements of marketing mix and develop a new product plan (K4,K6)
CO4	Apply different methods of pricing and create a channels of distribution (K3, K6)
CO5	Recognize the E-marketing tools and evaluate the impact of social media marketing (K2, K5)

Course Title: ELECTIVE III: HUMAN RESOURCE MANAGEMENT

Course Outcomes: At the end of the course, the student will be able to:

CO1	Understand the basic concept of human resource management and its evolution and challenges (K1,K2)
CO2	Articulate human resource planning using quantitative and qualitative dimensions (K1,K2)
CO3	List the methods of training and explain its role towards human resource development (K1,K2)
CO4	Explain performance appraisal methods and their link with compensation. (K1,K2)
CO5	Understand the concept of employee health, safety and e-HRM (K1,K2)
CO6	Explain the measures of welfare of the employees. (K1,K2)



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Department of Commerce

(Marketing Management)

PROGRAM SPECIFIC OUTCOMES

PSO 1: The Bachelor of Commerce in Marketing Management B.Com (MM) is an undergraduate programme that prepares students for professional careers in the field of Marketing

PSO 2: To mold passionate broad-minded human beings with strong sense of social commitment, responsibility and dynamic mind.

SEMESTER I

Course Title: CORE I - FINANCIAL ACCOUNTING-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the Basic Accounting concept, recording of Accounting transactions and Preparation of Bank Reconciliation Statement
CO2	Prepare the Final Accounts of Sole Trading concern
CO3	Understand the various methods of Depreciation
CO4	Explain the concept of Accounting from incomplete records and discriminate the single Entry and double entry system
CO5	Understand the difference between capital and revenue items and preparation of Receipts and Payments Account

Course Title: CORE II - BUSINESS ECONOMICS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the Basic Economic concepts and Introduction to Managerial Economics
CO2	Analyse the determinants and distinction of demand and supply
CO3	Analyse the Law of Diminishing Marginal Utility, Equi Marginal utility, consumer surplus and producer surplus
CO4	Formulate different product pricing based on the different market conditions
CO5	Explain the National Income Accounts and criticize the basic problems in National income



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Course Title: ALLIED I - BUSINESS COMMUNICATION

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the importance of communication and barriers to overcome for effective communication
CO2	Discriminate the various types of communication
CO3	Prepare the various types of business letters and understand the usage in Business
CO4	Understand the Market Positioning in communication , Analysis of market surveys and preparation of Report
CO5	Apply the communication skills in Group decision making, Presentation, speeches , customer relations and public relations

Course Title: NON- MAJOR ELECTIVE I – BASICS OF RETAIL MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discuss the basic concept of Retail marketing and issues
CO2	Explain the characteristics , functions and qualities of Retail marketing
CO3	Understand the types of Retail marketing
CO4	Discuss the Retail marketing in India
CO5	Summarize the advantages and disadvantages of Retail marketing

SEMESTER II

Course Title: CORE III - FINANCIAL ACCOUNTING II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Compare and contrast the Hire purchase and Instalment system
CO2	Prepare the different types of Branch Accounts and Departmental Accounts
CO3	Understand the special transaction such as consignment and Joint Venture and their accounting treatment
CO4	Prepare the Partnership Accounts for Admission, retirement and death of partners
CO5	Prepare Accounts for Dissolution of Partnership Firm


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Course Title: CORE IV - MARKETING MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Summarize the concept of Marketing Management, Marketing Mix, Marketing Environment and distinguish between micro and macro marketing
CO2	Explain the concept of Buyer Behaviour, Market segmentation, Targeting and positioning and New product planning
CO3	Understand the various Marketing mix decisions such as product, price, channels of distribution and promotional decisions
CO4	Analyse the Channels of Distribution and introduce the Marketing Research and Marketing Information System
CO5	Understand the various types of Marketing such as International Marketing, Rural Marketing, Social Marketing and Green Marketing

Course Title: ALLIED II - BUSINESS REGULATORY FRAMEWORK

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Interpret the law of contract, kinds of contract, essentials of a valid contract, performance, Discharge and Breach of contract
CO2	Describe the concept of Bailment, Indemnity and Guarantee
CO3	Understand the sale of goods act, 1930 and discriminate the Hire purchase sale and Instalment sale, conditions and warranty
CO4	Explain the contract of Agency and Delegation of Authority
CO5	Understand the basics of Information Technology Act, competition Act, Consumer Protection Act, Food safety and standards Act

Course Title: NON-MAJOR ELECTIVE II BASICS OF BUSINESS INSURANCE

CO1	Understand the concept and Insurance and its principles
CO2	Explain the IRDA ACT
CO3	Understand the various types of life insurance products
CO4	Examine the General insurance and its types
CO5	Discuss the Government vs Private insurance Companies.



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SEMESTER III

Course Title: CORE V - CORPORATE ACCOUNTING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Apply the provision of Companies Act for issue of shares & debentures and Accounting for Employee stock option plan
CO2	Understand the redemption of preference shares & debentures, Underwriting of shares & Debentures
CO3	Apply the concept of financial Accounts as per new guidelines and understand Managerial remuneration, divisible profits and profits prior to Incorporation
CO4	Apply various methods of valuation of Intangible Assets and understand the accounting treatment for Internal Reconstruction
CO5	Understand the concepts and Accounting treatment as per Accounting standard 14 an for Mergers and Amalgamation

Course Title: CORE VI - INTERNET AND DIGITAL MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept of Digital Marketing, categorization of Digital marketing and the website planning
CO2	Understand the concept of Search Engine Optimization techniques, Book marking and news Aggregators
CO3	Understand the concept of Social Media Optimization and identify various social media marketing
CO4	Explain the tools used for Search Engine Marketing such as Google Ad-words tools and Display marketing Techniques
CO5	Interpret the various analysis such as Google Analytics and social media Analytics

Course Title: CORE VII - CONSUMER BEHAVIOUR

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept of Consumer Behaviour, Consumer decision making process and interpret various Consumer Behaviour Models
CO2	Examine the Environmental influences on Consumer Behaviour and marketing implication of various influences
CO3	Understand the marketing implication of consumer perception, attitude, learning, motivation and personality in consumer behaviour
CO4	Describe the concept of strategic marketing application and understand the concept of Consumerism
CO5	Discuss the Consumer buying habits, issue of privacy and ethics ,value post purchase process , satisfaction and retention of consumers


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Course Title: CORE VIII - ENTREPRENEURIAL DEVELOPMENT**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Define the concepts fundamental to entrepreneurship
CO2	Explain the women entrepreneurs and their developments, Rural entrepreneurship, SHG's
CO3	Write down a business plan and preparation of Project report
CO4	Identify the methods of raising finance for an entrepreneurship venture
CO5	Explain the Entrepreneurial development programme, role of government and non government organizations

Course Title: ALLIED III - MODERN BANKING**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Explain the classification of Banking system and discuss the role and functions of Commercial Bank, Central Banking and Reserve Bank of India
CO2	Discuss the various types of Bank accounts, KYC norms ,Bank lending process and Credit Information Bureaus
CO3	Understand the concept of Negotiable instruments , Endorsement, crossing and material alteration
CO4	Compare and contrast the duties and liabilities of Paying Banker and Collecting Banker
CO5	Analyse the various E-Banking services provided by the Banks and understand the difference between Internet Banking and Traditional banking

SEMESTER IV**Course Title: CORE IX - CONSUMER RELATIONSHIP MANAGEMENT****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	To learn the basic concept of Customer Relationship Management, CRM implementation, Process and e-CRM.
CO2	Explain the concept of Communication Process in CRM , importance of Customer Relationship Marketing , Success Chain in CRM and Customer Segmentation.
CO3	To enhance awareness about Customer Loyalty and Business analytic tools
CO4	Discuss the Strategy applicable to Relationship Marketing to become better Marketing Executives and Analyst
CO5	Describe the impact of Technology in CRM, integration of ERP.


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Course Title: CORE X - INTERNATIONAL MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define the basic concepts of International Marketing, Scope and challenges of international marketing, Recent trends and developments in international trade, International Marketing Environment
CO2	Apply the conceptual framework Marketing Mix, Segmentation, Promotion and Advertising context to the International Marketing
CO3	Explain the concept of International market panning and International market opportunities , International marketing management
CO4	Discuss the intricacies of Global product management and pricing for International market
CO5	Compare different types of Global logistics management ,International distribution systems , Global advertising and promotional strategies.

Course Title: CORE XI - FINANCIAL SERVICES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Impart knowledge on Financial Services: An Overview
CO2	Explain the Credit rating, commercial bill financing and consumer finance and its types, mode and factors
CO3	Discuss the concept of Insurance, factoring and leasing types, advantages and limitations
CO4	Describe the concept of Merchant banking and mutual funds, types, methods, and SEBI guidelines
CO5	Define Securitization, meaning, types , advantages and Disadvantages.

Course Title: CORE XII - RETAIL MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the trends in the retail industry,
CO2	Interpret consumer behaviour and its implications for retail management
CO3	Explain the Retail Pricing and elements of retail pricing ,Design store layout and Retail merchandise handling
CO4	Identify the Retail communication , tools and elements of a retail Communication
CO5	Explain the Retail Management and IT , e-tailing, online shopping



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Course Title: ALLIED IV - BUSINESS STATISTICS AND OPERATIONS RESEARCH**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Recognize the importance of measures of central tendency/ dispersion and use them for analysis and data interpretation.
CO2	Determine the degree of relationship between variables using correlation and their linear relationship through regression analysis.
CO3	Use CPM and PERT techniques in planning, scheduling and controlling project activities.
CO4	Employ optimal strategies and take decisions in competitive situations.
CO5	Apply appropriate tools of decision analysis for effective planning and management in an organisation.

SEMESTER V**Course Title: CORE XIII - ADVERTISING & BRAND MANAGEMENT****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Understand the various aspects Advertising and the role of Advertising in branding
CO2	Discuss the DAGMAR approach in Advertising and Advertising Budget
CO3	Examine the concept of Advertising copy and understand the importance of creativity in advertising
CO4	Describe the various media mix and differentiate between reach and frequency in media
CO5	Measure the Effectiveness of Advertising uses various techniques such as Market Testing, Pre testing, Post testing, Field Testing, Positioning Advertising Copy Testing

Course Title: CORE XIV - COST ACCOUNTING**Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	Explain the concept and role of cost accounting in the business management of manufacturing and non-manufacturing companies , the relationships between cost and financial accounting and also to prepare production cost statement and tenders and quotation
CO2	Demonstrate the Stock valuation and its methods, Inventory control and Techniques, pricing of Materials and issues & methods.
CO3	Compute labor costs and records them under different methods the apportionment of overheads under various methods
CO4	Prepare the procedure of process costing and service sector costing
CO5	Computation of Contract Costing and Discuss the various methods.



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Course Title: CORE XV - FINANCIAL MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discuss the scope, goals and the objectives of Financial Management including the role of finance managers
CO2	Compute the "Cost of Capital" that impacts the capital structure decisions for a business.
CO3	Identify and execute decisions regarding capital budgeting and Financial Management
CO4	Discuss the various Dividend theories
CO5	Assimilate the concept of operating cycle and the estimation of working capital needs.

Course Title: CORE XVI - SALES AND DISTRIBUTION MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define personal selling and Personal management ,forecasting, methods, variables affecting the sales & distribution function
CO2	Design the strategies to effectively manage a company's sales operations, distribution channels, Logistics and Supply Chain Management.
CO3	Explain the Sales manager- Qualities and functions, types, significant responsibilities of sales person, recruitment of sales man
CO4	Examine and describe the various aspects of Physical Distribution and Strategies and selecting channel members
CO5	Outline ways of managing channel conflicts and comprehend the way in which services use marketing channels, Impact of ecommerce and E-tailing.

Course Title: ELECTIVE I - --TRAVEL & TOURISM MMANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Defining tourism & foreign tourists, Tourism Products: Definition, Concept and classification.
CO2	Explain the tourism promotion, advertising, public relations, public relation technique.
CO3	Analyse the International air transport association (IATA), , IATA allied services, IATA accreditation for travel agency, IATA International regulations, Indian association of tour operator, World tourism and travel council, Federation of Hotel & Restaurant Association of India (FHRAI)
CO4	Describe the Tour Packaging, Types of Tour, Component of a Standard Package Tour, Factors affecting Tour Formulation, Tour Designing Process,
CO5	Explain the Introduction of HRD meaning, Concept and Significance, HRD systems, models and Practices in Travel Industry,



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Course Title: ELECTIVE I - PRACTICAL AUDITING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the qualities expected of an auditor including professional ethics.
CO2	Discuss the Planning and conduct of Audit , Audit Planning , Audit Programme, Audit Documentation,Audit Note Book ,Audit Working Papers , Audit Files
CO3	Explain the importance of Internal check , internal control, Audit programme and vouching.
CO4	Demonstrate abilities to verify assets and liabilities.
CO5	Discuss the provisions for appointment of auditors and demonstrate ability to write an audit report.

SEMESTER VI

Course Title: CORE XVII - ACCOUNTING FOR DECISION MAKING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To enlighten the students thought and knowledge on management Accounting
CO2	Helps to give proper idea on financial statement analysis in practical point of view
CO3	To introduce the concept of fund flow
CO4	Evaluate the concept of cash flow statement
CO5	To develop the know-how and concept of marginal costing with practical problems

Course Title: CORE XVIII - SERVICES MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the evolution and growth of service sector and classification of services
CO2	Analyse the elements of services marketing mix and understand the concept of Relationship marketing
CO3	Discuss the cost of services , promotional mix , location and methods of distributing Services
CO4	Understand the components of service delivery system and concept of physical evidence
CO5	Interpret the marketing of various services



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Course Title: CORE XIX - MARKETING RESEARCH AND INFORMATION SYSTEM

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept, types, process and steps in Market Research
CO2	Explain the concepts of sampling procedures, methods, sampling size and sampling error
CO3	Examine the concepts of validity, reliability and scaling procedures
CO4	Discuss the methods of collecting data ,Data processing, coding and editing
CO5	Analyse the Data using various statistical techniques and describe the presentation of data

Course Title: ELECTIVE II - LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the concept and function of Logistics Management and Supply Chain Management
CO2	Discuss the various elements of supply chain management and logistics management
CO3	Discuss the various modes of Transportation in logistics and supply chain management
CO4	Understand the concept of containerization and Logistics Information system
CO5	Describe the Export procedures in logistics management

Course Title: ELECTIVE II - INDUSTRIAL MARKETING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the concept of Industrial market and differentiate the consumer and Industrial market
CO2	Explain the concept of positioning and Marketing Intelligence
CO3	Understand the buyer motives, buyer population and types of purchasing organisation
CO4	Discuss the Marketing strategies and understand the product development,Industrial marketing channels, Industrial pricing and promotional component
CO5	Identify the marketing opportunities and compare the standards and performance in Industrial marketing



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13. DEPARTMENT OF FINANCE AND TAXATION

PROGRAM SPECIFIC OBJECTIVES:

The undergraduate program in Finance and Taxation aims at:

1. Providing opportunity to students to access the latest trends, information and knowledge within the global perspective
2. Equipping and supporting the students to qualify as the member of Association of Certified Chartered Accountants, UK
3. Grooming the skill for developing a comfortable and a competitive learning experience
4. Imparting hands-on exposure for advanced learning in the domain of taxation and finance

COURSE OUTCOMES

Semester: I			Section:	Course Code: CORE I	Course: Business Accounting
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Explain the concept and purpose of Financial Accounting, and Understand the role of Accounting concepts in maintaining books of accounts
CO2	Demonstrate the use of Double entry system and preparation of Journal, Ledger and Trial Balance
CO3	Recording for Errors and creation of Suspense Account, and Derive a Bank Reconciliation Statement from the balances of Cash Book and Bank Book
CO4	Preparation of Final Accounts and explain the need for adjustments in the Statement of Profit and Loss and Balance sheet
CO5	Apply the appropriate method of Depreciation and Charge for Depreciation using SLM, WDVM and SFM
CO6	Interpret the relationship between various Financial Transactions with regard to Profitability, Turnover and Solvency Ratios, thereby facilitating comparison of performance of business

Department: Finance & Taxation			Academic Semester: 1	
Semester: I	Section:	Course Code: CORE II	Course: Business Economics	

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Paraphrase the relevance and need of economics in current business scenario
CO2	Apply the concept of law of demand and thereby determine the expected demand in the future
CO3	Judge the consumer behavior and make inference on the basis of Law of Diminishing Marginal Utility
CO4	Determine the pattern of price under various market forms
CO5	Define national income accounts, the content of economic indicators and technology


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Department: Finance & Taxation		Academic Semester: 1	
Semester: I	Section:	Course Code: ALLIED I	Course: Information Technology

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Explain the relevance and the need of information technology in commerce domain
CO2	Apply MS Word, menu and tool bar options, edit and format text.
CO3	Prepare worksheet and apply functions, formulae and charts using MS Excel
CO4	Design a powerpoint presentation and use custom animations and transitions
CO5	Prepare final accounts of a business using accounting software Tally

Semester: I	Section:	Course Code: PART IV	Course: NME-BASICS OF RETAIL MARKETING
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Explain the basic concept of Retailing and, and Understand the evolution of Retail marketing in India
CO2	Understand the functions and classification of retailing
CO3	Elucidate the importance of Branding and Communication in Retailing
CO4	Identify with the latest trends and technology in Retailing

Department: Finance & Taxation		Academic Semester: 2	
Semester: 2	Section:	Course Code: CORE III	Course: Financial Accounting

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Gain working knowledge on the principles of accounting relating to Hire purchase and Installment system
CO2	Solve the accounts with respect to Branch accounting and Departmental accounting
CO3	Familiarize with the concept of features of Consignment and Joint Venture business and accounting treatment thereof
CO4	Prepare balance sheet with respect to admission, retirement and death of partners
CO5	Apply appropriate accounting provisions in case of dissolution of partnership



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Department: Finance & Taxation		Academic Semester: 2	
Semester: 2	Section:	Course Code: CORE IV	Course: Principles of Management

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understand management as a profession, science and art
CO2	Remember the contributions of different schools of management thought and relate to Indian philosophy
CO3	Apply the concept, importance and steps involved in business planning, forecasting and decision making including MBO
CO4	Interpret the principles of different organizational models and understand the basis for departmentalization and delegation of authority
CO5	State the contributions of management thinkers in the field of motivation, leadership, coordination and control
CO6	Apply latest management trends and concepts and compare it with regard to quality management systems in an organization

Department: Finance & Taxation		Academic Semester: 2	
Semester: 2	Section:	Course Code: ALLIED II	Course: Ethics and Corporate Governance

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understand the evolution and genesis of ethics in India
CO2	Describe the relevance and need of strengthening the personal and organizational integrity
CO3	Relate CSR towards stakeholders, environment and the society as a whole
CO4	Understand the scope of corporate governance with respect to disclosure requirements
CO5	Explain the role of SEBI in enforcement of corporate governance with regard to shareholders' grievances and investor protection

Semester: II	Section:	Course Code: PART IV	Course: NME-BASICS OF BUSINESS INSURANCE
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Explain the basic concept of Insurance and Understand its function and importance
CO2	Understand the functions of regulating framework and authorities for Insurance in India.
CO3	Identify the distinction between Life Insurance and General Insurance.
CO4	Aware of government and private players in the field of Insurance.

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Department: Finance & Taxation		Academic Semester: 3	
Semester: 3	Section:	Course Code: CORE V	Course: Corporate Accounting

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Prepare company account and understand the various provisions of company law.
CO2	Associate with the concepts of accounting for issue of shares and debentures, employee stock option plan and assessment in case of redemption of shares and debentures.
CO3	State the Concepts of divisible profits, managerial remuneration and profits prior to in corporation
CO4	Distinguish between IFRS and Indian Accounting standards and explain the process of Transition to IFRS
CO5	Value intangible assets, goodwill, patents, trademarks and IPR
CO6	Solve accounting problems with respect to Mergers and Amalgamations

Department: Finance & Taxation		Academic Semester: 3	
Semester: 3	Section:	Course Code: CORE VI	Course: Audit and Assurance

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Interpret the Significance and Importance of Auditing in accounting and business domain.
CO2	Plan and obtain for audit assignments, assessment of audit risk and documentation
CO3	Assess the internal control system, communication of Internal controls and application of Internal auditing concept.
CO4	Collect audit evidence by observation, Inspection, Re calculation and enquiry
CO5	Design and disclose audit reports and apply information system audit

Department: Finance & Taxation		Academic Semester: 3	
Semester: 3	Section:	Course Code: CORE VII	Course: Corporate and Business Law

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To describe the legal framework related to business and understand the relevance of legal remedies available to stake holders
CO2	Apply the provisions of Company's Act, 2013 and remember the concepts of various types of Companies
CO3	Classify Right issue and Bonus issue and explain Dematerialization of shares, Company meetings and administration
CO4	Define the Law of contracts, explain the kinds of contract and understand the Elements of valid contracts.
CO5	Identify special contracts with respect to bailment, pledge, indemnity and guarantee
CO6	Compare the provisions regarding Condition and Warranty, understand the scope of Sale of Goods Act and Information Technology Act



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Department: Finance & Taxation		Academic Semester: 3	
Semester: 3	Section:	Course Code: CORE VIII	Course: Cost Accounting

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To identify the advantages of costing to stakeholders, workers, creditors and the public
CO2	Interpret the cost concepts, cost centers and cost units and prepare cost sheets, tenders and quotations.
CO3	Appraise material procurement procedures, documentation of receipt and issue of stock, application of inventory control techniques.
CO4	Prepare attendance and payroll procedures, overview of statutory requirements and computation of labour efficiency, capacity and volume ratios
CO5	Assess profit or loss in case of industries who apply Process costing
CO6	Design Budgets and distinguish between various budgets such as functional budget, fixed & flexible budget, cash budget and zero base budget

Department: Finance & Taxation		Academic Semester: 3	
Semester: 3	Section:	Course Code: ALLIED III	Course: Business Maths

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Define theory of set and its relations and functions
CO2	Apply ratios, proportions, variations and interpret the concept of permutations and combinations
CO3	Familiarize with the concept of binomial theorem and different progressions
CO4	Solve problems using differentiation and application of maxima and minima in business
CO5	Compute simple interest and compound interest, prepare matrices and solve linear equations

Department: Finance & Taxation		Academic Semester: 4	
Semester: 4	Section:	Course Code: CORE IX	Course: Financial Reporting

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Compile financial information and financial statements relating to banking and insurance standards
CO2	Illustrate the provisions of consolidation of group financial statements and relevant accounting standards
CO3	Relate the international standards with respect to income taxes, cash flows and government grants
CO4	Compare the exchange rates, investment in associates and joint ventures
CO5	Report the financial position of holding companies and preparation of consolidated balance sheet


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Department: Finance & Taxation		Academic Semester: 4	
Semester: 4	Section:	Course Code: CORE X	Course: International Marketing

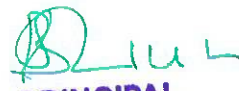
COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Distinguish between the concept of marketing in the traditional period when compared to liberalized era of globalization.
CO2	Paraphrase the scope and challenges of International marketing, protectionism, trade barriers and easing trade restrictions.
CO3	Appraise the role of IMF, World Bank, WTO, TRIPS and liberalization of service industries.
CO4	Examine International Market opportunities through market research, planning and strategy making.
CO5	Interpret standardization and differentiation with respect to global product management.
CO6	Define global logistic management, global advertising and promotional strategies.

Department: Finance & Taxation		Academic Semester: 4	
Semester:4	Section:	Course Code: CORE XI	Course: Management Accounting

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To understand the advantages of management accounting in decision making and business combination
CO2	Analyze and interpret financial statements by applying tools such as comparative statements, common size statements and trend analyses
CO3	Apply the concept of marginal costing in decision making, determination of sales and product mix, make or buy decision and discontinuance of product line
CO4	Conceive a budgetary system in an organization, analysis of variance and making performance analysis with variances.
CO5	Apply financial and non-financial performance integrators, cost-volume-profit relationship and estimate resource optimization.
CO6	Evaluate the performance of business division by applying tools such as return on investment and residual income.


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Department: Finance & Taxation		Academic Semester: 4	
Semester: 4	Section:	Course Code: CORE XII	Course: International Taxation and Technology

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Enable to qualify for international taxation examination and obtain license to practice as international tax consultants.
CO2	Describe federal tax legislative process, jurisdiction and tax system
CO3	Compute alternate minimum tax and recognition of income for foreign nationals
CO4	Apply the concept of filling status and exemptions, due dates extension and tax calculation
CO5	Ascertain property transactions on the basis of types of assets, holding period, sale and exchange
CO6	Assess income/losses in case of partnership firms and change of ownership and termination.
CO7	To determine earning and profits in case of corporations, preparation of forms and schedules and tax calculation

Department: Finance & Taxation		Academic Semester: 4	
Semester: 4	Section:	Course Code: ALLIED IV	Course: Operations Research


COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Explain operation research, its meaning, scope and characteristics
CO2	Solve problems with regards to transportation model and suggest basic feasible solutions
CO3	Apply the concept of assignment models and solve balanced and unbalanced problems
CO4	Make decisions under uncertainty and apply the concept of Queuing Theory
CO5	Interpret the importance of network analysis in business decisions by applying PERT, CPM and Game Theory

Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: CORE XIII	Course: Corporate Finance

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Facilitate the understanding of the relevance and need of corporate finance and capital market
CO2	Cite the basis problems of Indian Capital Market and explain the guidelines prescribed by SEBI regarding various sources of finance
CO3	Estimate working capital requirements, adopted by commercial banks
CO4	Appraise risky investments using probability information, sensitivity analysis, and nature of cash flows
CO5	Determine the probability of cash Insolvency in the context of Financing decision and judge inappropriate pricing models with respect to financing decisions
CO6	Understand corporate disaster and ethics, corporate social responsibility and ethics for managers and stake holders


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Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: CORE XIV	Course: Information Management

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Familiarize the concept of data sustainability and adhere to data protection and security
CO2	Recall system development methodologies, systems analysis and design tools
CO3	Relate database management system with the help of various functional information systems
CO4	Apply security testing control and reporting concepts in information management
CO5	Describe the role of information management in enterprise resource planning and infer conclusions on the basis of data mining and business intelligence.

Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: CORE XV	Course: Income Tax Law and Practice


COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To recall importance definitions under Income tax act and examine the residential status of individuals
CO2	Compute Income from salaries and Income from house property
CO3	Explain the principles of arriving at business income and apply the general deductions under specific provisions
CO4	Ascertain short term and long term capital gains and also compute income from other sources
CO5	Compile the Income in case of setoff or carry forward of losses, assessments of individuals total income and tax liability and file returns

Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: CORE XVI	Course: Financial Management

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify the financial objectives of business organization, impact of monetary policies and competence policies
CO2	Describe the composition of working capital and management of inventory, receivables and accounts payable.
CO3	Identify the types of investment projects such as Mutually exclusive projects and independent projects
CO4	Estimate the cost of equity using various financial models
CO5	Classify currency risks and analyze the causes of interest rate fluctuations.


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Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: ELECTIVE I	Course: IFRS

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understand the importance of IFRS in preparation and presentation of financial statements
CO2	Facilitate to appear for IFRS certification examination conducted ACCA, UK
CO3	Interpret the relevance of IFRS in a global scenario.
CO4	Distinguish accounting transactions with respect to IFRS and relate to Universally accepted accounting principles

Department: Finance & Taxation		Academic Semester: 5	
Semester: 5	Section:	Course Code: ELECTIVE I	Course: Financial Services

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To list the functions of financial services market and explain the role of Credit Information Bureau
CO2	Identify the regulatory framework of credit rating agencies.
CO3	Distinguish between factoring and leasing, thereby contrast the utility of both.
CO4	Introduce to the concept of Merchant Banking and Asset management companies.
CO5	Demonstrate the process of securitization and explain its application in risk management

Department: Finance & Taxation		Academic Semester: 6	
Semester: 6	Section:	Course Code: CORE XVII	Course: Insurance and Risk Management

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Classify different types of risk, risk identification and understand the significance of risk management function with in business organization
CO2	Define the purpose and need of insurance and understand insurance as a contract
CO3	Explain the characteristics of different life insurance and general insurance policies
CO4	Analyse the factors for determination of premium and types of documents needed in various types of claims.
CO5	Examine the lead for insurance underwriting and role of actually in risk management

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Department: Finance & Taxation		Academic Semester: 6	
Semester: 6	Section:	Course Code: CORE XVIII	Course: Banking Law and Operations

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Classify the banking system and understand the role of commercial banks and RBI in economic development.
CO2	Open bank accounts, understand KYC norms and assessment of customer profile and credit worthiness of the applicant for loans
CO3	Describe negotiable instruments, transactions with respect to cheques, material alteration and statutory protection.
CO4	Site the duties and liabilities of paying banker and collecting banker, redressal of customer grievance and understand the concept of banking ombudsman
CO5	Compare the various E-banking service provided by bank and authorities involved in global financial network

Department: Finance & Taxation		Academic Semester: 6	
Semester: 6	Section:	Course Code: CORE XIX	Course: GST and Customs Law

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Facilitate the students to qualify for tax practitioners examination conducted CBIC
CO2	Compare the structure and types of GST, composition of GST council and other qualification and enrollment procedures
CO3	Classify good and service with respect to supply, point of taxation and familiarize with the documents maintained by the assessee
CO4	Familiarize valuation of GST and understand the periodicity of GST payment including due dates of filling returns
CO5	Compute the net GST payable and set off regarding input tax credit
CO6	Illustrate the provisions customs act, levy and collection and valuation and clear of goods

Semester: 6	Section:	Course Code: ELECTIVE II	Course: Project Management
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Outline the essentials of Project management and its process
CO2	Plan for project identification, selection and interpret using feasibility analysis.
CO3	Examine the role and responsibilities of a project leader and study their relationship with other line managers
CO4	Relate the concept of Project quality management with value engineering and design for simple PMIS
CO5	Evaluation and measurement of project performance and thereby exercise control



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Department: Finance & Taxation		Academic Semester: 6	
Semester: 6	Section:	Course Code: ELECTIVE II	Course: Indian Accounting Standards

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Equipped themselves with the basic knowledge of Indian accounting standards and its importance in preparation of financial statements
CO2	Apply the provisions of Indian accounting standards and compare its application with respect to various accounting transactions

Department: Finance & Taxation		Academic Semester:6	
Semester: 6	Section:	Course Code: Project Work	Course: Project work and Viva Voce

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify and bridge the gap between theory and practice with respect to accounting and finance
CO2	Create and interest the practical aspects of Finance and taxation the main and equipped themselves to face real life challenges.
CO3	Plan and design financial statement analysis for various business organization
CO4	To compile the results of analysis and thereby interpret the financial performance of the organization.



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DEPARTMENT OF BBA

PROGRAM SPECIFIC OUTCOMES

PSO 1: Students will be able to apply the knowledge of management concepts in business environment and describe the recent trends.

PSO2: Students will build proficiency in their area of specialization Marketing or Human Resource Management.

PSO3: Students undergo co-curricular activities to demonstrate practical knowledge in their domain area.

PSO4: Students acquire practical skills to identify & solve a problem/area of improvement.

PSO5: Students gain knowledge & skills to start their own enterprises, effectively contribute to the growth of the organization and/or pursue higher studies in management.

PSO6: Students will be able to identify the technology trends and its impact on business.

ACCOUNTING FOR MANAGERS – I

COURSE OUTCOME:

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

CO1	Prepare Journal, ledger, trial balance and cash book
CO2	Prepare final accounts with adjustments
CO3	Classify errors and making rectification entries
CO4	Pass depreciation entries and prepare depreciation accounts
CO5	Prepare single and double entry system of accounting.

PRINCIPLES OF MANAGEMENT

COURSE OUTCOME:

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

CO1	Describe nature, scope, role, levels, functions and approaches of management
CO2	Apply planning and decision making in management
CO3	Identify types of organization and its structure
CO4	Analyse appropriate recruitment and training practices in organization.
CO5	Explain co-ordination and control mechanisms in organization



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MANAGERIAL ECONOMICS

COURSE OUTCOME:

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

CO1	Analyse & apply the various economic concepts in individual & business decisions
CO2	Explain demand concepts, underlying theories and identify demand forecasting techniques.
CO3	Employ production, cost and supply analysis for business decision making
CO4	Identify pricing strategies
CO5	Classify market under competitive scenarios.

CONSUMER BEHAVIOUR

COURSE OUTCOME:

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

CO1	Describe concepts underlying consumer behavior and relate consumer involvement & decision making.
CO2	Identify & outline the significance of motivation & personality with consumer behavior
CO3	Identify & outline the significance of Attitude, Culture with consumer behavior.

ACCOUNTING FOR MANAGERS –II

COURSE OUTCOME:

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

CO1	Interpret cost sheet & write comments
CO2	Compare cost, management & financial accounting
CO3	Calculate fund flow and cash flow statements
CO4	Evaluate marginal costing and its components
CO5	Analyse the various ratio and compare it with standards to assess deviations

COMPUTER APPLICATIONS IN BUSINESS

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

CO1	Demonstrate hands on experience with Ms-word for business activities
CO2	Demonstrate hands on experience with Ms-Excel for business activities
CO3	Demonstrate hands on experience with Ms-power point for business activities
CO4	Demonstrate hands on experience with Tally for business activities
CO5	Demonstrate hands on experience with Tally for reporting in business


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BUSINESS COMMUNICATION

COURSE OUTCOME:

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

CO1	Understand communication process and its barriers
CO2	Identify non-verbal communication
CO3	Develop oral communication skills & conducting interviews
CO4	Use managerial writing for business communication
CO5	Identify usage of modern communication tools & its significance for managers

E-COMMERCE

COURSE OUTCOME:

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

CO1	Outline e-commerce framework and its related terminologies.
CO2	Understand planning and implementation of e-commerce business
CO3	Discuss fundamental concepts underlying e-commerce.

FINANCIAL MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand the importance of finance and its source to operate the business
CO2	Analysis the structure of capital and determine the debt and equity portion in business
CO3	Know the cost incurred to the company to raise capital through long term sources
CO4	Analyse ARR, IRR, NPV and PI
CO5	Understand the concept of working capital and its importance in administration of finance in business.

MARKETING MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand the fundamental concepts of marketing and apply 4P's of marketing
CO2	Apply and demonstrate the 4P's of marketing.
CO3	Apply and demonstrate STP in marketing.
CO4	Outline the concepts of buyer behavior, sales management techniques and sales forecasting method
CO5	Identify the recent trends of digital marketing.



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HUMAN RESOURCE MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand basic concepts and importance of human resource management
CO2	Provide insights on HR planning, recruitment, selection procedures in organization
CO3	Identify remuneration and its components
CO4	Understand role of trade union and dispute solving mechanisms
CO5	Describe HR Audit, E-HRM and identify other recent trends in HRM.

BUSINESS MATHEMATICS

COURSE OUTCOME:

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

CO1	Restate concept of Arithmetic progression; Solve the problems in A.P; Demonstrate the term geometric progression and solve its problems.
CO2	Define the term Analytic geometry; Solve the problems in straight lines; Differentiate various forms of lines;
CO3	Define the term differential calculus; Define the term Average cost, marginal cost & revenue; Solve the problems in maxima and minima.
CO4	Restate the concept of metrics; Define algebra of matrices; Solve the matrix problem by using matrix inversion method.
CO5	Judge and classify simple and compound interests; Define the term annuity; Differentiate S.I, C.I and Annuity.

PRODUCTION MANAGEMENT

COURSE OUTCOME:

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

CO1	Provide comprehensive outlook on basic concepts, theories and practices of production
CO2	Describe route chart, maintenance schedule for production.
CO3	Identify right plant location and plant layout of factory
CO4	Know work study & method study, its procedure
CO5	Identify quality control techniques in production

RESEARCH METHODOLOGY

COURSE OUTCOME:

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

CO1	Identify and select social research methods
CO2	Outline stage of research and research design
CO3	Apply appropriate data collection and compile data for analysis
CO4	Outline data analysis techniques
CO5	Prepare and present research findings in standard format


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ADVERTISING MANAGEMENT AND SALES PROMOTION
COURSE OUTCOME:

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

CO1	Discuss advertising concepts & its implications
CO2	Demonstrate concepts & terminology in developing advertising copy
CO3	Analyse & select different types of advertising media
CO4	Explain & evaluate advertising agency, budget and its effectiveness
CO5	Identify and classify sales promotion techniques – its implementation

INDUSTRIAL RELATIONS
COURSE OUTCOME:

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

CO1	Understand the role and importance of ethics and values in business
CO2	Analyze the types of ethical issues in business
CO3	Identify and relate internal-external ethics to business environment
CO4	Understand social audit and social responsibility of business towards society
CO5	Familiarize the role of CEO in business

FAMILY BUSINESS MANAGEMENT – I
COURSE OUTCOME:

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

CO1	Discuss family business in Indian context
CO2	Outline concepts of family business
CO3	Explain tools for family communication and participation
CO4	Outline family business planning and its influence on life cycle
CO5	Identify and compile about Indian trader families

OPERATIONS RESEARCH
COURSE OUTCOME:

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

CO1	Relate concept and scope of Operations Research; Demonstrate the steps of LPP model and graphical model; Differentiate LPP and graphical method.
CO2	Define the term transportation problem. Solve the transportation problem by its various methods; Summarise the optimum solution.
CO3	Define the term Assignment; Demonstrate the Hungarian method; Solve the problem on sequencing p
CO4	Define the term Network – PERT and CPM; Differentiate PERT and CPM; Judge and classify constructing network.
CO5	Define the term game theory; Demonstrate maxima and minima in game theory; Define the graphical method for solving 2xn and mx2.


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BUSINESS STATISTICS

COURSE OUTCOME:

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

CO1	Define different types of data for decision making
CO2	Analyse the measures of central tendency
CO3	Describe the statistics to solve business problems
CO4	Discuss various types of data to solve corporate problems
CO5	Understand the different types of samples to study population

INTERNATIONAL TRADE

COURSE OUTCOME:

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

CO1	Discuss the difference between internal and international trade and its significance
CO2	Explain international trade theories
CO3	Outline the balance of trade, balance of payment, exchange rate concepts
CO4	Identify the relevance of international institutions and trading blocs.
CO5	Understand globalization and its impact on Indian business scenario

SERVICE MARKETING

COURSE OUTCOME:

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

CO1	Understand the concepts of service and growth of service sector.
CO2	Apply the 7P's of service marketing.
CO3	Understand service design and effective management of service marketing.
CO4	Explain the service quality gaps.
CO5	Demonstrate service marketing with specific sectors.

ORGANIZATION PSYCHOLOGY

COURSE OUTCOME:

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

CO1	Describe role of organization behavior
CO2	Explain Motivation, its techniques and employee morale.
CO3	Outline work environment and leadership theories
CO4	Understand group dynamics
CO5	Outline organization culture, climate and counseling



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FAMILY BUSINESS MANAGEMENT – II

COURSE OUTCOME:

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

CO1	Outline ownership in family business
CO2	Discuss governance of family business
CO3	Identify succession options in family business
CO4	Prepare Next Gen family managers & leaders
CO5	Identify SWOT on their own family business and report.

BUSINESS TAXATION

COURSE OUTCOME:

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

CO1	Explain tax system in India
CO2	Outline Income Tax Act 1961 inclusive underlying concepts & definitions
CO3	Outline Customs Act 1961 inclusive Types (Goods & Custom duty) & procedure.
CO4	Discuss procedures involved in GST Registration and its issues
CO5	Outline Tax audit and relevant taxation procedure

LEGAL ASPECTS OF BUSINESS

COURSE OUTCOME:

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

CO1	Outline companies Act and discuss incorporation of companies
CO2	Understand contract act and its legal implications
CO3	Identify different types of contract
CO4	Outline sale of goods acts and discuss its legal framework
CO5	Outline Negotiable Instruments Act and discuss its legal framework.

ENTREPRENEURIAL DEVELOPMENT

COURSE OUTCOME:

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

CO1	Outline concepts, factors, functions, classification of entrepreneurship
CO2	Identify funding sources for entrepreneurship
CO3	Identify business idea generation techniques and outline project report writing
CO4	Discuss EDP and its functions
CO5	Relate Economic growth and entrepreneurial development



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MATERIALS MANAGEMENT

COURSE OUTCOME:

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

CO1	Understand the principles of effective materials management
CO2	Outline inventory control concepts and its replenishment to manage inventory
CO3	Discuss purchase management procedure
CO4	Explain store keeping functions and its security
CO5	Identify Vendor rating mechanisms and vendor relationship management.

BUSINESS ETHICS AND VALUES

COURSE OUTCOME:

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

CO1	Understand significance of ethics & values in business and outline role of CEO in business
CO2	Analyse types of ethical issues in business environment
CO3	Identify and relate internal ethics to business environment
CO4	Identify and relate external ethics to business environment and outline social audit
CO5	Discuss corporate social responsibility

PERSONALITY DEVELOPMENT

COURSE OUTCOME:

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

CO1	Outline the pattern of thoughts, feelings and behavior
CO2	Enhance communication
CO3	Identify their personality
CO4	Balance EQ/IQ levels
CO5	Transform adolescence to adult stage

FINANCIAL SERVICES

COURSE OUTCOME:

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

CO1	List types of financial services and their role
CO2	Recognize role and functions of merchant banker and capital market
CO3	Compare and contrast factoring and leasing
CO4	Categorise mutual funds based on features
CO5	Explain credit rating, consumer finance, bonds and venture capital.



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INFORMATION MANAGEMENT

COURSE OUTCOME:

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

CO1	Explain information system concepts and its role in decision making
CO2	Explain MIS, its structure and role in management functions
CO3	Classify & discuss information system categories, Database Management systems
CO4	Discuss SDLC and functional information system categories
CO5	Outline functions fo BPO and recent trends in information management

PROJECT

COURSE OUTCOME:

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

CO1	To understand problem area or area of improvement in the organization
CO2	To apply and relate his conceptual knowledge in the field of study
CO3	To analyse the data collected related to the objectives of the study
CO4	To interpret the results of data analysis
CO5	To compile and design suggestions/solutions for the study and report the study in prescribed format.



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15.DEPARTMENT OF COMPUTER APPLICATIONS (B.C.A)

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1	Gain theoretical knowledge in computer fields.
PSO2	Apply the knowledge of computer in practice.
PSO3	Ability to design and develop an application to meet the desired.
PSO4	Enhance programming skills in student.
PSO5	Enhance the critical thinking and problem solving abilities.
PSO6	Use computer skills in different fields.

Course Outcomes:

FIRST SEMESTER

Course Title: CORE THEORY I- FUNDAMENTALS OF DIGITAL ELECTRONICS

CO1	To demonstrate the functional codes of Binary Systems. To study about the concepts of Logic Gates.
CO2	To clarify the concepts of Boolean Functions. Construction of K-Map
CO3	Demonstrating Binary Arithmetic. Extracting the nature of Combinational Logic Circuits. To impart the applications of Encoders and Decoders.
CO4	To differentiate the types of Registers and their applications. Classification of Flip-flops.
CO5	Demonstrating the Classification of Counters. Explanation of Memory and its types.

Course Title: CORE THEORY II -PROBLEM SOLVING TECHNIQUES

CO1	Study the basic knowledge of Computers. Analyze the programming languages. Study the data types and arithmetic operations.
CO2	Know about the algorithms. Develop program using flow chart and pseudo code. Determine the various operators.
CO3	Explain about the structures. Illustrate the concept of Loops
CO4	Study about Numeric data and character-based data. Analyze about Arrays. Explain about DFD
CO5	Illustrate program modules. Creating and reading Files



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**Course Title: NON MAJOR
ELECTIVE 1- COMPUTER
FUNDAMENTALS**

CO1	Understand the basics of Computer and its Generations. Be able to understand the components of computer.
CO2	To Understand the introduction about MS Word. Be able to perform the Elements of window, Text Formatting, Text Manipulating options in MS Word.
CO3	To Understand the introduction about MS Excel. Be able to inserting and sizing the cells Implementing formulas and inserting worksheet.
CO4	To Understand the introduction about MS PowerPoint Be able to perform the slides manipulation. Implementing Multimedia and templates.
CO5	To Understand the introduction about Internet and Intranet. Be able to access the browsers. To get knowledge about basic components of E-Mail and E-Commerce

SECOND SEMESTER

**Course Title: CORE THEORY III-
C++ PROGRAMMING**

CO1	Revise the basics of Building any programming language. Introduction of OOPs and its Concept.
CO2	Creating programs in Conditional/Decision Making Statement Creating programs in Loop Statements. Defining programs in Jump Statements
CO3	Definition of Classes and important of Object. Benefits of using Friend Function. Define functions and its important in building the code Advantage of using Inline function.
CO4	Develop programs for overloading Unary and Binary Operators. Define the concept of constructor, destructor and its usage and its implementations.
CO5	Enhance reusability features using the concept inheritance. Avoid the duplicate of multiple inheritances using virtual base class. Access the program using polymorphism

Course Title: CORE PAPER IV-MICROPROCESSOR AND ITS APPLICATIONS

CO1	Describe the architecture and organization of microprocessor along with instruction set format. List and describe memory and addressing modes. Describe modes and functional block diagram of 8085 along with pins and their functions
CO2	Describe the microprocessor instruction set and classifications of 8085. Programming techniques like looping, counting and indexing.
CO3	List the concepts of stack and subroutine Concept of bit level programming and to do the programs using arithmetic operations.
CO4	Describe and use different types of conversions Representation of Time Delayed Programs on a Register pair and counters.
CO5	To Point out the Importance of Various types of Interrupts. Explains the uses of memory interfacing.



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Course Title: NON MAJOR ELECTIVE II - INTRODUCTION TO HTML

CO1	Knows the basic concept in HTML Concept of resources in HTML
CO2	Knows Design concept. Concept of Meta Data Understand the concept of save the files.
CO3	Understand the page formatting. Concept of list
CO4	Creating Links. Know the concept of creating link to mail address
CO5	Concept of adding images Understand the table creation.

THIRD SEMESTER

Course Title: CORE THEORY V - JAVA PROGRAMMING

- CO1** Knows the reason about the evolution of Java its development.
Study the basic of Java and to develop code.
Importance of Java comparing the other language.
- CO2** Develop program using constructors and its types.
Definition of inheritance and Writing program related to it
Differentiate string class and string buffer.
Concept of packages, interface, threads.
- CO3** Implementing the concept Exception handling various application.
Significance of exception handling.
Life cycle of thread.
- CO4** Explain I/O Streams.
Create file using Byte Stream and character Stream classes.
Usage of Java in internet
- CO5** Definition of Applet and Developing code to connect to internet.
Life Build Applet code using AWT controls and Layout managers

Course Title: CORE THEORY VI- DATA STRUCTURES

- CO1** Describe the various operations and applications of stacks ,arrays and queues
Understands the concepts of infix, postfix and prefix
- CO2** Understands the Basic operations on linked list and Applications of Linked List in Addition of Polynomials.
- CO3** Describes Binary Trees and Binary Tree Traversals: Inorder, Preorder and Post order Applies the concepts of BST.
- CO4** Describes and analyses Graph Traversals: Breadth First Traversal and Depth First Traversal.
And Applies the concepts Graphs in Minimum Cost Spanning tree and Dijkstra's Shortest Path
- CO5** Analyses and Applies the concepts of searching and sorting . Understands the concepts of Hashing and evaluates Collision Resolution.



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Course Title: CORE THEORY VII - GRAPHICS AND MULTIMEDIA

CO1	Describes Graphics and its applications .Analyses the working of the CRT. Evaluates DDA Line drawing and Bresenham's Circle drawing algorithm
CO2	Understands basics of 2D and 3D Transformations. Describes Parallel and Perspective projection.
CO3	Analyses Polygon Clipping Algorithms. Describes different Visible Surface Detection Methods. Understands the concepts of Polygon Surfaces-Polygon tables, Plane equations, Polygon meshes
CO4	Defines Multimedia and its applications. Describes Multimedia system architecture. Analyses Multimedia data interface standards and Multimedia databases.
CO5	Defines Hypermedia. Knows how to create hypermedia message. Understands the concepts of Distributed multimedia systems.

FOURTH SEMESTER

Course Title: CORE THEORY VIII- PYTHON PROGRAMMING

- CO1
 - Learn the basics of python
 - Do simple programs on python
 - Learn how to use an array
- CO2
 - Develop program using selection statement
 - Work with Looping and jump statements
 - Do programs on Loops and jump statements
 - Concept of function, function arguments.
- CO3
 - Implementing the concept strings in various application.
 - Significance of Modules.
 - Work with functions, Strings and modules
- CO4
 - Work with List, tuples and dictionary
 - Write program using list, tuples and dictionary
 - Usage of File handlings in python
- CO5
 - Concept of reading and writing files
 - Do programs using files

Course Title: CORE THEORY IX- OPERATING SYSTEMS

- CO1
 - Describe the important computer system resources and the role of operating system and scheduling of processes by CPU algorithms
- CO2
 - Understand the process synchronisation and Dead lock algorithms
- CO3
 - Evaluate the requirement for process synchronization and coordination handled by operating system
- CO4
 - Describe and analyse the memory management and its allocation policies.
- CO5
 - Identify use and evaluate the file management policies with respect to different storage management technologies



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Course Title: CORE THEORY X: SOFTWARE ENGINEERING

CO1	Familiarization with the concept of software engineering and its relevance
CO2	Understanding of various methods or models for developing a software product
CO3	Understand tools and techniques of software engineering
CO4	Skill to design and code a software
CO5	Verify and validate the problem of software programming

FIFTH SEMESTER

Course Title: CORE THEORY XI - DOT NET PROGRAMMING

- CO1 To understand the basic concept of HTML language with different types tags like formatting the text, inserting the tables.
- CO2 To gain the basic knowledge in VB NET with the Frame work
- CO3 Enable to apply technical knowledge and perform specific technical skills
- CO4 Understand to design web applications using ASP.NET 2. Successful students will be able to use ASP.NET controls in web applications
- CO5 Apply the concept to create database driven ASP.NET web applications and web services

Course Title: CORE THEORY XII- DATABASE MANAGEMENT SYSTEM

CO1	To demonstrate the characteristics of Database Management Systems. To study about the concepts and models of database. To impart the concepts of System Development Life Cycle and E-R Model.
CO2	To classify the keys and the concepts of Relational Algebra. To impart the applications of various Normal Forms Classification of Dependency.
CO3	To elaborate the different types of Functions and Joins and their applications. Introduction of Views, Sequence, Index and Procedure.
CO4	Representation of PL-SQL Structure. To impart the knowledge of Sub Programs, Functions and Procedures.
CO5	Representation of Exception and Pre-Defined Exception. To Point out the Importance of Triggers, Implicit and Explicit Cursors.

Course Title: CORE THEORY XIII - COMPUTER NETWORKS

- CO1 Define computer networks, Demonstrate the types of networks, Distinguish topologies, Differentiate Transmission mode, Design OSI and TCP/IP Reference model
- CO2 Illustrate Transmission media, Analyze the wireless media, Create the structure of Telephone system
- CO3 Formulate framing control and flow control, Explain error correcting codes and error detecting codes
- CO4 Discuss store and forward switching network, Explain Routing algorithm, Examine congestion control algorithm
- CO5 Summarize the elements of transport protocol, Describe DNS,EMAIL,WWW



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Course Title: CORE PAPER XIV ELECTIVE I - OBJECT ORIENTED ANALYSIS AND DESIGN

- CO1** Demonstrate the ability to apply the knowledge of Object-Oriented Methodologies. Understand the use of UML.
Ability to Create Use case Models.
- CO2** Defining and Applying Objects, Attributes and Methods.
Benefits of Case studies.
- CO3** To describe the step by step object-oriented methodology of software development through class design and database management system.
- CO4** Ability to apply the concept of different patterns for constructing software architectures through User interface design.
- CO5** Apply the concept of Object orientation on testing for software development.
Ability to understand the problems, communicating with application experts and user.

SIXTH SEMESTER

Course Title: CORE THEORY XV - PHP PROGRAMMING

- CO1** Discuss the basic concepts, Creating basic scripts, Implement data types, variables and operators
- CO2** Illustrate the conditional statements, Implementing String and numeric functions
- CO3** Create and processing array functions, Express the date and time functions
- CO4** Creating User-Defined Functions and classes, Implement files and directories
- CO5** Demonstrate database connectivity, Examine the user input through Database layer and Application layer, Construct query output with Character, Numeric, Date and time.

Course Title: CORE THEORY XVI - MOBILE APPLICATION DEVELOPMENT

CO1	Understand the Overview, Architecture and Features of Android. Study the setting up of Android environment. Developing simple Android application.
CO2	Understand the concepts of Android user interface. Exploring the different types of views available.
CO3	Understand the concepts of Saving and Loading User Preferences. Studies the File Handling methods and thereby able to manage data.
CO4	Able to Send and Receive messages .Understands how to send E-mail .Explores the concepts of Networking thereby able to download Binary Data and Text Files.
CO5	Explore the concepts of Location Based Services thereby able to Display maps and zoom control and add Markers Able to get the location – Geocoding. Understand Publishing Android Applications concepts



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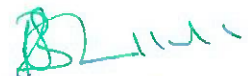
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Course Title: CORE THEORY XVII - DESIGN AND ANALYSIS OF ALGORITHMS

- CO1** Knows how to solve the basic Problems.
Derive asymptotic runtime bounds for reasonably straightforward pseudo-code with nested loop
Concept of Space complexity, Time complexity
- CO2** Knows sorting and searching.
Concept of Knap sack problems, Job sequencing with deadlines
Definition of Optimal Merge Patterns.
- CO3** Know the basic representation of undirected and directed graphs.
Understand the shortest path problems and their applications
Usage of 0/1 Knapsack
Concept of Backtracking
- CO4** Knows to solve the N-Queens Problem
Definition of Hamiltonian Cycle Problem.
- CO5** Understand the Travelling Salesman Problem.
Definition of Branch and Bound general method.

Course Title: CORE THEORY XVIII ELECTIVE II - OPERATIONS RESEARCH

- CO1** Applying features of OR in decision making for industries. Develop formulations for Linear programming problem
- CO2** Obtain the Algebraic Solution using Simplex method and Big M method
- CO3** Obtain solution for Transportation Model and Assignment Model Problems and also understand the difference between the same
- CO4** Understanding Sequencing Problem and Processing each of 'n' jobs through m machines
Understanding the characteristics of game theory and obtaining the algebraic solution for solving games.
- CO5** Applying PERT and CPM computations and thereby scheduling the resources



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Department of Biotechnology

PROGRAM SPECIFIC OUTCOMES

PSO1: Acquire basic knowledge in English and language grammar, communication skills, writingskills and creative writing skills.

PSO2: Comprehensive the core concepts and various ideas, analyze, execute and contribute in thefield of biotechnology and other related industries.

PSO3: Possess the basic and essential knowledge on various aspects of biotechnology tosuccessfully pursue their higher studies.

PSO4: Obtain prerequisite skills and have the ability to start pursue their employment,entrepreneurship and research activities.

PSO5: Realize and share the importance of professional integrity, ethical and environmental issuesrelated to the field biotechnology.

Course Title:
Core Paper 1:
Cell Biology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To have an insight of Cell as the fundamental unit of life and to compare the complexity of Eukaryotic cell with the primitive prokaryotic cell, with the identification of specific role of organelles that attribute to the co-ordinated function of cell.
CO2	To analyze the structure and functions of plasma membrane and the variousmechanisms that regulates the transport process across cell membranes.
CO3	To selectively categorize the cytoskeletal backbone, cell motility organs and todescribe the cell cycle and cell death.
CO4	To predict the response of cells to intra and extracellular environment by studyingabout the intracellular signaling pathways.
CO5	To specifically examine life processes at the cellular level, such as protein secretion, targeting and protein degradation.



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Course Title: Allied Paper1: Microbiology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Outline the evolution of microbiology and characterize microorganisms.
CO2	Categorize the methods of sterilization and identify the significance of culture media in the growth of different microbes.
CO3	Discover different staining procedures and microscopic techniques used to visualize microbial cells.
CO4	Distinguish between normal flora and pathogens.
CO5	Define and describe the role of microbes in food intoxications and soil fertility

Course Title: Core Practical – I: Cell Biology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Enumerate the different types of blood cells using appropriate techniques.
CO2	Analyze the stages of mitotic and meiotic cell divisions.
CO3	Utilize the techniques involved in cell biology for preservation of specimen.
CO4	Explain the working of different types of microscopes.
CO5	Demonstrate the working principle of cell fractionation.

Course Title: Allied Practical – I: Microbiology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Establish basic skills associated with microbiology and biotechnology
CO2	Gain basic knowledge on various pure culture techniques for the isolation of microorganisms from various samples
CO3	Distinguish between various methods of sterilization
CO4	Characterize and differentiate various types of bacteria using different staining techniques.
CO5	Learn how to measure the size of the different types of microorganism using micrometry method.
CO6	Microscopically analyze the morphological features of fungal organisms using lactophenol cotton blue staining.



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Course Title: Non Major Elective 1: Biotechnology For Society

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the importance of biotechnology in different agricultural practices.
CO2	Appreciate the role played by microorganisms in the development of food supplements, biological fertilizers and pesticides.
CO3	Gain knowledge about the application of biotechnology in transforming environmental pollutants and learn the detrimental effects of biological weapons.
CO4	Summarize the basics of antibiotics and outline the production of penicillin.
CO5	Know the significance and uses of transgenic plants.

Course Title: Core Paper: 2: Molecular Biology

Course Outcomes: At the end of the Course, the Student will be able to:

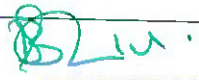
CO1	Explain the fundamental properties, structure and processes of nucleic acids
CO2	Discuss the molecular mechanism of Replication in prokaryotes
CO3	Elucidate the transcription mechanism in prokaryotes
CO4	Explain the process of Initiation, elongation and termination, and post translational modifications of proteins
CO5	Elaborate the regulation of gene expression using Operon concept

Course Title: Allied Paper 2– Chemistry in Everyday Life

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate the preparation of the chemical solutions such as normal, molar and molal solutions.
CO2	Distinguish the components of air and water and gain insights on air and water pollution.
CO3	Classify and identify the food flavorants and food preservatives used in food production
CO4	Discuss on the chemicals such as fertilizers and pesticides in agriculture.
CO5	Identify the chemicals used in medicines for the treatment of ailments.
CO6	Analyze and appraise the chemicals used in everyday life and gain insights on green chemistry.

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Course Title: Core Practical: II Molecular biology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Make use of the conventional and advanced methods in isolating and purifying nucleic acid from various organisms.
CO2	Estimate the concentration of nucleic acid from various biological samples
CO3	Estimate the concentration of protein from various biological samples
CO4	Evaluate the quality of nucleic acids by gel electrophoresis
CO5	Evaluate the quality of nucleic acids by denaturing in formaldehyde gel electrophoresis

Course Title: Allied practical II– Chemistry in Everyday Life

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Gain insights on the safe handling of laboratory glass wares and laboratory practices
CO2	Prepare of the chemical solutions such as normal, molar and molal solutions.
CO3	Prepare buffer solutions with determined pH
CO4	Estimate the amount of chemicals present in unknown solutions and test the hardness of water.
CO5	Outline the preparation of soaps

Course Title: Non Major Elective 2: Food Science

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Study the energy components of food.
CO2	Classify foods and learn the ill effects associated with the consumption of unhealthy foods.
CO3	Learn the process and the importance of food preservation.
CO4	Understand the basic principles of food packaging.
CO5	Identify the signs of spoilage and determine the role of microbes in spoilage of foods.
CO6	Develop basic knowledge on adulterants in food and the related food standards and specifications.

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Course Title: Core Paper 3: Skill Enhancement Course - Bioinstrumentation

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the various centrifugation and chromatography used in separating biomolecules based on various characters such as molecular weight, charge etc.
CO2	Apply absorbance and transmittance of light and outline the instruments operating with these light rays for identifying biomolecules.
CO3	Practice the electrophoretic techniques to identify the quality of nucleic acids and proteins.
CO4	Illustrate the importance of advanced electrophoretic techniques in identifying variations in nucleic acid molecules.
CO5	Explain the role of radiography and biosensors in medicine and diagnosis of biological entity.

Course Title:

Allied Paper

3:

Biochemistry

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define and relate the acidity and alkalinity with the biological buffer systems.
CO2	Classify and analyze the structure, composition and function of biomolecules such as carbohydrates and proteins
CO3	Discuss the metabolic pathways and significance of biomolecules such as lipids and nucleic acids
CO4	Discriminate the types and the various roles of prostaglandins and porphyrins.
CO5	Tabulate the sources, structure, function and deficiency diseases relating to fat soluble and water soluble vitamins and minerals

Course Title: Core Practical – III: Bioinstrumentation

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Record lab safety rules and apply the same in safe access of laboratory wares.
CO2	Practice, experiment with and apply the basic instruments in the laboratory such as weighing balance, pH meter, shaker, incubator etc. in various research processes.
CO3	Predict the functionality of Beer – Lambert's law in identifying and quantifying a biomolecule such as protein, pigment etc.
CO4	Employ the separation techniques for separating biomolecules based on centrifugal force by centrifugation and chromatography by molecular weight, charge etc .
CO5	Apply electrophoretic techniques to qualify nucleic acid and to identify various proteins based on their molecular weight.
CO6	Observe and record the operation of FTIR, HPLC and GCMS for identifying a compound.

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Course Title: Allied Practical – III: Biochemistry
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Deduce how to standardise various chemical solutions.
CO2	Estimate the amount of chemicals such as glycine, glucose and ascorbic acid volumetrically
CO3	Estimate the amount of glucose and inorganic phosphorus colorimetrically
CO4	Analyze the sugars such as glucose, fructose, lactose and sucrose qualitatively
CO5	Analyze the aminoacids such as Arginine, Cysteine, Tyrosine and Tryptophan qualitatively

,Course Title: Core Paper 4: Skill Enhancement Course - Genetic Engineering
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate the basic principles that govern the genetic engineering techniques
CO2	Illustrate the significance of enzymes and nucleic acids in molecular techniques and the specificity of vectors for cloning and advantages.
CO3	Enumerate various recombinant techniques and gene probes and molecular markers identification
CO4	Analyze and detect nucleic acid components from different sources using advanced molecular techniques.
CO5	Exhibit knowledge in sequencing technologies and protein engineering techniques
CO6	Explore the strategies for Gene cloning and its application in research, medicine and agriculture

Course Title: Allied Paper 4: Fundamentals of Computers and Biostatistics
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Enumerate the basics of computers architecture and storage devices
CO2	Explain the basics of working with MS-word, Excel and powerpoint
CO3	Demonstrate the basic methods of data collection, graph construction and sampling techniques
CO4	Calculate measures of central tendency and interpret biological data via various probabilistic distribution methods.
CO5	Correlate and analyze biological data through various statistical methods.



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Course Title: Core Practical IV: Genetic Engineering
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Isolate the Plasmid DNA and Genomic DNA.
CO2	Predict the molecular weight of DNA by agarose gel electrophoresis
CO3	Estimate the DNA using UV-Visible spectrophotometry. Determine the restriction digestion and ligation of DNA
CO4	Determine the restriction digestion of DNA.
CO5	Amplify the DNA using PCR and to explicate the proteins using SDS- PAGE.
CO6	Prepare the competent cells and perform bacterial transformation

Course Title: Allied Practical IV: Fundamentals of Computers and Biostatistics
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Represent data in to graphical form
CO2	Determine averages of the biological data
CO3	Test the level of significance of biological data and interpret the results
CO4	Enhance skills in working with MS-word, powerpoint and Excel
CO5	Create E-mail and use of various search engines

Course Title:
Core Paper 5:
Immunology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Grasp the basic concepts of immunity while distinguishing between innate and acquired immunity
CO2	Define the role of various cells/ organs involved in bodily defense mechanisms
CO3	Classify antigens/antibodies and Monoclonal antibody production and learn the pathways of complement systems
CO4	Gain an in-depth understanding of the development of T & B cells and explain the role of MHC in cell and antibody mediated immune response.
CO5	Demonstrate the role of cytokines in immune response and explain the types of hypersensitivity and auto immune diseases
CO6	Demonstrate the antigen –antibody reactions in various immune techniques and also gain knowledge of production of vaccines.



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Course Title: Core Paper 6: Bioinformatics

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discuss about various biological databases and its analysis
CO2	Compare the genomic data from databases and to interpret in meaningful manner.
CO3	Demonstrate the principles of human genome project and genome organization techniques
CO4	Explore the steps in sequence alignment algorithms and various sequence alignment programs used.
CO5	Use various protein databases and proteomics analysis tools
CO6	Identify novel lead compounds using ligand based and structure based drug designing process
CO7	Exhibit knowledge in microarray data analysis using gene expression tools

Course Title: Core Paper 7: Bioprocess Technology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Illustrate the significance of cultivation and preservation of different types of industrial microbes.
CO2	Distinguish the principle and application of various fermentors used in different industries.
CO3	Depict the various methods involved in the downstream processing for various metabolites.
CO4	Compare the different methods of extraction, purification and drying process for different metabolites products.
CO5	Summarize the microbial role and economic importance of various primary and secondary metabolites.
CO6	Speculate the role and importance of microorganisms behind the production of Biopesticides and Biofertilisers.

Course Title: Core Paper 8- Skill Enhancement Course: Food Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discover the role of biotechnology in food processing industries.
CO2	Execute the biotechnological production of commercially important metabolites.
CO3	Apply the principle of downstream processing and explain the various stages involved in downstream processing.
CO4	Evaluate the molecular diagnostic techniques pertaining to identification of food adulterants.
CO5	Assess the safety aspects and social issues related to applications and implications of genetically modified foods.



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Course Title: Elective 1A -Marine Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Demonstrate the importance of aquaculture, selection of cultivable species and its commercial importance.
CO2	Discuss the design, construction and management practices of aqua farms.
CO3	Compile the various cultivation methods of marine organisms and to explain the marine pollution and sea food infections.
CO4	Comprehend the uses of marine organisms, their significance, interaction and impacts on the environment.
CO5	Describe the growing use of marine natural products in food, cosmetics, agriculture and to analyze the concepts on bio fouling and antifouling.

Course Title: Elective Paper 1B: Agricultural Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:


CO1	Discuss crop improvement hybridization and plant breeding techniques.
CO2	Demonstrate <i>in vitro</i> production of disease free plants and the molecular basis of plant resistance to various abiotic stresses
CO3	Illustrate the plant growth promoting microorganisms and phosphate solubilizing bacteria.
CO4	Describe the impact of transgenic plants in agriculture and Horticulture and produce transgenic plants for fungal, bacterial and viral disease resistance
CO5	Apply the principles of bioethics on GM crops and recall the various plant variety protection acts.

Course Title: Elective Paper 1C: Basics in stem cell Biology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Exhibit knowledge on the types and sources of embryonic, adult and induced pluripotent stem cells and to differentiate the potential of embryonic stem cells with adult stem cells.
CO2	Understand the properties, differentiation and regulation stem cells.
CO3	Share insights into techniques involved in isolation, expansion and identification of stem cells.
CO4	Evaluate the role of stem cells in clinical applications for human health and improvement. Discuss about animal models for regeneration.
CO5	Acquire a deeper understanding of stem cell banks and its importance .Understand the national & international guidelines of stem cell research and also recent advancements.

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Course Title: Core Practical V: Immunology, Bioinformatics, Bioprocess Technology & Food Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Perform blood grouping and determine blood type and to conduct serological diagnostic tests such as ASO, CRP and RA
CO2	Diagnose syphilis by carrying out TPHA and enteric fever by Widal test.
CO3	Acquire technical skills required for immunodiffusion and know the principle behind the techniques.
CO4	Retrieve biological data from various protein and nucleotide sequence database
CO5	Perform pairwise and multiple sequence analysis using various alignment programs
CO6	Predict sequence similarity, ORF, domains, motif using various sequence analysis tools
CO7	Isolate and screen industrially important microbes for the production of different metabolites.
CO8	Quantify and validate the presence of microbial metabolites using various techniques.
CO9	Perform serial dilution and plating in order to enumerate the microorganisms present in food samples.
CO10	Acquire skills to isolate lactic acid bacteria and manufacture whey.
CO11	Gain basic skills to detect adulterants in food.

Course Title: Core Paper 9: Animal Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Outline the techniques in assisted reproductive technology, embryo technology and artificial insemination.
CO2	Describe the media preparation, preservation, trypsinization, counting, maintenance and application of cell lines.
CO3	Discuss the strategies for gene transfer, treatment and transgenic animals.
CO4	Acquire knowledge on transgenic animals and animal diseases.
CO5	Explain the genetic modification in medicine and the ethics involved in it.

Course Title: Core Paper 10: Skill Enhancement Course: Plant Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Outline the history of plant biotechnology and state its importance during the different stages of plant development.
CO2	Explain regulation and control of gene expression
CO3	Illustrate about various culture medium preparation, haploid, triploid plant production and its application.
CO4	Learn in-depth the basic techniques of plant tissue culture and its application.
CO5	Recollect the role of phyto-hormones in plants
CO6	Develop molecular technique skills in plant tissue culture using Ti plasmid vectors in agrobacterium and use of transgenic plants.
CO7	Elaborate the genetic engineering and construction of DNA libraries in development of transgenic plants and its application

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Course Title: Core Paper 11: Environmental Biotechnology
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Analyze the scope of environmental Biotechnology and importance of Biogeo cycles
CO2	Explain the different types of environmental pollution and their impacts
CO3	Explain the process of waste water collection and waste water treatment in various methods.
CO4	Establish the role of denitrifying bacteria in maintaining Environment
CO5	Describe the principle and application of reactors used in different industries
CO6	Explain the process of drinking water treatment and summarize the sludge treatment process

Course Title: Elective Paper 2A: Entrepreneurship, Biosafety, Bioethics and Intellectual property rights

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Summarize the impact of entrepreneurship in Biotechnology
CO2	Describe the biosafety practices and guidelines for research in transgenic plants and analyze the risk assessment, handling and manufacturing practices of good laboratories.
CO3	Describe the human rights and solve the social issues prevailing in the society
CO4	Analyze the ethical basis concerning, reproduction technologies, prenatal diagnosis, sex selection and abortion.
CO5	Discuss the various forms of Intellectual property rights

Course Title: Elective Paper 2B: Biofertilizer

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify the role played by the various soil microbes in enriching soil fertility.
CO2	Understand the process and technology concerned with the mass production of biofertilizers.
CO3	Establish the function of soil bacteria like Azospirillum & Azotobacter as potent nitrogen fertilizers and learn the significance of VA-Mycorrhizal association.
CO4	Predict the role of cyanobacteria as a potent biofertilizer and its application on rice cultivation and crop yield.
CO5	Recycle organic/industrial waste for soil amendment and production of useful compounds like methane gas.



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Course Title: Elective Paper 2C: Medical Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Discuss the different types of vaccines available in market for treating diseases and the current research processes conducted in vaccine development
CO2	Find various diagnosis techniques used in identifying inborn errors of metabolism
CO3	Describe molecular techniques such as PCR, rDNA technology etc utilized in identifying genetic diseases
CO4	List various types of viral diseases and identify various techniques used in identifying those viral infections and other infectious disease
CO5	Illustrate immuno techniques used for identification of infectious antigens and allergens
CO6	Summarize the production of therapeutic agents such as cytokines and interferon
CO7	Identify the importance of various levels of clinical trials to be performed for successful production of a therapeutic product
CO8	Justify the ethics to be followed in performing clinical trials

Course Title: Open Elective 3: Public Health and Hygiene

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the scope and importance of public health and hygiene; also the various factors influence the healthy condition among the community
CO2	Distinguish the between the various types of causes and effects of environmental pollution
CO3	Depict the various types of hygiene measures to be followed and links between healthful housing and healthy living.
CO4	Gain knowledge on the causes and preventive measures of various non-communicable diseases.
CO5	Illustrate the significance and development of various organizations related with public health.
CO6	Gain knowledge on the various legal act pertaining to public health and hygiene

Course Title: Core Practical VI: Animal Biotechnology, Plant Biotechnology & Environmental Biotechnology

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Make use of the techniques used in preparing tissue culture medium and membrane filtration in culturing animal cells and prepare single cell suspension from spleen
CO2	Evaluate cell viability and cell count
CO3	Experiment with cryopreservation
CO4	Examine the importance of trypsinization in monolayer and subculture
CO5	Explain and infer the role of serum in cell culture
CO6	Evaluate the principles and application of plant biotechnology such as cell and tissue culture
CO7	Explain Invitro germination of plants and Organogenesis of plant tissue
CO8	Illustrate Callus Development and Micropropagation of plants
CO9	Develop technical skills in Protoplast isolation and Isolation of genomic DNA from plantsamples
CO10	Demonstrate of soli microorganisms mediated gene transfer.
CO11	To identify the coliform bacteria using MPN technique.
CO12	To Analyze the dissolved oxygen concentration of water sample.
CO13	To estimate the chemical oxygen demand

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B.Sc BIOCHEMISTRY

PROGRAM SPECIFIC OUTCOMES (PSO) IN RELATION TO GRADUATE ATTRIBUTES

After successful completion of 3 years BSc programme the students will be able to

PSO1	Become knowledgeable in the field of Biochemistry and apply the principles of the same to the needs of the Employer / Institution
PSO2	Gaining a wide knowledge on role of proteins, carbohydrates, nucleic acids, enzymes in the cell with their clinical importance.
PSO3	Acquiring analytical and hands on skills to perform research in the area of Biochemistry.
PSO4	Students will be able to comprehend the knowledge in the biochemical, analytical, biostatistical, computational areas.
PSO5	Integrating the concepts of Metabolism, Clinical Biochemistry, and Immunology, nutritional to illuminate acquaintance on health and disease.
PSO6	Use library search tools to locate and retrieve scientific information about a technique or topic related to biochemistry Use online data bases and source appropriately to study genetic disease Equipped to record and interpret digital data
PSO7	Identify problems related to environment. Analyze and derive valid conclusions with contemporary knowledge in biochemistry and computers

FIRST SEMESTER

Course Title: **NUTRITIONAL BIOCHEMISTRY (CORE PAPER -I)**

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Realizing the fact that "Food as medicine",
CO2	Cognizance of basic food groups viz. Carbohydrates, proteins and lipids and their nutritional aspects as well as calorific value
CO3	Identify and explain nutrients in foods and the specific functions in maintaining health.
CO4	Exposure to the nature and biomedical significance of vitamins and minerals present in food
CO5	Analyzing the biological importance of major and minor trace elements (Minerals) in the food
CO6	Understanding the correlation between importance of nutrients and life style disorders viz. diabetes mellitus, renal failure and cardiovascular diseases
CO7	Apply knowledge of the role of nutrition and healthy diet for disease prevention.



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Course Title: ALLIED CHEMISTRY-1
(SEMESTER-I)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Know the discovery of electron, proton and neutron and their characteristics (various atom models), formation of different types of bonds, geometry of simple molecules, calculate bond order of heterohomo atomic molecules.
CO2	Apply the fundamental principles of measurement, matter (pressure from a macroscopic and microscopic perspective), chemical bonding, general chemical reactivity and solution chemistry to subsequent courses in science.
CO3	To make students capable of understanding and studying organic reactions To have exposure to various emerging new areas of organic chemistry To develop skills required for the qualitative analysis of organic compounds
CO4	Recognize the basic terms of thermodynamic. Able to predict the energy change in heat capacities at constant volume and pressure and their relationship. Able to derive Joule's law and its applications. And to derive relationship between modification of distribution law when solute undergoes dissociation
CO5	To have basic idea about type of solutions and its fundamental concentration units. To know the fundamental properties of acid and base classifications and its importance in chemical reactions.

NON MAJOR ELECTIVE -1 (SEMESTER-I)

Course Title: BASICS OF MEDICAL TERMINOLOGIES

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Define Medical Terminologies
CO2	Compare Different Human Diseases
CO3	Apply Medical Terms In Health Sectors Or Medical Reports
CO4	Analyse The Functions Of Different Parts of Human body
CO5	Interpret Normal Values Of Metabolic Parameters

SECOND SEMESTER

Course Title: CELL BIOLOGY(CORE PAPER II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify and explain the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially the organelles
CO2	Demonstrate familiarity with various elements of cytoskeleton
CO3	State the structure, function and composition of cell membrane and communicate the types and mechanism of membrane transport
CO4	Illustrate the phases of cell cycle; in particular mitosis and describe the significance of meiosis in genetic diversity
CO5	Relate the structure and biological role of extracellular matrix and cell-cell junction with physiological processes
CO6	Apply the knowledge of cell biology in practicals and interpret experimental results

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Course Title: ALLIED CHEMISTRY-2

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	To have a basic idea about nuclear Chemistry and its applications, nuclear reactions and radioactivity and their medical importance (isotopes).
CO2	To study the various factors which affect the rate of a chemical reaction such as concentration, temperature, solvent, catalyst etc. and theories of chemical kinetics, and also to describe a reaction rate in terms of a change in concentration divided by a change in time (at constant volume) and a general form of a (differential) rate law
CO3	Recognize the bonding in transition compounds by VBT and CFST theories. Able to predict the geometry of coordination compounds and type of hybridization. Able to recognize the biological reaction alkali and alkaline earth metals, nitrogen fixation, hemoglobin and myoglobin.
CO4	Acquire basic knowledge of electrode conduction. Determine the solubility of sparingly soluble salts. Explain the various methods for the determination of transport number. Understand theories of electrochemical cell reactions, and also learn about chemical and physical equilibrium of the electrolytes. To study the various types of cells and functionalities.
CO5	To study the behaviour of binary liquid mixtures, CST, azeotropes, colligative properties, solubility of gases in liquids, ionic equilibria and electrical properties of ions in solutions.

NON MAJOR ELECTIVE II

Course Title: PLANT BIOACTIVE COMPOUNDS IN TRADITIONAL MEDICINE

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Define and classify bioactive compounds with proper examples
CO2	Differentiate traditional and modern medicine
CO3	Discuss the plants used in traditional medicine of Ayurveda, Siddha, Unani and Greek medicine
CO4	Identify the plants used in the treatment of diabetes, arthritis and immunomodulation
CO5	Analyse the plants with different biochemical techniques

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NON MAJOR ELECTIVE-II (SEMESTER- II)

Course Title: PREVENTION AND MANAGEMENT OF LIFESTYLE DISORDERS-

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Define Life Style And Balanced Diet
CO2	Identify Lifestyle Prone Disorders
CO3	Categorize Communicable And Non-Communicable Disease
CO4	Prioritize Improved Life Style
CO5	Develop Healthy Habits
CO6	Illustrate The Importance Of Nutrition In Prevention And Management Of Life Style Prone Disorders

B.SC BIOCHEMISTRYFIRST YEAR

Course Title: MAJOR PRACTICAL-1

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Qualitatively analyse the carbohydrates and amino acids and report the type of carbohydrate based on specific tests
CO2	Differentiate the carbohydrates based microscopic examination of the crystal structure.
CO3	Quantify glucose in jaggery by benedicts method
CO4	Quantify ascorbic acid in lemon by Dichlorophenol indo phenol dye method
CO5	Quantify glycine by sorensens formal titration method, Determine lipid properties

B.SC BIOCHEMISTRYFIRST YEAR

Course Title: ALLIED PRACTICAL-1 (CHEMISTRY)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Perform qualitative analysis of known standards as well as unknown samples and semi micro qualitative analysis of organic compoundsfunctional group identification.
CO2	Knows the proper procedures and regulations for safe handling and use of chemicals and can follow the proper procedures and regulations for safe handling when usingchemicals.
CO3	Identify, properly use, and care for equipment and supplies used in analytical laboratory
CO4	Communicate the concepts and results of laboratory experiments through effective writing and oral communication skills.
CO5	Are able to design, carry out, record and analyze the results of chemical experiments.



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THIRD SEMESTER

Course Title: CHEMISTRY OF BIOMOLECULES (CORE PAPER III)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	List the facts and milestone discoveries, key contributions of scientists that led to the establishment of Biochemistry as a separate discipline
CO2	Explain the structure, biological importance and physico chemical properties of carbohydrates, from monosaccharides to polysaccharides
CO3	Identify the structure of amino acids, classify proteins and explain their properties
CO4	Show how amino acid sequence of a polypeptide chain is determined, relate the structural levels of organization of proteins and describe the forces stabilizing the structure of proteins
CO5	Illustrate the structure of nucleotides, distinguish DNA and RNA and describe the structure of DNA, types of RNA and their biological functions
CO6	Define and classify lipids with examples, explain the properties of fats and describe the structure and biological functions of phospholipids, glycolipids and sterols

THIRD SEMESTER

Course Title: CHEMISTRY OF BIOMOLECULES (CORE PAPER III)

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FOURTH SEMESTER**Course Title: BIOCHEMICAL TECHNIQUES (CORE PAPER IV)****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	<ul style="list-style-type: none">• A practical knowledge on the separation of biological sample by centrifugation• Separation of subcellular organelles by differential centrifugation
CO2	<ul style="list-style-type: none">• To learn various techniques of product purification and design purification strategy based on product characterized and cost effectiveness Obtaining analytical skills to separate samples (amino acids) using paper chromatography• Detection of sugars using thin layer chromatography• Separation and purification of proteins using affinity chromatography
CO3	<ul style="list-style-type: none">• Know the structure of atoms and molecules. The larger the number of wavelength emitted by these system makes it possible to investigate their structure in detail including electronic configuration of ground and various excited state and also biochemical assay of macromolecules• Advanced knowledge about the interactions of electromagnetic radiation and matter and their applications in spectroscopy• Analyze and interpret spectroscopic data collected by the methods• Assay of biomolecules using UV spectroscopy
CO4	<ul style="list-style-type: none">• The students will be able to demonstrate the methodology involved in separation of proteins, Nucleic acid by various electrophoretic techniques.
CO5	<ul style="list-style-type: none">• Acquire knowledge on atomic structure.• Radiation, types of radioactive decay,• Detection and measurement of radioactivity using GM counter and Scintillation counter.• Biological hazards of radiation and safety measures in handling radio isotopes.

FOURTH SEMESTER**Course Title: Allied Microbiology-2****Course Outcomes: At the end of the Course, the Student will be able to:**

CO1	By the end of this course, students will be able to list out the microbes used in water treatment, and air purification. They can able to compare and explain different air sampling devices.
CO2	Analyze and understand the types of microbes in Food microbiology; the factors and kind of microbes in food spoilage and can categorize various foodpreservation techniques used in microbiology.
CO3	Identify various sources of microbes in milk and demonstrate experiments with pasteurization, phosphatase and reductase tests. Able to understand the formation of dairy products- Cheese and Yogurt.
CO4	Explain the importance of microbial fermentation in the production of organic acids, antibiotics and alcoholic beverages such as citric acid & Vinegar, Penicillin & Streptomycin, Beer & Wine.
CO5	Predict the role of microbes in human disease, the role of microbes in issues of health, and the human immune response to microbial infection.
CO6	Cite examples and plan the vital role of microorganisms in biotechnology, fermentation, medicine, and other industries important to human well being.

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B.SC., BIOCHEMISTRY SECOND YEAR

Course Title: MAJOR PRACTICAL-II

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand good laboratory practices in a biochemistry laboratory
CO2	Use of analytical balance
CO3	Calculate and prepare normal, molar and percentage solutions
CO4	Learn the working of colorimeter device
CO5	Explain the concept of stock solution and working standard solution
CO6	Estimate phosphorus and protein using colorimetric method
CO7	Exhibit the knowledge of isolation of biomolecules like starch, casein and albumin from biological samples
CO8	Obtain hands on training in basic separation technique like paper chromatography, thin layer chromatography and column chromatography and gain expertise
CO9	Assess the suitability of chromatography technique for solving specific analytical problem and critically apply the knowledge for biomolecule separation
CO10	Demonstrate the principle and working of SDS PAGE
CO11	Visualize and identify permanent slides of different cell types and different stages of cell division
CO12	Handle microscope

B.SC., BIOCHEMISTRY SECOND YEAR

Course Title: ALLIED PRACTICAL -II (MICROBIOLOGY)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Demonstrate the practical skills in handling microscopy and staining procedures
CO2	Graduates acquired knowledge in sterilization techniques and be able to perform routine culture handling tasks safely and effectively.
CO3	Students will be able to Know various Culture media used in isolating Pure culture of bacteria, perform in pathological samples
CO4	Know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement
CO5	Students will be able to isolate and enumerate bacteria from soil water and air.
CO6	It provides the knowledge of antibiotic sensitivity and various biochemical characterizations of bacteria.



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FIFTH SEMESTER

Course Title: ENZYMES (CORE PAPER V)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Name and classify enzymes. Understand about the structure of enzyme, gain fundamental knowledge in relevant principles of enzyme
CO2	Analyse and interpret the graphs based on kinetics data. Identification of Enzyme specificity of unknown samples using MM- Equation or by LB plot. Gain knowledge on regulation of enzyme activity and its types.
CO3	Understand the terms such as activation energy, interpret the theories of enzyme mechanism of action -Lock and key theory and induced fit theory. Explain the principles behind enzyme catalysis- acid base, covalent metal ion and proximity orientation.
CO4	Describe the structure and functions of various coenzymes and cofactors in the biological system
CO5	Comprehend the various methods for production, purification, characterization of immobilized enzymes. D Discuss the application of industrially important enzymes in food, pharmaceutical and textile industries


BSc FIFTH SEMESTER

Course Title: INTERMEDIARY METABOLISM (CORE PAPER VI)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Define the terms Metabolism-Catabolism and Anabolism Write chemical reactions involved in biochemical pathways that produce ATP such as glycolysis, TCA cycle, ETC
CO2	Explain how biochemical energy is generated in cells using principles of thermodynamics (free energy enthalpy) using coupled reactions to show how an endergonic reaction can occur by coupling with exergonic reaction
CO3	To draw or describe the structure of amino acids, proteins, carbohydrates, lipids and nucleic acid Write chemical reactions involved in biochemical pathways that produce ATP such as glycolysis, TCA cycle, ETC
CO4	Describe the metabolism of, lipids. Write chemical reactions for the individual steps in each pathway
CO5	Exemplify the role of ribose 5-phosphate and the steps involved in the synthesis of adenine and guanine Detailed information in the formation of uric acid upon purine catabolism. Recall the steps involved in the biosynthesis and degradation of pyrimidine.

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BSc FIFTH SEMESTER
Course Title: HUMAN PHYSIOLOGY (CORE PAPER VII)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Gaining a complete knowledge in the physiology of life
CO2	Be aware of the functional relationships between various organ systems of the body
CO3	Classify blood groups so as to identify the blood groups of patients and donors for the purpose of safe blood transfusion
CO4	Cognizance of various systems of the body which support life viz. Circulatory, digestive, respiratory, nervous and excretory systems
CO5	Explain the structure and functions of neuron, transmission of nerve impulse, Understand neuromuscular coordination

BSc FIFTH SEMESTER
Course Title: MOLECULAR BIOLOGY (CORE PAPER VIII)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Infer the central dogma of molecular biology, Show how DNA acts as vehicle of inheritance through experimental evidences
CO2	Outline the steps involved in replication and explain the events, enzymology, fidelity and inhibitors of replication in <i>E.coli</i>
CO3	Summarize the process of prokaryotic transcription
CO4	Define genetic code, list its basic features and show how it can be deciphered Relate genetic code to translation process and explain protein biosynthesis
CO5	Illustrate the regulation of gene expression in prokaryotes using <i>lac</i> and <i>trp</i> operon

BSc FIFTH SEMESTER
Course Title: PRINCIPLES OF BIOTECHNOLOGY (Elective Paper I)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To Discuss the basic requirements and tools employed in genetic engineering process
CO2	Demonstrate the basic and recent techniques applied in the field of Recombinant DNA technology
CO3	Apply the basic rDNA technique to produce transgenic animal, discuss gene transfer methods, their application in pharmaceutical industry, cloning and its importance
CO4	Design experiments on plants using rDNA techniques
CO5	Handle the equipments employed in DNA amplification, describe about gene therapy and antisense RNA therapy



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BSc FIFTH SEMESTER

Course Title: BASICS IN MEDICAL LABORATORY
TECHNOLOGY

(Elective Paper-I)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Develop a good conduct in lab and prepare of laboratory reagents
CO2	Analyze the samples using various microscopes and Maintain lab wares
CO3	Identify the significance of normal and abnormal constituents of urine.
CO4	Examine the stool specimen
CO5	Estimate the hematological parameters

BSc FIFTH SEMESTER

Course Title: GENETICS (Elective Paper-I)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Explain the law of segregation, law of independent assortment. Mendel's monohybrid and dihybrid cross with examples.
CO2	Define the Features of Inheritance, discrete inheritance, cytoplasmic inheritance and sex linked inheritance. Draw Notation and diagrams- Integration of multiple genes.
CO3	Understand the concepts of linkage and types of linkage and its significance.
CO4	Explain and relate the basic concepts of crossing over, types and significance.
CO5	Explain and apply the key concepts in DNA and chromosomes, and mutations with examples.
CO6	Understand how inheritance patterns are affected by position on chromosomes

SIXTH SEMESTER

Course Title: BIOINFORMATICS (CORE PAPER IX)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Introduce the fundamental concepts related computer devices and explain the various features of operating system
CO2	Correlate the terminologies used in Bioinformatics with molecular biology.
CO3	Summarize the organization of genes in prokaryotes and Eukaryotes
CO4	Classify biological database and to correlate the different file formats used by nucleic acid and protein database.
CO5	Explain the tools employed in analysis of query sequence with subject sequence and illustrate the genome , pathway ,specialized and structural database. To discuss the concepts of alignment and phylogenetic analysis
CO6	Apply the various tools employed in genomic study and protein visualization

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Sixth Semester

Course Title: IMMUNOLOGY (CORE PAPER X)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Associate structure and function of the organs involved in our body's natural defense
CO2	Classification of antigens and antibodies on the basis of their properties
CO3	Explain the cooperation between the different lymphocytes in defending the host
CO4	Identify the anatomical barriers and illustrate the role of soluble factors and membrane associated receptors in mediating immunity
CO5	Examine the immunological tests and relate it to the immune status of an individual
CO6	Analyse immune dysfunction and state its consequences

Sixth Semester

Course Title: CLINICAL BIOCHEMISTRY (CORE PAPER XI)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Understand the pathophysiology and molecular basis of Diabetes mellitus. Professionally apply biochemical tests to analyse health problems and explain their clinical significance in metabolic disorders.
CO2	Students will be able to describe and analyze the genetic diseases like phenylketonuria, cystinuria, albinism, hypo and hyperuricemia, gout and atherosclerosis.
CO3	Explain the physiopathological and biochemical markers of the liver function tests. Think in an integrated manner and approach problems from different perspectives. Integrate the use of biochemical tests and explain their clinical significance in the assessment of liver function.
CO4	Assessment of the diagnostic performance of renal function tests. Integrate the use of biochemical tests and explain their clinical significance in the assessment of gastric function.
CO5	Categorize the use of enzymes and Isozymes in assessment of liver damage, bone disorders and myocardial infarction.
CO6	Know how clinical biochemistry can contribute to the clinical laboratory to assess the health status of individuals.

Sixth Semester

Course Title: PHARMACEUTICAL BIOCHEMISTRY (Elective Paper –II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Identify the chemistry of drug molecules.
CO2	Explain the routes of drug administration
CO3	Illustrate the mechanism of drug absorption, distribution and metabolism
CO4	Appraise on the novel drug delivery systems compared to the conventional routes.
CO5	Justify the use of synthetic drugs for different disease systems.
CO6	Highlight the importance of organic phytochemicals in pharmaceuticals

Sixth Semester

Course Title: INTELLECTUAL PROPERTY RIGHTS (Elective Paper-II)

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Comprehend Concepts, kinds and economic importance of IPR in India and world
CO2	Differentiate IPR and patent and copyright
CO3	co-relate objectives, rights, infringement and domain defense of trademark and geographical indications
CO4	Explain the protection of traditional knowledge
CO5	Elaborate on protection of plant varieties.
CO6	Apply and analyze the traditional knowledge

Course Title: PLANT PHYSIOLOGY AND BIOCHEMISTRY (Elective Paper-II)

At the end of the course students will be able to

CO NUMBER	CO Statement
CO1	Define the significance of water and summarize the mechanism of transpiration
CO2	Illustrate the events in photosynthesis
CO3	Explain Nitrogen Fixation by symbiosis biochemistry of nitrogen fixation
CO4	Classify Plant Hormones And Explain Their Functions. Discuss Secondary Metabolites In Plants
CO5	Describe the nitrogen cycle and nitrogen fixation in plants

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Course Title: Entrepreneurship in Science and technology(Elective Paper III)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Understand the concept and scope for entrepreneurship
CO2	Identify various operations involved in a venture creation
CO3	Gather funding and launching a winning business
CO4	Nurture the organization and harvest the rewards
CO5	Utilize the schemes promoted through knowledge centres and various agencies.
CO6	Illustrate about the Business incubator centres and Bioentrepreneurship

Course Title : FIRST AID (Elective Paper- III)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Illustrate the importance of first aid
CO2	Analyze the symptoms and treatment for various medical emergencies
CO3	Illustrate the causes and effects of poisoning and its treatment
CO4	Identify the causes and treatment for various aches in the body
CO6	Identify the treatment for various wounds

Course Title: Therapeutic Nutrition (Elective Paper III)
 Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the nature of fever, nutritional requirements define diet during fever
CO2	Apply the nutrition knowledge in weight management
CO3	Classify hypertension and able to trace the root cause, suggest diet for hypertension
CO4	Critically discuss about gastrointestinal disorders and summarize the disease management
CO5	Apply the knowledge of biochemistry in treating metabolic disorders.

Course Title: MAJOR PRACTICAL-III

Course Outcomes: At the end of the Course, the Student will be able to:

CO NUMBER	CO Statement
CO1	Demonstrate the collection of blood sample List the conditions essential for collection of urine and other clinical samples
CO2	Show the effect of pH, temperature and substrate concentration on the activity of salivary amylase Assay the activity of salivary amylase, SGOT and SGPT and relate their clinical importance
CO3	Estimate creatinine by Jaffe's method, urea by DAM-TSC method, DNA by diphenylamine method and RNA by orcinol method
CO4	Identify and enumerate the total count of erythrocytes, leukocytes and Differentiate leukocytes
CO5	Define and determine the erythrocyte sedimentation rate, packed cell volume and mean corpuscular volume and relate their clinical implications Utilize sphygmomanometer to determine the blood pressure

Course Title: MAJOR PRACTICAL-IV

Course Outcomes: At the end of the Course, the Student will be able :

CO NUMBER	CO Statement
CO1	To quantitatively estimate and interpret the macronutrients like glucose, protein & Cholesterol in clinical samples
CO2	To determine the activities of enzymes like alkaline phosphatase, Urease.
CO3	To collect & analyze the normal & abnormal constituents in urine sample.
CO4	To apply bioinformatics tools to study protein structure, to retrieve nucleic acid, protein sequences in various file formats.
CO5	To analyze the structure of Biomolecules using Bioinformatics tools



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16.B.Sc. COMPUTER SCIENCE PROGRAMME


PROGRAMME SPECIFIC OUTCOMES [PSOs] FOR B.SC COMPUTER SCIENCE

PSO1	Learning the applications of various software elements which help to identify various analysis and design methodologies
PSO2	Demonstrate by developing computer programs in the area related to algorithm, web designing, facilitating efficient design for complex problems.
PSO3	Enables the students to be familiar with the modern- day issues, latest trends in computing and technology and create ideas and solutions to existing problems
PSO4	Building code in Various Programming Languages and applications
PSO5	Detailed Glimpse of Orientation and Interconnection.
PSO6	Gains Knowledge in the various aspects of new Trends and Technologies.

FIRST SEMESTER

Course Title: CORE THEORY T1-COMPUTER FUNDAMENTALS
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">● Restate the Definition of Computers.● To study about Compilers, Assemblers and Interpreters.● To clarify the concepts of diligence and versatility of computers.
CO2	<ul style="list-style-type: none">● Extracting the nature of Input and Output Devices.● To impart the applications of devices in various Fields.
CO3	<ul style="list-style-type: none">● To differentiate the types of Memory● To demonstrate the importance of Winchester Disks.
CO4	<ul style="list-style-type: none">● To classify the Characterization of Software.● Explain the Structure of Algorithms, Programs and Flowcharts.● To impart the knowledge of Computers in Business.
CO5	<ul style="list-style-type: none">● Scholastic Representation of Web Portals, Search Engines.● To Point out the Importance of Emails-Composing and receiving of Messages.


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Course Title: CORE THEORY T2- DIGITAL ELECTRONICS AND MICROPROCESSOR

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> • To demonstrate the functional codes of Binary Systems. • To study about the concepts of Logic Gates. • To clarify the concepts of Boolean Functions.
CO2	<ul style="list-style-type: none"> • Extracting the nature of Combinational Logic Circuits. • To impart the applications of Encoders and Decoders. Classification of Flipflops.
CO3	<ul style="list-style-type: none"> • To differentiate the types of Registers and their applications. <p>Demonstrating the Classification of Counters.</p>
CO4	<ul style="list-style-type: none"> • To classify the Characterization of Microprocessor and Micro Computers. • Introduction of 8085 Instructions and their Utilities. To impart the knowledge of Assembly Language Programs and Addressing Modes.
CO5	<ul style="list-style-type: none"> • Representation of Time Delayed Programs on a Register pair. To Point out the Importance of Various types of Interrupts.

Course Title: NON MAJOR ELECTIVE 1- FUNDAMENTALS OF INFORMATION TECHNOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> • Introduction to Information Technology • Understanding the Digital Domain. Representing Numbers and text in Binary codes.
CO2	<ul style="list-style-type: none"> • Fundamentals of Computers: Computer Hardware-Software-System • Development of Software applications. Introduction of Software translators MLL-HLL-ALL
CO3	<ul style="list-style-type: none"> • Demonstration of Transmission of Information. • Creating the Fundamentals of Communications. Explanation of Fiber optics- Wireless communications.
CO4	<ul style="list-style-type: none"> • Goals of computer networking. • Developing Goals Topologies-LAN, WAN, MAN.
CO5	<ul style="list-style-type: none"> • Implementation of Internet Architecture • Types of Network Security Incorporating Internet applications-Internet address- Domain name-E-mail..



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SECOND SEMESTER

Course Title: CORE THEORY T3- OBJECT ORIENTED PROGRAMMING USING C++
the Course, the Student will be able to:

CO1	Revise the basics of Building any programming language. Introduction of OOPs and its Concept.
CO2	Define functions and its important inbuildingthecodeAdvantageof using Inline function. Explanation about Arrays with illustration.
CO3	Definition of Classes and important of Object. Benefits of using Friend Function. Define the concept of constructor, destructor and its usage and its implementations.
CO4	Develop programs for overloading Unary and Binary Operators. Enhance reusability features using the concept inheritance. Avoid the duplicate of multiple inheritance using virtual base class.
CO5	Access the memory Address of any variable using pointers. Create file and Apply File Modes based on its usage.
CO6	Revise the basics of Building any programming language. Introduction of OOPs and its Concept.

Course Title: CORE THEORY T4-DATA STRUCTURES

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To Demonstrate the Definition and Classification of Arrays. To study about the concepts of Searching Techniques. To impart the concepts of Sorting Techniques.
CO2	To elaborate the operations and applications of Stack. To impart the applications of Queues and operations on the Queues.
CO3	To elaborate the Addition of Polynomials. To study the Operations on Linked Lists.
CO4	Representation of Trees. To impart the knowledge of Tree Traversals, Threaded Binary Trees.
CO5	Representation of Exception and Pre-Defined Exception. To Point out the Importance of Graphs, Traversals and Algorithms.

Course Title: NON MAJOR ELECTIVE 2-HTML AND WEB DESIGN

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Introduction to WWW. Common terms of Web writing styles, Web design and management. Concepts of HTML Programming. Introduction to Telnet and FTP
CO2	Basics of HTML. Development of Hyperlinks and style sheets. Introduction of Lists and Backgrounds.
CO3	Demonstration of Graphics format for Web use. Creating and arranging the elements in Web page. Explanation for Image size and padding.
CO4	Create Hyper linking from Graphics. Developing Thumbnail using Graphics. Creating Tables – Formatting Tables.
CO5	Implementation of Layouts: Creating Division-Based Layouts Usage of Frames layout. Incorporating Audio and Video using Frames.



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THIRD SEMESTER

Course Title: CORE THEORY T5- JAVAPROGRAMMING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Knows the reason about the evolution of Java its development. Study the basic of Java and to develop code. Importance of Java comparing the other language.
CO2	Develop program using constructors and its types. Definition of inheritance and Writing programmed related to it Differentiate string class and string buffer.
CO3	Concept of packages, interface, threads. Implementing the concept Exception handling various application. Significance of exception handling. Life cycle of thread.
CO4	Explain I/O streams. Create file using Byte Stream and character Stream classes.
CO5	Usage of Java in internet Definition of Applet and Developing code to connect to internet. Life Build Applet code using AWT controls and Layout managers

Course Title: CORE THEORY T6-WEB DESIGN

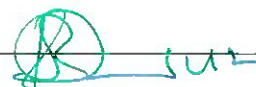
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To Demonstrate Internet Basic concepts and Internet Domains To Study about Internet Server Identities To impart the concepts of Establishing Connectivity on the Internet
CO2	To classify the HTML Tags. To impart Lists, Frames and Table To the Forms and Forms Elements.
CO3	To elaborate DHTML Style Sheets and Element of the Style. To impart Linking a style sheet to a html documents and Web page designing.
CO4	Representation of JavaScript Data types, Control and Looping and Functions. To point out the knowledge about the Dialog Boxes.
CO5	Representation of JavaScript Document Object Model and Event Handling. To point out Form object, User Defined Object and Cookies.

Course Title: CORE THEORY T6-VISUALPROGRAMMING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Introduction to GUI. Common terms of Visual Programming. Concepts of Visual Programming. Program design tools with its properties.
CO2	Programming Paradigms. Development of program. Coding using control structures.
CO3	Demonstration of Form design. Create Menus. Explanation for passing parameters by val and byref. Importance of Function procedure.
CO4	Create Database file using MS-Access. Develop programs by taking Ms-Access as Backend. Usage of ActiveX data control.
CO5	Implementation of Error Handling. Usage of Dialog Boxes. Importance of OLE.



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Course Title: CORE THEORY T7-COMPUTER NETWORKS


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Usage of computer networks. Describe the functions of each layer in OSI and TCP/IP model.
CO2	basics of Physical layer, and apply them in real time applications. Techniques in multiplexing and switching.
CO3	Design of Data link layer . Deduction of errors and correction. Flow control using protocols
CO4	Design of Network layers . Generate IP address to find out the route through Routing algorithms
CO5	Design of transport layer > Protocols needed for end –end delivery of packets Role of layer in real time applications

Course Title: CORE THEORY- ELECTIVE 1-CLIENT-SERVER TECHNOLOGY

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Comprehend the basic concepts of the client-server model.• Improve the performance and reliability of Client Server based systems.
CO2	<ul style="list-style-type: none">• Components of Client-Server Applications and Role.• Understand how Client-Server systems work.
CO3	<ul style="list-style-type: none">• Understand the Connectivity.• Comprehend the concept of different technologies.
CO4	<ul style="list-style-type: none">• Understand the software and hardware requirements of Client-Server based systems.• Improve the common interface across platform.
CO5	<ul style="list-style-type: none">• Understand the service and support of the system.• Identify security and ethical issues in Client Server Computing.


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**Course Title: CORE THEORY- ELECTIVE 1-ARTIFICIAL INTELLIGENCE
ANDEXPERTSYSTEMS**

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> To demonstrate knowledge of the building blocks of AI as presented in terms of intelligent agents. To impart the the basic principles, techniques, and applications of Artificial Intelligence.
CO2	<ul style="list-style-type: none"> To create an understanding of the basic issues of knowledge representation. To analyze and formalize the problem as a state space, graph, design heuristics and select amongst different search or game based techniques to solve them
CO3	<ul style="list-style-type: none"> To impart basic proficiency in representing difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing.
CO4	<ul style="list-style-type: none"> To apply basic principles of AI in solutions that require problem solving, inference, perception and learning.
CO5	<ul style="list-style-type: none"> To develop abilities to apply, build and modify decision models to solve real problems To explore the issues involved in the design and development of Artificial Intelligence Based Decision Support Systems and discuss the role these systems play in the business environment.

FIFTH SEMESTER

Course Title: CORE THEORY T9-OPERATING SYSTEM


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Define OS with its view and goals and services rented by it Deign of OS with its structure. Message through interposes communication
CO2	Allocation of process through scheduling algorithms. Define critical section problems and its usage . Prevention of multiple process executing through the concept ofsemaphores
CO3	Know the Mutual exclusion, Deadlock detection and agreement protocols for deadlock prevention and its avoidance
CO4	Strategies of memory management schemes and the usage of virtual memory. Apply prepare Replacement to algorithmsto avoid thrashing
CO5	Brief of storage management. Methods to allocate files for proper protection.

**Course Title: CORE THEORY T10-DATABASE MANAGEMENT
SYSTEMS**

CO1	<ul style="list-style-type: none"> To demonstrate the characteristics of Database Management Systems. To study about the concepts and models of database. To impart the concepts of System Development Life Cycle and E-R Model.
CO2	<ul style="list-style-type: none"> To classify the keys and the concepts of Relational Algebra. To impart the applications of various Normal Forms Classification of Dependency.
CO3	<ul style="list-style-type: none"> To elaborate the different types of Functions and Joins and their applications. Introduction of Views, Sequence, Index and Procedure.
CO4	<ul style="list-style-type: none"> Representation of PL-SQLStructure. To impart the knowledge of Sub Programs, Functions and Procedures.
CO5	<ul style="list-style-type: none"> Representation of Exception and Pre-Defined Exception. To Point out the Importance of Triggers, Implicit and Explicit Cursors.

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Course Title: CORE THEORY T 11-COMPUTER GRAPHICS

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Illustrate the concepts of various display devices and explain the types of input and output devices used in graphics systems.• Classify the various Line Drawing Algorithms with their characteristics.• Explain about graphic primitives and work with coordinate spaces, coordinate conversion.
CO2	<ul style="list-style-type: none">• Point out and classify the types of transformation and their representations in Matrix form.• Design and implement the model of mapping from a World coordinates to device coordinates.• Design to clip an image by using clipping techniques.
CO3	<ul style="list-style-type: none">• Demonstrate the concepts of representation of objects in 3D.• Design the structure needed to represent graphical objects using Bezier and Spline curves and surfaces.
CO4	<ul style="list-style-type: none">• Classify the various 3D geometric transformation and their composition.• Explore projections and visible surface detection methods techniques for display of 3D scene on 2D scene.• Extract the scene with different clipping methods and its transformation to graphics display device.
CO5	<ul style="list-style-type: none">• Subdivide the various color models that can be used in graphics system.• Apply the concepts of color models, lighting and shading models, textures, ray tracing, hidden surface elimination, anti-aliasing, and rendering.

FIFTH SEMESTER

Course Title: CORE THEORY ELECTIVE 2-ASP DOT NET PROGRAMMING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	To understand the basic concept of HTML language with different types tags like formatting the text, inserting the tables.
CO2	To gain the basic knowledge in VB NET with the Frame work.
CO3	Enable to apply technical knowledge and perform specific technical skills
CO4	Understand to design web applications using ASP.NET 2. Successful students will be able to use ASP.NET controls in web applications
CO5	Apply the concept to create database driven ASP.NET web applications and web services



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FIFTH SEMESTER

Course Title: CORE THEORY ELECTIVE 2- ADVANCED JAVA PROGRAMMING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">• Create dynamic web pages, using Servlets.• Learn to access database through Java programs, using Java Data Base Connectivity (JDBC)• To clarify the concepts of Servlet listener elements, filter elements
CO2	<ul style="list-style-type: none">• Create dynamic web pages using JSP• Design and develop Web applications• To understand Java Messaging Services, Transactions.
CO3	<ul style="list-style-type: none">• Invoke the remote methods in an application using Remote Method Invocation (RMI)• Implementing remote interfaces.• To demonstrate the importance of RMI over Inter-ORB Protocol.
CO4	<ul style="list-style-type: none">• To make a reusable software component, using Java Beans.• To develop Notable Beans
CO5	<ul style="list-style-type: none">• To review the Roles, Relationships and Responsibilities of the deployment descriptor, bean provider, server/container provider• To understand the difference between Entity Beans and Session Beans

Course Title: Elective II: Multimedia (For

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Defining the basic concepts of Multimedia and to learn about text in Multimedia.
CO2	Introduce the concept of Image and Colors and thereby explain the concept of Image File Formats, Sound and Various Audio File Formats.
CO3	Acquire the knowledge of animation and illustrate the principles of animation and ways to handle the video with the help of Multimedia tools.
CO4	Explain and discuss the stage of Multimedia ,hardware and software needs of Multimedia
CO5	Describe the Multimedia production Team.
CO6	Sketch out the concept of Planning and costing, Scheduling, designing and producing and content and talent.



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SIXTH SEMESTER

Course Title: CORE THEORY T13-PROGRAMMING IN PHP

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Learn the basics of PHP Do simple programs Know How to utilize the predefined string and numeric functions
CO2	Work with arrays and functions Do programs on arrays and functions Work with Time and date functionalities
CO3	Learn advanced OOPs concept Do programs on UDF
CO4	Work with files and Learn file management concept Learn cookies management Learn session management
CO5	Work with MySql Synchronize various queries and process them on php. Work with character, numeric, date and time.

Course Title: CORE THEORY T14-PYTHON PROGRAMMING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none">● Learn the basics of PYTHON● Do simple programs on python● Utilize the control statement and recursion
CO2	<ul style="list-style-type: none">● Work with Looping statements● Do programs on Loops and String methods● Do programs on Various string operations
CO3	<ul style="list-style-type: none">● Learn string, list slices and dictionaries● Do work with reverse lookup● Learn in depth about Global variable utilization
CO4	<ul style="list-style-type: none">● Work with files and Learn file management concept● Learn Immutable● Learn Dictionary and tuple management
CO5	<ul style="list-style-type: none">● Learn Classes and Objects.● Do programs on OOPs concept in Python



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Course Title: CORE THEORY T15-SOFTWARE ENGINEERING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Fundamental knowledge of software engineering. Apply the software engineering lifecycle by demonstrating competence in communication, planning, analysis, design, construction, and deployment Know software process models such as the waterfall, incremental ,evolutionary models and concurrent models .
CO2	Acquire requirements and Analyze it to design software designing through UML language.
CO3	Design process ,design concept and design models Basic design principles and its components
CO4	Good quality of software achieved through SQA. Strategies of various software testing . Methods of software testing .
CO5	Role of software configuration management. Software Risk and its solution through RMMM. Restructure of software by software reengineering and software reverse engineering

Course Title: CORE THEORY T15-DATA MINING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> • Understand the basics ofDM • Learn about databases inDM • Learn about knowledge discovery inDM
CO2	<ul style="list-style-type: none"> • Work with DM techniques • Learn about Statistical Prospective on DM • Understand Decision Trees/Neural Networks/Genetic Algorithm
CO3	<ul style="list-style-type: none"> • Learn about different types of algorithm in DM • Work with Statistical Based alg/Distance based algorithm • Work with Decision trees/Neural Network/Rule based
CO4	<ul style="list-style-type: none"> • Apply Hierarchical and Partitional algorithm • Learn about Similarity and Distance Measures • Understand various algorithm technique
CO5	<ul style="list-style-type: none"> • Learn about large item sets in DM • Apply incremental rules and Measuring quality rules • Understand about applying various rules applying methods



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Course Title: CORE THEORY Elective 3-DIGITAL IMAGE PROCESSING

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Review the fundamental concepts of a digital image processing system. Understand the need for color models for images.
CO2	<ul style="list-style-type: none"> Learn different techniques employed for the enhancement of images. Understand the need for image compression and to learn the spatial domain.
CO3	<ul style="list-style-type: none"> Evaluate the techniques for image enhancement. Analyze images in the frequency domain using various transforms.
CO4	<ul style="list-style-type: none"> Evaluate the techniques for image enhancement and image restoration. Learn different causes for image degradation and overview of image restoration techniques.
CO5	<ul style="list-style-type: none"> Interpret image compression standards. Learn basics of predictive and transform coding.

Course Title: CORE ELECTIVE III – UNIFIED MODELING LANGUAGE

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> Recognize the concepts and principles of object oriented programming concept Modeling design Technique, Three models, Class Model, State model and Interaction model.
CO2	<ul style="list-style-type: none"> The Structural things define the static part of the model. They represent physical and conceptual elements. The class and object diagrams give the structural view of system.
CO3	<ul style="list-style-type: none"> Understand the purposes, major components and key mechanisms of Class and Object Diagram. A behavioral thing consists of the dynamic parts of UML models
CO4	<ul style="list-style-type: none"> Knowledge on State-chart Diagram.. Develop, explore the conceptual model into various scenarios and applications.. Present the transition from business events to use cases
CO5	<ul style="list-style-type: none"> Apply the concepts of architectural design for deploying the code for software..



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DEPARTMENT OF VISUAL COMMUNICATION

PROGRAM SPECIFIC OUTCOMES

PSO 1: The students of Visual Communication acquire skills to design, analyze and develop media products with the development of honing communication skills

PSO 2: Contribute the skills in media domain as an individual as well as a team that will set out the foundation for entrepreneurship

PSO 3: Develop the strong skills in planning, testing and implementing media programming using modern tools and software

PSO 4: Opportunities for the students to work in various media projects that improves the quality of work ethics and professionalism during the program period

Semester: I	Section: A and B	Course Code:	Course: Approaches to Communication
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify the importance of Communication concepts as an expression
CO2	Indicate and classify the various theories and models of communication patterns and thinking process
CO3	Discuss the aspects and principles of design in communication
CO4	Classify the concept of aesthetics in art including visual perception
CO5	Determine and identify the various art movements in the history along with contemporary postmodern art forms
CO6	

Semester: 2	Section:	Course Code:	Course: Writing for Media
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Get an idea of script and style.
CO2	Apply the principles of script writing
CO3	Write for advertising
CO4	Write for the audio visual medium
CO5	Write for features and documentary
CO6	



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Semester:I

Section: A&B

Course Code:

Course:Drawing

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understandings about different shapes and sign
CO2	Introduction to visual elements
CO3	Creating patterns and textures
CO4	Understanding Perspective
CO5	Creating Still life image
CO6	

Semester: I & VI

Section : A& B

Course Code:

Course: Film Appreciation

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Analyzing the film movements in world cinema
CO2	Discussing the camera angles, lights and mise en scene
CO3	Comparing the movies of world and Indian cinema
CO4	Evaluating and writing reviews on films
CO5	Compile and submit report on film reviews

Semester:2 & 4

Section:

Course Code:

Course:Digital Photography

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understanding the different types of camera and lenses
CO2	Applying different types of lighting such as Natural & Artificial
CO3	Uses of ISO, exposure and focusing
CO4	Access to different formats of camera
CO5	Create photo-features & photojournalism



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Semester:II
Section:A and B

Course Code:

Course:Psychology of Media

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify and understand the various school of thoughts in psychology
CO2	Indicate the characteristics of perception and awareness concepts in media psychology
CO3	Determine the importance of colour theory in psychology with references to its aspects
CO4	Discuss and compare the concepts of social behavior and concepts related to visual communication
CO5	Identify and discuss the relation between media and psychology and its impact on the community

Semester:II

Section:

Course Code:

Course: Graphic design

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating company name and brand name
CO2	Introduction to monogram and logo design
CO3	Creating visiting cards and letter head
CO4	Analyzing Print advertisement and tint preparation
CO5	Creating Brochures and poster

Semester:II

Section:A and B

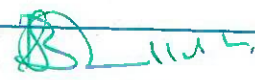
Course Code:

Course:Digital Art

Content delivery:	Chalk and Talk, Power Point Presentation, Quiz and Assignments
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating Dynamic Character Illustrations
CO2	Creating Characters within an Environment
CO3	Creating Industrial Design involving mechanical and engineering design aspects which will have full function
CO4	Creating Matt painted environment which can be used on TV or Feature Film
CO5	Creating a Full Comic Book and to publish it in print



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Semester: III	Section: A & B	Course Code:	Course: Advertising
Course Instructor: S. ISAI AMUTHA		Contact Hours /week: 5	No. of credits:
CIA:		ESE:	Exam Hours: 03

Prerequisites if any:

Code No	Course Name	Description	Semester

Content delivery:	Chalk and Talk, Power Point Presentation, Quiz and Assignments
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COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify the roles and functions of advertising based on target audience
CO2	Discuss about ad agency structure and their latest trends in advertising
CO3	Analyzing brand positioning, personality, image and equity
CO4	Applying the ideas into campaign and writing slogans, logos and trademarks
CO5	Analyzing audience and research in advertising

Semester:III

Section:A and B

Course Code:

Course:Computer Graphics

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating a Print Design
CO2	Creating Various types of illustrations
CO3	Creating Print Advertisements for Mass Media
CO4	Creating Newspaper layout that is print ready for publishing
CO5	Creating 2D Advertisement and Greetings using Adobe Animate



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Semester:3

Section: A & B

Course Code:

Course: Practical Photography

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify and structure the functions of DSLR camera
CO2	Discuss the various angles, lightings in photography along with experimenting it
CO3	Illustrate the different roles photography can play in the industry
CO4	Construct and develop the structure of photos based on various themes upon analyzing the prospects
CO5	Discuss and create photography portfolio upon the aspects of photography

Semester: IV

Section: A & B

Course Code:

Course: Film Studies

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify and understand the concept of film, style and ideology with respect to approaching a film
CO2	Indicate the importance of mise-en-scene in narration of a film
CO3	Discuss the history of early cinema at a global level in current trends
CO4	Analyse and apply the various aspects of lighting in films
CO5	Determine the contemporary aspects of economical aspects in films

Semester:4

Section:

Course Code:

Course: Advanced Photography

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understanding the usage of indoor studio in photography
CO2	Discuss the various angles, lightings in photography along with experimenting it
CO3	Applying the various branding techniques, product and model photography
CO4	Construct and develop the structure of photos based on various themes upon analyzing the prospects
CO5	Discuss about various filters and rules of pictures along with the aspects of photography



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Semester:IV

Section:A and B

Course Code:

Course:Multimedia

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating a Static Multipage Website
CO2	Creating Motion Graphics for online media and social network
CO3	Creating Title Design and Intro Design for Movies and TV Production
CO4	Creating an Explainer Video for a Brand or a Company's Product
CO5	Creating a Full Video Advertisement with CGI and Motion Graphics

Semester:4

Section:A&B

Course Code:

Course:Digital Cinematography

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understanding cinematic terms
CO2	Creating jingles for radio
CO3	Creating PSA
CO4	Understanding the Camera, lens, lighting and other technical equipment required during shoot
CO5	Working practically for film, tv shows series.

Semester:V

Section: A&B

Course Code:

Course:AVE

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understand the fundamentals of editing, types of audio visual formats.
CO2	Determine the psychophysics of Sound and its function.
CO3	Use the audio equipment and audio editing software applications effectively.
CO4	Explain the principles of continuity, montages and editing techniques.
CO5	Analyze the editing process and Integrating graphics.



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Semester:5

Section:A&B

Course Code:

Course:Media Organization

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	To analysis Print, Broadcast and New Media in business strategy.
CO2	To create Magazine, Pamphlets and Billboard Design.
CO3	To recall cost and revenue of Production house.
CO4	To understand Digital Marketing for Effective business management.
CO5	To Evaluate a Television Program.

Semester:V

Section:A and B

Course Code:

Course:Research Methodology in Communication

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understand the nature of social science research along with various classifications
CO2	Classify the levels of research projects and methods of problem selection
CO3	Indicate the concept of hypothesis and its types needed in social science research
CO4	Identify and classify the concepts related to research design and sampling
CO5	Compute and apply various methods of data collection in the process of research

Semester:V

Section:

Course Code:

Course:AVT

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Developing the students about the various script writing techniques
CO2	Interpreting creative and out of the box thinking among the students
CO3	Justifying the students to do PSAs and enabling them to deliver the message
CO4	Understanding the importance of screenplay and producing shortfilms
CO5	Associating with the pre and post production activities



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Semester:5 & 6

Section:

Course Code:

Course:AD Photography Elective

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understanding the usage of indoor studio in photography
CO2	Discuss the various angles, lightings in photography along with experimenting it
CO3	Applying the various branding techniques, product and model photography
CO4	Construct and develop the structure of photos based on various themes upon analyzing the prospects
CO5	Discuss and create photography portfolio upon the aspects of photography

Semester: V

Section:A& B

Course Code:

Course:RADIO PROGRAMME

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Discuss the audio techniques in studio
CO2	Experimenting the working of audio lab
CO3	Understanding the concept of FM stations
CO4	Comparing the various types of microphones
CO5	Developing the idea of radio jockey
CO6	Creating a radio FM on their own

Semester: I

Section:

Course Code:

Course: Elective - Novel Adaptation

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify visual content from written works.
CO2	Analyze and Adapt written text for screen.
CO3	Visualize themes and concepts using appropriate metaphors, Camera angles, camera movements, shots other audio visual techniques.
CO4	Write Screenplay and technically equip themselves for a production.
CO5	Make films based on written works of Fiction and Non fiction and exhibit them.



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Semester:V

Section:A and B

Course Code:

Course:3Ds Max & Maya

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating a 3D Model with Texture
CO2	Understanding of the Maya Software
CO3	Creating a walkthrough of a House or a Corporate building
CO4	Creating a detailed 3D Interior Design Plan
CO5	Creating Industrial Design from Plan to 3D

Semester: V

Section: A & B

Course Code:

Course: Internship

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Experiencing a chance to work in the media environment
CO2	Differentiating the flexibility and scheduling by working in media
CO3	Associating in the media houses with the necessary socializing and interpersonal skills
CO4	Compiling responsibility and do real time assignment in the field
CO5	Extending the media world and prioritizing their area of interest

Semester:V

Section:A & B

Course Code:

Course:Newsletter

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Illustrate the structure of a newsletter
CO2	Justifying the newsletter editing with principles to follow
CO3	Explaining the types of headlines, stylebook, page layout and design
CO4	Designing the newsletter with font type, size, layout and pagination
CO5	Creating a newsletter for the assessment



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Semester:6

Section:A&B

Course Code:

Course:Media Culture and Society

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Understanding mass media, characteristic, feature nature and scope.
CO2	Uses of communication theory
CO3	Analysis different media approach
CO4	Identify different audience segmentation
CO5	Explains about media content and media representative

Semester:6

Section:

Course Code:

Course:Broadcast Journalism

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Describing the laws, rights and responsibilities of journalist with news values
CO2	Recommending to collect facts, select news and understand the types of news
CO3	Comparing radio, television with elements and techniques of news editing
CO4	Identify television broadcast system, studio production and outdoor production
CO5	Creating various types of journalism formats

Semester:VI

Section:

Course Code:

Course:Comprehensives and Portfolio

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Create a comprehensive based on the topics studied from the first to fifth semester
CO2	Developing a portfolio to enter the media industry
CO3	Exploring the internet to substantiate the articles with materials downloaded from the net.
CO4	Assess the works done by them and check for plagiarism
CO5	Explain the comprehensives with clear terms and definitions.

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Semester:I

Section:

Course Code:

Course: Documentary Production

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Identify and work on themes related to their creative identity.
CO2	Draft a documentary proposal as per the guidelines prescribed by International funding Agencies.
CO3	Research, script and technically equip themselves for a production.
CO4	Plan, budget, schedule and complete a documentary shoot.
CO5	Present and discuss their work at film festivals and with the audience.

Semester:4

Section:A&B

Course Code:

Course: Elective : News Production

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Create a special news feature for TV on an current issue
CO2	Understand the basics of broadcast journalism, news values
CO3	Developing reporting and presentation skills.
CO4	Classify the structure of radio and television
CO5	Developing the writing skills for preparing a news script
CO6	

Semester:VI

Section:A and B

Course Code:

Course:VFX

COURSE OUTCOMES: At the end of the Course, the Student will be able to:

CO1	Creating a Photorealistic 3D Object
CO2	Creating Animation for a CGI Element in a Live Action Plate
CO3	Creating CG Environment for a Green Screen Footage
CO4	Creating Character FX and Animation for TV or Feature Film Production
CO5	Creating Particle FX and Animation for Natural Elements Using Stock Footage


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DEPARTMENT OF MATHEMATICS WITH COMPUTER APPLICATIONS

PROGRAM SPECIFIC OUTCOMES

PSO 1: Develop logical reasoning and thinking capacity.

PSO 2: Carry out mathematical computations, both analytical and numerical, to a reasonably good level.

PSO 3: Identify the different approaches and mathematical techniques/ methods of proofs adopted in a wide range of mathematical areas.

PSO 4: Explain abstract mathematical ideas and able to write simple proofs, and Apply concepts to solve simple problems

PSO 5: Make appropriate use of computer technology to develop solutions by using suitable languages and platforms.

FIRST SEMESTER (SYLLABUS)

Course Title: Core Paper –I - Classical Algebra

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the concept of binomial, exponential and logarithmic series and discuss other forms of binomial expansion, summation of series using binomial, exponential and logarithmic series.
CO2	Describe theory of equations and explain the relation between the roots and coefficients of an equation, define symmetric function and the roots of the function.
CO3	Solve reciprocal equations and using diminishing of roots to transform an equation, and State Descartes' rule of signs, Apply Newton's method and Horner's method to find roots of polynomial equations.
CO4	Classify different types of matrices and their properties, find the eigen values and eigenvectors of a matrix and compute inverse of the matrix using Cayley Hamilton theorem.
CO5	Use Fermat's & Euler's theorems to solve congruence equation, find the sum and number of all divisors of N , and define congruence and their properties.



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Course Title: Core Paper –II - Differential Calculus

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Retrieve the concept of differentiation and perceive the idea of finding nth derivative using Leibnitz theorem. Find the derivatives of nested functions –chain rule. Choose the chain rule to find the derivatives of implicit function and total differentiation.
CO2	Determine the derivative for a function of several variables in partial forms– Jacobian matrix. Examine the maxima and minima for the function of two variables, Implement the idea of maxima and minima for functions subject to the constraints (Lagrange Multipliers)
CO3	Attaining the knowledge of finding the angle between radius vector and tangent to the curve. Infer the bending of the curve by finding the radius of curvature in both Cartesian and polar form. Extend the idea of tangent to a curve to find the radius of curvature for pedal curve
CO4	Recall the concept of radius of curvature and tangent to find the centre of curvature. Examine the locus of centre of curvature to calculate the evolute. Survey the family of curves to find an envelope.
CO5	Identify the asymptote of a rational algebraic curve by various methods. Estimate the possible number of asymptotes by analyzing the given curve.

Course Title: Allied Paper I- Programming in C Theory

Course Outcomes: After completion of this course, students will be able to

CO1	Understand the basic elements of C language, Do simple programs in C & Get familiar with I/O Statements
CO2	Learn control statements and its importance, Learn Looping statements and its significance, and Understand difference between Conditional and Unconditional statements
CO3	Know the importance of Arrays and Strings, Do programs on arrays and strings and Learn about functions and its types
CO4	Understand the Structure/Union/Pointer concepts, To do programs in Pointers as well as Structures, Difference between Structures and Union and Difference between Arrays and Pointer
CO5	Understand the various File Handling Techniques in C, Learn about different operations on Files in C and Do programs on Files in C

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Course Title: NME I- Statistical Methods

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain the basic concepts of measures of central tendency and Estimate the mean, mode, median for the given data.
CO2	Estimate variation for distributions using quartile deviations, Compare the variability of two or more series using coefficient of variation and Explain the various measures of dispersion.
CO3	Demonstrate correlation and regression relations between the data, Estimate the unknown values using regression equations, and Evaluate the correlation coefficient with the help of regression coefficients.
CO4	Prepare the Index Numbers for the given data, and Explain the various reversibility tests to be satisfied by a good index number.
CO5	Use the past observations to estimate the future values using time series, Appraise the trend values using different methods, Explain mathematical and statistical literatures of various types, including survey articles.

Course Title: Core Paper –III - Trigonometry

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Use Demoivre's theorem to expand $\sin^n \theta$ & $\cos^n \theta$, express $\sin^n \theta$ & $\cos^n \theta$ in multiples of θ and also can express $\sin \theta$, $\cos \theta$ and $\tan \theta$ in terms of θ .
CO2	Express hyperbolic functions in terms of exponential functions, obtain hyperbolic identities, manipulate expressions involving hyperbolic functions and classify relation between circular and hyperbolic functions.
CO3	Express inverse trigonometric functions in terms of logarithmic functions, differentiate hyperbolic, inverse – hyperbolic trigonometric functions and separate the real and imaginary parts of trigonometric functions of complex variable.
CO4	Recognize the concept of logarithmic of complex numbers and estimate sum of series of sines and cosines of n terms in A.P.
CO5	Manipulate any forms of summation of series such as binomial, logarithmic, geometric and Gregory's series and recognize the concept of $C+iS$ method

Course Title: Core Paper – IV Integral Calculus

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Identify the various techniques of integration and apply them to integrate rational and irrational functions
CO2	List the Properties of definite Integrals and evaluate definite integrals using these properties easily. Apply the technique of integration by parts and integrate.
CO3	Summarize Bernoulli's formula and Evaluate Integrals using the same. Prove the reduction formulae for Standard functions and use the same to solve problems on standard integrals. Analyze Definite integral as area under the curve using summation and limits.
CO4	Classify double and triple integrals and evaluate them. Solve double integrals by changing order of Integration. Use Polar coordinate system to solve Calculus application problems. Evaluate the area of plane surfaces and Volume of Solids using double and triple Integrals.
CO5	Define Beta and Gamma Functions, summarize their properties and Use them to integrate complex functions. Derive the recurrence formula For Gamma functions, and Relation between Beta and Gamma functions.

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Course Title: Allied Paper II- Object Oriented Programming with C++ Theory
Course Outcomes: After completion of this course, students will be able to

CO1	Demonstrate the basic elements of C++ language, Discuss and analyze the concept of Object Oriented Programming ,Prepare simple programs in C++ , Get familiar with I/O Statements in C++ .
CO2	Explain control statements and its importance, Explain Looping statements and its significance, Prepare programs on arrays and strings in C++ and Demonstrate arrays and functions in C++.
CO3	Know the importance Classes and Objects, and Learn about Constructor and its types
CO4	Demonstrate the concept of Operator Overloading and its types, Learn the concept of Inheritance and its different types, Analyze the concept of reusability in OOP(Object Oriented Programming) and Prepare programs on Inheritance
CO5	Learn the Importance of Pointers in C++, Prepare programs using Pointers in OOPs concept, Demonstrate the various File Handling Techniques in C++, Learn about different operations on Files in C++ and Prepare programs on Files in C++

Course Title: NME II- Discrete Mathematics

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Define Boolean algebra, Identify whether the given set is a Boolean algebra or not with reasons, Illustrate the properties of Boolean algebra, Define two element Boolean algebra, and Interpret the equality of Boolean expressions
CO2	Analyze Boolean expression, Estimate the min terms and max terms in Boolean expressions, Obtaining the canonical form of Boolean logic (disjunctive normal form and conjunctive normal form).
CO3	Define and describe the basic ideas in circuits, Apply of Boolean logic for simplification of circuits and for designing of switching circuits.
CO4	Associate the Boolean operation with logic gates, Draw circuits from Boolean expression and vice versa, And Determine the equivalency in logic circuits
CO5	Recall sequence and define recurrence relation, Solve recurrence relation by iteration method, and Solve linear difference equations with constant coefficients.



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Course Title: Core Paper – V Differential Equations

Course Outcomes: After completion of this course, students will be able to

CO1	Discuss the differential equation of first order and higher degree of the form $(x, y, p) = 0$ Define the necessary and sufficient condition for exact equation. Convert differential equation which are not exact into exact equation
CO2	Estimate solution to second order linear homogeneous Differential Equations with constant coefficient. And Illustrate the basic knowledge of complementary function and particular integral
CO3	Estimate solution to second order Differential Equation with variable coefficient. Use the method "Variation of parameter" to find the solution of higher order D.E with variable coefficient
CO4	Discuss the solution for PDE of standard type $(p, q) = 0, f(x, p, q) = 0, f(y, p, q) = 0, f(x, p) = f(y, q) = 0$ by eliminating the arbitrary constant and arbitrary function, complete integral, singular integral and general integral. And Evaluate the solution of Clairaut's form and linear partial differential equations
CO5	Define homogeneous equation and Solve the homogeneous linear partial differential equation with particular integrals $e^{ax+by}, \sin(mx + ny), \cos(mx + ny), xmy, n$

Course Title: Core Paper – VI Mathematical Statistics

Course Outcomes: At the end of the Course, the Student will be able to

O1	Illustrate and describe sample spaces and events for random experiments. Interpret and calculate probabilities of event in discrete sample spaces and conditional probabilities of events using Baye's theorem.
CO2	Illustrate the concept of a probability distribution. Sketch the same to real world problems involving various distributions like Binomial, Poisson and Normal distribution
CO3	Measure and analyze the strength of the relationship between two variable using a correlation analysis. Predict the value of any independent variable to the value of dependent variable using linear regression analysis
CO4	Categorize small and large samples. Produce a significant test of hypothesis concerning the value of population mean based on Normal distribution.
CO5	Produce a significant test of hypothesis concerning the value of population mean based on t-distribution, F-test, χ^2 -test. Explain the concept of analysis of variance and use them to investigate factorial dependence Discuss about goodness of fit for given data



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Course Title: Core Paper VII Multimedia Theory

Course Outcomes : At the end of the course, the Student will be able to

CO1	Define the common multimedia terms and qualify its characteristics in terms of linear and non-linear content. Categorize the applications of Multimedia in several different environments that provide the benefit over other forms of information presentation. Demonstrate the importance of text and the ways in which the text can be leveraged in multimedia presentation.
CO2	Differentiate the use of MIDI and Digital Audio in multimedia production. Differentiate among bitmap, vector and 3D images by describing their capabilities and limitations. Point out the considerations involved in managing audio file and integrating them into multimedia project.
CO3	Define Animation and demonstrate the principle and uses of animation in multimedia. Classify the types of Animation Techniques and create a computer generated scene from multiple still images. Judge and classify on selecting the best video recording formats for multimedia project.
CO4	Demonstrate the intangible elements needed to make good multimedia. Point out the importance of selecting and managing a team in order to produce successful multimedia projects. Develop a multimedia project by choosing the appropriate software program, hardware and authoring system.
CO5	Design the structure needed for a successful multimedia project by working with clients on a timely manner. Organize the schedule, tasks and estimate the cost, timeline required to complete a multimedia project. Plan to identify the benefits, drawbacks of various sources of project of content and determine the copyright, licensing for ownership of the project.

Course Title: Allied Paper III -Numerical Methods -I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Restate the principal of least curves ,Solve the problems of fitting of straightlines, parabolas and different form of exponential curves.
CO2	Solve algebraic equations using various methods like Bisection method, Iteration method, Regula-Falsi method and Newton – Raphson's method
CO3	Estimate the solution of simultaneous linear equations using direct methods : Gauss-elimination method , Gauss –Jordan method and Crout's method . Estimate the solution of simultaneous linear equations using Iterative method :Gauss-Siedel
CO4	Define basic concept of operators Δ , ∇ and E . Differentiate the factorial polynomial. Solving interpolation with equal intervals problems using Gregory Newton's forward formula and Newton's backward formula and Estimate the missing value for the equidistant terms
CO5	Explain the operators μ , δ and relation with the operator, Estimate the solution of central difference formula using the methods Gauss's forward, backward formula, Stirling's formula, Bessel's formula and Laplace Everett formula.

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Course Title: Core Paper – VIII - Vector Calculus, Analytical Geometry of Three Dimensions

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Restate Gradient, Curl and Divergent .Solve the problems of directional derivatives.Solve the problems of unit normal to the surface
CO2	Define line ,surface and volume. Estimate the integration using Gauss, Stoke"s, Green"s theorems
CO3	Restate general equation of plane. Estimate the equation of a plane passing through three points. Solve the problem of intercept form and normal form. Explain angle between two planes. Distinguish between condition of perpendicularity and parallelism. Demonstrate the equations from perpendicular distance form a point to a give plane, equation of plane pausing through the line of interchange of two planes.Solve problems on ratio in which the plane divides the line joining the two points.
CO4	Define general equation of the straight line, Symmetric, transformation. Explain angle between plane and line. Identify conditions of a line. Solve problems on parallel to the plane and two lie a plane. Classify coplanar lines, intersection of twogiven, skew lines and short distance between the lines.
CO5	Define equation of the sphere, section of the sphere by a plane. Demonstrate an equation of a circle, equation of a sphere passing through a given circle. Explain intersection of two sphere, Orthogonal sphere and Identify condition for Orthogonality. Distinguish equation of the tangent two spheres, length of a tangent.

Course Title: Core Paper – IX - Transforms and Fourier Series

Course outcomes: At the end of the course, the student will be able to

CO1	Use Laplace transform and Inverse Laplace transform in solving differential equations with constant coefficients. Differentiate between Laplace transform and Inverse Laplace transform.Demonstrate the concept of Laplace transform and Inverse Laplace transform by giving examples and classify it
CO2	Demonstrate the Fourier series to study the behavior of Periodic functions and their applications. Evaluate the problems in Fourier series using periodic functions.
CO3	Categorize Even and odd functions and Classify half range Fourier series.
CO4	Understand Fourier Integral theorem and evaluate problems under Integrals using the theorem.
CO5	Analyze and understand infinite Fourier transforms and its inversion properties usingconvolution and Parseval"s identity for Fourier transforms. Evaluate integrals using sine and cosine transforms.

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Course Title: Core Paper X Programming in JAVA (Theory)
Course outcomes: At the end of course, the student will be able to

CO1	Explain the reason about the evolution of Java its development. Recall the basic of Java and to develop code. Summarize the importance of Java comparing the other language.
CO2	Develop program using fields, methods and its types. Categorize different types of decision making and branching. Explain different types of looping.
CO3	Explain the concept of interface, threads. Sketch the concept Exception handling in various applications. Judge the significance of exception handling. Define Life cycle of thread. Recall the definition of inheritance and Writing program related to it.
CO4	State the Usage of Java in internet, Definition of Applet and Developing code to connect to internet. Demonstrate Life Build Applet code using AWT controls.
CO5	Explain I/O streams. Create file using Byte Stream and character Stream classes.

Course Title: Allied Paper –IV Numerical Methods-II

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Define interpolation and extrapolation. Use the Newton's divided difference formula and Lagrange's formulas for interpolation. Construct a polynomial passing through the (n+1) points
CO2	Explain the definitions of Newton's forwards, backward, divided difference and Stirling's formula for numerical differentiation. Prepare the first order second order derivatives from a set of tabulated values. Point out the extreme values of model real time problems.
CO3	Demonstrate a definite integral numerically. Summarize the concept of Trapezoidal, Simpson's (1/3), Simpson's (3/8) and Weddle's rules. Compute definite integral from a set of tabulated values by various numerical integration methods.
CO4	Identify linear homogeneous and non-homogeneous difference equations. Distinguish difference equation and differential equation. Formulate first and second order difference equations. Solve first and second order difference equations.
CO5	Explain Taylor's series, Euler's method, Modified Euler's method Runge-Kutta method. Solve first order differential equation by various numerical methods. Point out the importance of Milne's and Adams-Bashforth Predictor-corrector methods.



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Course Title: Core Paper –XI -Algebraic Structures

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Summarize the structure of Group, Subgroups, Demonstrate operations satisfying various properties in group structure, and Explain Lagrange's Theorem and its consequences.
CO2	Classify and demonstrate examples of subgroups, normal subgroups and quotient groups, Summarize the properties of cyclic subgroups of a group and Explain Isomorphism and homomorphism of Groups.
CO3	Explain the notion of permutations and operations on them, Summarize Cayley's theorem and Classify Inner automorphism and their properties
CO4	Define Rings, Integral Domains, Fields and Divisors of Zero, Classify Quotient Rings, Ideals and their existence with examples, and demonstrate their characteristics , Explain Homomorphism and Isomorphism of Rings
CO5	Classify the different types of Ideals and state their properties, Illustrate Imbedding of Integral domain over Field, Identify Euclidean Rings and investigate their properties.

Course Title: Core Paper –XII - Real Analysis

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Describe the fundamental properties of the real numbers that lead to the formal development of real analysis. Define and recognize the basic properties of the field of real numbers. Identify the cardinality of a sets.
CO2	Demonstrate an understanding of limits and how that are used in sequences. Explain the basic principles of the convergence of a sequence. List the condition(s) of convergent and divergent of a sequence.
CO3	Identify the limit superior and limit inferior of a sequence. Recall the Cauchy definition of a sequence.
CO4	Construct rigorous mathematical proofs of convergence test of a sequence. Distinguish between conditional convergence and absolute convergence.
CO5	Define the Euclidian distance function and explain the geometric meaning of each of the metric space properties. Demonstrate whether a given distance function is a metric. Point out the value of a limit of a function at a point using definition



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Course Title: Core Elective I – Discrete Mathematics

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain the definition of Mathematical logic and analyze statements using truth tables. Differentiate between conjunction and disjunction, conditional and bi- conditional statements. Formulate an argument using logical notation and determine if the argument is or is not valid
CO2	Distinguish between NAND, NOR and Normal forms. Construct simple mathematical proofs and possess the ability to verify them.
CO3	To solve recursive functions in a formal mathematical manner. Classify the algorithm for solving finite order homogeneous and non-homogeneous finite linear relation. Develop problem-solving skills using logical thinking.
CO4	Solve problems on generating functions for recurrence relations. Illustrate different types of graphs and explain some definitions and basic theorems. Indicate the concept of degree sequences, Graph isomorphism and operations on graphs.
CO5	Apply graph theory-based tools in solving practical problems. Describe Kruskal's and Prim's algorithm in finding minimum weight spanning tree. Restate the definitions and simple examples of Eulerian and Hamiltonian graphs

Course Title: Core Elective II – Operation Research-I

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Summarize and Identify the concept of Linear Programming, Formulation of LPP and to solve Graphical method and Simplex method
CO2	Classify and demonstrate the examples of Big M method, Summarize the concept of Principle of Duality, Primal and Dual relation and able to solve Dual Simplex method.
CO3	Formulate the given Transportation problem into a mathematical model and determine the optimal solution by North West Corner Rule – Vogel's approximation method and matrix minimum method-Procedure for finding optimal solution – Both minimization and maximization cases – Unbalanced and degenerate transportation problems
CO4	Attaining the knowledge and able to solve assignment problem Formulation- Minimization cases –Procedure for getting optimum solution – Unbalanced problem- Maximization problem – Problems with restrictions.
CO5	Summarize the concept of Queuing models – States of Queuing system – Steady state analysis of (M/M/1):(∞/FCFS)-(Birth-Death model), (M/M/1):(∞/FCFS) (General Erlang Queuing Model), (M/M/1):(N/FCFS), (M/M/S):(∞/FCFS) Derivations only for the above models and Simple applications.



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Course Title: Core Paper XIII Web Technology Theory

Course Outcome: At the end of the course, the Student will be able to

CO1	Define the common Web terms and qualify its characteristics in terms of design, writing and management. Illustrate the concept of registering web pages. Classify the different strategies for searching data on web and summarize their working. Subdivide and explain the different types of Computer Viruses and the ways to prevent it.
CO2	Demonstrate the concept of setting the document structure in HTML. Differentiate the ways of formatting text using HTML tags. Explain the process of creating hyperlinks and anchors. Point out the considerations involved on applying Cascading style sheet in HTML script.
CO3	Judge and classify on inserting Graphics and selecting different graphics format. Organize the ways of creating navigational aids. Explain the process of creating and formatting tables in HTML.
CO4	Utilize the concept of JavaScript and their advantages. Categorize the different types of Operators and Control Structures in JavaScript with examples. Identify the characteristics of function and demonstrate the concept of recursion.
CO5	Declare the concept of array and explain the process of passing arrays to functions. Explain the process of sorting arrays and summarize the need of sorting. Recognize and implement the different types of objects and outline their functions.

Course Title: Core Paper XIV - Linear Algebra

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Define Polynomial rings over a field $F[x]$. Demonstrate that $F[x]$ is a Euclidean Ring and is a PID, Describe Polynomial Rings over Commutative Rings ie $R[x]$. Relate the properties of $R[x]$ with that of R and hence Conclude that if R is a UFD then so is $R[x]$. Explain Eisenstein Criteria for irreducibility of Polynomials and apply the same to investigate the irreducibility of given polynomials.
CO2	Describe an abstract vector space, Define the terms span, linear independence, basis, dimension, and Discuss their properties Compute Basis and Dimension of Vector Spaces in R^n .
CO3	Summarize Vector Space Homomorphisms and Annihilator. Demonstrate that $\text{Hom}(V, W)$ is the dual space for a given vector space V . Define Norm and Orthogonality of vectors and Inner Product Space. Discuss orthogonal and orthonormal basis, Explain the Gram-Schmidt Orthogonalization process, and Construct orthogonal and orthonormal basis for a given basis.
CO4	Define Algebra over F . Indicate that $\text{Hom}(V, V)$ is an Algebra over F . Outline the properties of Invertible Linear transformations, Discuss the Kernel and Range of linear transformations and Compute rank nullity of associated vector spaces. Discuss Characteristic Roots and Characteristic Vectors of Linear Transformations in $A(V)$.

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CO5	Associate Linear Transformations with matrices and represent them using matrix. Demonstrate that F_n the set of all $n \times n$ matrices forms an Associative Algebra over F and hence conclude that $A(V)$ and F_n are isomorphic as algebras over F . Describe matrix of a transformation for a given basis and Demonstrate similarity transformation using Triangular forms.
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Course Title: Core Paper –XV - Complex Analysis

Course Outcomes: At the end of the Course, the

Student will be able to:

CO1	Judge Analytic function and harmonic function and its properties. Design analytic function. Derive Cauchy Riemann equation and Derive Cauchy Riemann equation in polar form.
CO2	Illustrate Cauchy's Integral theorem. Restate derivatives of analytical function. Examine the values of the function using Cauchy's Goursat theorem. Demonstrate Morera's theorem, Maximum moduli functions and Liouville's theorem.
CO3	Derive various series for an analytic function. Analyze poles and zeros and estimate the residue at poles. Categorize the singularities
CO4	Evaluates Improper real integrals.
CO5	Judge and classify mappings by elementary functions Classify fractional transformation. Discuss various standard transformations.

Course Title: Core Paper –XVI - Mechanics

Course outcomes :At the end of the course, the student will be able to

CO1	Understand the Vectorial and scalar representation of forces and moments. Identify basic definitions and categorize Lami's theorem and its Applications.
CO2	Explain Static equilibrium of particles and rigid bodies in two dimensions and also in three dimensions. Distinguish problems under moments, parallel forces and couples.
CO3	Illustrate the Laws of motion, Kinematics of motion and their Interrelationship. Compare the relationship between Resultant, relative, angular and relative angular velocities.
CO4	Recall concepts of projectiles. Differentiate time of flight, horizontal range and range in an inclined plane.
CO5	Analyze the properties of surfaces and solids in relation to moment of Inertia. Explain moment of Inertia of simple bodies and theorems of parallel and perpendicular axes. Demonstrate various moments of Inertia of triangular and circular lamina as well as hollow and solid right sphere and cone.



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Course Title: Core Elective III – Operation Research-II


Course Outcomes: At the end of this Course, the Student will be able to

CO1	Explain the rules for Network constructions. Evaluate time calculation in PERT. Describe PERT algorithm. Distinguish between PERT and CPM.
CO2	Explain basic concepts of EOQ models. Apply the decision models to various real time problems. Describe and analyze various models in EOQ.
CO3	Discuss about models of replacement. Apply and evaluate the replacement of an item whose maintenance cost increases with time and money value is not changed. Apply and evaluate various models in replacement.
CO4	Explain the concept of game theory. Describe and solve the two person zero sum game with and without saddle point. Explain and evaluate dominance rule. Solve $2 \times n$ and $m \times 2$ game by using game theory.
CO5	Discuss the concepts of sequencing problem. Describe and solve n jobs - 2 machines, n -jobs through 3 machines and n -jobs through n -machines. Apply and solve problems by using graphical method.

Course Title: Core Paper XVII-DOT NET Programming Theory

Course Outcomes: At the end of the course, the Student will be able to

CO1	Demonstrate the concept of setting the document structure in HTML. Differentiate the ways of formatting text using HTML tags. Explain the process of creating hyperlinks and anchors. Point out the considerations involved on applying Cascading style sheet in HTML script.
CO2	Detailed framework for controls, menus and dialog boxes related to DOT.NET Illustrate the concept of variables and operators. Subdivide and explain the different types of decision structures and the ways to trap and prevent errors.
CO3	Recognize and implement the different types of graphics and animation that can be implemented in VB.net. Demonstrate the concept of setting the document modules and procedures
CO4	Utilize the concept of Web Server Controls. Foster the development of ASP.NET language structure. Design and explain the concept of validation controls
CO5	Explain the process of creating database and executing it Demonstrate the process of managing cookies and objects associated with it.


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Course Title: Allied Mathematics-I
(For I year Students of B. Sc (Computer Science) and B. Sc (Physics with CA))

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Classify different types of matrices and their properties, using characteristic polynomial to find Eigen values & Eigen vectors, verify the square matrix satisfies its characteristic polynomial, compute inverse of the matrix using Cayley Hamilton theorem.
CO2	Use Demoivre's theorem to expand $\sin^n \theta$ and $\cos^n \theta$, express $\sin^n \theta$, $\cos^n \theta$ in multiples of θ and also can express hyperbolic functions in terms of exponential functions and obtain hyperbolic identities, manipulate expressions involving hyperbolic functions.
CO3	Express inverse trigonometric functions in terms of logarithmic functions, Separate the real and imaginary parts of trigonometric functions of complex variables, evaluate integration using Bernoulli's formula and reduction formula and formulate Fourier series of a given periodic function by evaluating the Fourier coefficients.
CO4	Find partial derivatives of given function, classify maxima and minima of the function of two variables, calculate partial derivatives using Jacobian and Evaluate curvature & radius of curvature in Cartesian form.
CO5	Demonstrate about the Laplace transforms and inverse Laplace transforms of standard functions, solve second order differential equations using Laplace transform and inverse Laplace transform.

Course Title: Allied Mathematics-II
(For I year Students of B. Sc Physics with CA)
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Summarize the basic ideas about algebraic equations, determine the roots of polynomial equations, Identify the symmetric function and transform the polynomial equations by either increasing or decreasing the roots by a constant.
CO2	Estimate the intermediate value of a function whose table values are known at equal intervals by Newton's forward and backward interpolation method, find the missing term in the table of values using binomial expansion and compute the intermediate value for a function whose table values are unequal intervals.
CO3	Recall the concept of partial differentiation, explain the formation of Partial differential equation, classify the different type of solutions of PDE and enhance the problem-solving skills for any PDE and point out the method to be used for solving PDE.
CO4	Retrieve the idea of multiplication of vectors in two ways (dot and cross product) with its properties, interpret the derivative of a vector, manipulate differential operator to a vector in both dot and cross product and summarize the properties of differential operators when applied to vectors.
CO5	Recall the vector operators, apply critical thinking and problem solving skills to evaluate line, surface and volume integrals and relate the line, surface and volume integrals by Gauss, Stokes and Green's theorem.



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Course Title: Allied Mathematics-II
(For I year Students of B. Sc Computer Science)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain the relation between roots and coefficients, solve the polynomial equations using imaginary and irrational roots, generate equation using reciprocal roots and use diminishing of roots to transform an equation.
CO2	Define least square method, examine the best fit for a line or curve and explain about interpolating the data. Calculate the dependent variable $f(x)$ at any point of x and solve problems using the interpolation methods for equal intervals.
CO3	Discuss about the concept of divided difference, solve the problems with unequal intervals and interpolate the value, and use inverse interpolation to find the independent variable x for given values of $f(x)$.
CO4	Use numerical differentiation to find the value of derivative of a function, discuss the various methods of numerical integration and estimate the given function in an interval.
CO5	Define algebraic and transcendental equations, explain about iteration method and use various methods of solving algebraic and transcendental equations.

Course Title: Statistical Methods
(For II year Students of B. Sc Computer Science)

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain about central tendency. Calculate the various measures of central tendency. Test the empirical relation. Explain how mean, median, mode are related in symmetric and skew symmetric distributions.
CO2	Explain about dispersion and calculate the various measures. Estimate the coefficient of variation using standard deviation. Investigate the uniformity or consistency of data using coefficient of variation. Interpret the concept of Skewness and methods to calculate its coefficient.
CO3	Define correlation and its types. Conclude about the correlation between two variables. Use regression equations to estimate the values of unknown variable using the given data. Compute the rank correlation.
CO4	Categorize small and large samples. Test the hypothesis of the given population using t-test. Estimate confidence interval.
CO5	Test the equality of variances using F-test. Use Chi-square test for the independent attributes. Discuss about goodness of fit for given data. Compute and interpret the results of a bivariate data using ANOVA.



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**Course Title: Resource Management
Technique (For II year Students of B.
Sc Computer Science)**


Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain the term LPP, Formulate and model a linear programming problem, Solve an LPP using graphical and simplex method. Identify a feasible solution and optimal solution using Simplex Method and Big M method
CO2	Explain the Transportation problem and formulate it as LPP and solve the problem, Interpret the initial basic solution using various methods, Evaluate the optimal solution using MODI method
CO3	Explain Assignment problem, Determine that an assignment problem is a special case of LPP and evaluate using Hungarian Method
CO4	Explain basic components of network analysis and critical path, Define CPM and PERT, Construct the network using CPM and PERT techniques to plan, schedule and control project activities
CO5	Define various terms and rules used in the Theory of Games, Identify strategic situations and represent them as games, Compute general solution of $m \times n$ rectangular games, Calculate graphical solution for $m \times 2$ and $2 \times n$ games

**Course Title: Mathematics for
Statistics-I(For I year Students
of B. Sc Statistics)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain different types of matrices and algebra of matrices. Use elementary row and column operations to find rank of a matrix.
CO2	Judge and classify the characterization of matrices and determinants. Use determinant to find the inverse of a non-singular matrix. Illustrate the Cramer's rule techniques in solving system of linear equations. Classify the consistency of system of homogeneous and non-homogeneous linear equations.
CO3	Summarize different methods of differentiation. Point out the derivative as a process of measuring changes. Identify the nature of curves like increasing or decreasing.
CO4	Explain Leibnitz theorem and Partial Differentiation. Formulate successive derivatives. Illustrate maximum and minimum values of a function.
CO5	Demonstrate integral as a result of reversing the process of differentiation. Use properties of definite integrals. Example of definite and indefinite integrals. Point out the importance of Reduction formula and Bernoulli's formula.


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**Course Title: Mathematics for Statistics-II(For I year
Students of B. Sc Statistics)**

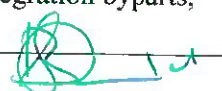
Course Outcomes: At the end of the Course, the Student will be able to:

CO1	List and work with many properties of sets and operations on sets.Explain the concepts real numbers bounds, supremum and infimum.Example of limits of real sequences.Differentiate between limit inferior and limit superior.
CO2	Summarize various methods to test the convergence of real sequence.Judge and classify the characterization convergence and divergence of series. Categories an alternating is conditional convergent or absolute convergent.
CO3	Explain the concept of limit and continuity through geometric process.Formulate a series of a function by Taylor's series.Illustrate sufficient conditions for Riemann integrability and Darboux theorem.Point out the fundamental theorem of integral calculus and mean value theorem.
CO4	Differentiate between proper and Improper Riemann integrals.Point out the importance of Gamma and Beta integrals.Summarize the transformation of variables to evaluate multiple integrals.
CO5	Define Laplace Transforms and summarize existence of Laplace Transforms.Compare the Laplace Transform and inverse Laplace Transform.Demonstrate the importance of Laplace Transforms.

**Course Title: Mathematical
Foundations(For I year
students of BCA)**

**Course Outcomes: At the end of the Course, the
Student will be able to**

CO1	Retrieve the concept of matrix and perceive the idea of finding inverse by using Cayley - Hamilton theorem. Solving linear equations by using matrix method and determinant method.(Cramer's Rule)
CO2	Define Proposition Summarize the concept of types of proposition, negation, disjunction, Conjunction, conditional, by conditional. Prepare tautologies and contradictions. Explain logical equivalence Summarize converse, inverse and contra positive propositions, arguments and validity of arguments.
CO3	Attaining the knowledge of finding operations on sets and Cartesian product of sets. Prepare a Venn-diagram Identify number of elements of sets Summarize the concepts of domain, range, Equivalence relations, partially and totally ordered sets List types of functions and Composition of function.
CO4	Recall the concept of derivatives of simple function using sum, product, quotient rules, function of function rule, logarithmic differentiation, Implicit of functions, Parametric differentiation. Solve problems on successive differentiation.
CO5	Identify the rules of integration. Discover integration by substitution method, integration by parts, and Bernoulli's formula.



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**Course Title: STATISTICAL
METHODS(For I year students
of BCA)**

**Course Outcomes: At the end of the Course, the
Student will be able to**

CO1	Retrieve the concept of Arithmetic mean, median, mode geometric mean and harmonic mean combined mean, weighted mean-Simple problems.
CO2	Determine the Range, Quartile deviation, mean deviation, standard deviation, combined standard deviation, coefficient variation. Measures of skewness :Karl Pearson's, Bowley's coefficient of skewness. Simple problems.
CO3	Attaining the knowledge of finding Karl Pearson, Spearman's rank correlation method and Lines of regression.
CO4	Recall the concept of Probability Sample space-Events-probability-Addition and multiplication theorem and Conditional probability. Application of Baye's theorem. Solving problems using Baye's Theorem
CO5	Identify the Time series and Meaning of time series , definitions and uses Components of time series and Methods of measuring trends.

(SYLLABUS)

**Course Title: Business
Mathematics - I(For I year
students of B.Com. (Gen)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Restate the definition of sets. Differentiate the elements and sets. Demonstrate relation and functions of sets.
CO2	Distinguish between permutation and combination. Solve the problem on binomial theorem. Summarise the concepts of exponential and logarithmic series.
CO3	Define the term ratio. Demonstrate the importance of proportions.. Solve the problems on ratios, proportion and variance.
CO4	Define the term differentiation . Explain the concept of maxima and minima of univariate functions. Apply the concepts of maxima and minima.
CO5	Define the term interest. Point out the important term of annuity and banker's discount.



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SECOND SEMESTER(SYLLABUS)

**Course Title: Business
Mathematics II(For I year
students of B.Com. (Gen)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Restate the definition of plane analytical geometry. Demonstrate the Cartesian co-ordinate system. Demonstrate gradient of straight line.
CO2	Distinguish between arithmetic mean and geometric mean. Solve the problem on arithmetic mean and harmonic mean.
CO3	Understand the concept of integral calculus. Demonstrate the meaning and rules of integration. Solve the problems on integration by parts rule.
CO4	Define the term interpolation. Explain the concept of binomial method. Judge and classify the concepts of Newton and Lagrange interpolation method).
CO5	Define the term matrix. Point out the important term of matrix inversion, solution to linear equation.

FIRST SEMESTER (SYLLABUS)

**Course Title: Business
Mathematics - I(For I year
students of B.Com. (A&F)**

**Course Outcomes: At the end of the Course, the
Student will be able to:**

CO1	Restate the definition of sets. Differentiate the elements and sets. Demonstrate relation and functions of sets.
CO2	Define the term ratio. Demonstrate the importance of proportions. Solve the problems on ratios, proportion and variance.
CO3	Distinguish between permutation and combination. Solve the problems on binomial theorem. Summarize the concepts of exponential and logarithmic series.
CO4	Define the term interest. Explain the difference between Simple interest and Compound interest. Calculate the future and present values of Annuities. Point out the important term of banker's discount.
CO5	Distinguish between H.C.F & L.C.M of numbers. Demonstrate the importance of Average and Percentage. Solve real-life problems based on time & work.



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**SECOND SEMESTER
(SYLLABUS)**

**Course Title: Business
Mathematics II(For I year
students of B.Com. (A & F)**

Course Outcomes: At the end of the Course, the Student will be able to

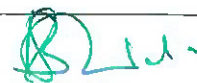
CO1	Restate the definition of plane analytical geometry. Demonstrate the Cartesian co-ordinate system. Demonstrate gradient of straight line.
CO2	Distinguish between arithmetic mean and geometric mean. Solve the problem on arithmetic mean and harmonic mean.
CO3	Define the term interpolation. Explain the concept of binomial method. Judge and classify the concepts of Newton and Lagrange interpolation method).
CO4	Define the term matrix. Point out the important term of matrix inversion, solution to linear equation.
CO5	Understand the difference between rational and irrational numbers and perform operations with Surds and Indices. Calculate the profit and loss of a real-life problem. Find the ratio between two or more ingredients at their respective prices

THIRD SEMESTER(SYLLABUS)

**Course Title: Business Statistics and Operations Research – IFor II year Students of B.Com,
(General) &B.Com,(A/F)**

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Explain about classification and tabulation of statistical data. Plot the diagrammaticand graphical representation of data
CO2	Explain about central tendency and calculate various measures. Explain how mean, median, mode are related in symmetric and skew symmetric distributions. Explain about dispersion and calculate various measures. Estimate the coefficient of variation using standard deviation. Investigate the uniformity or consistency of a data using coefficient of variation. Interpret the concept of skewness and methods to calculate its coefficient
CO3	Define correlation and its types. Calculate and interpret correlation between two variables. Apply regression equations to estimate the values of unknown variable using the given data. Rank the given data and examine the rank correlation
CO4	Define the nature and features of operations research. Explain the term various termsin LPP. Formulate and model a linear programming problem. Solve an LPP using graphical and simplex method. Identify a feasible solution and optimal solutionusing simplex method
CO5	Explain basic components of network analysis and critical path. Define CPM and PERT. Construct the network using CPM and PERT techniques to plan, scheduleand control project activities



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**FOURTH SEMESTER
(SYLLABUS)**

**Course Title: Business Statistics and Operations
Research – II For II year Students of B.Com,
(General) & B.Com,(A/F)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Explain the term time series Classify the various components of time series Analyze the seasonal and cyclical pattern in series of time.
CO2	Interpret indices to identify trends in a data set. Construct simple and weighted price, quantity and value indices. Use the consumer price index to determine the purchasing power
CO3	Explain basic probability axioms and rules. Calculate probabilities by using addition and multiplication law, with the terms independent and mutually exclusive events. Apply Baye's Theorem to solve real world events
CO4	Explain the Transportation problem and formulate it as LPP and solve the problem Determine that an assignment problem is a special case of LPP and evaluate using Hungarian Method
CO5	Define various terms and rules used in the Theory of Games. Identify strategic situations and represent them as games. Compute general solution of $m \times n$ rectangular games. Demonstrate graphical solution for $m \times 2$ and $2 \times n$ games

**THIRD
SEMESTER
(SYLLABUS)**

**Course Title: Business
Mathematics (For II year
students of B.Com. (Honors)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Restate the set notation, elementary set theory. explain the connection between set operations and logic. Classify the different types of functions and properties of injections, surjections, bijections, compositions and inverse functions. Categorize the different types of relations.
CO2	Demonstrate and solve certain real time business problems using ratios, proportion, variations, permutations and combinations.
CO3	Explain the different types of series such as Binomial series, exponential series and logarithmic series and illustrate with examples. Distinguish and solve the arithmetic progression, Geometric progression and Harmonic progression.
CO4	Point out the derivative of an algebraic, exponential and logarithmic function using the addition rule, product rule, quotient rule and chain rule. Point out the applications of differentiation to business situations. Identify the extrema of a function and classify them as minima and maxima.
CO5	Explain the meaning of simple interest, compound interest and annuity through secondary data. Restate the matrix and explain the different types of matrices using examples. Solve the system of linear and equations by matrix method.

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FOURTH SEMESTER(SYLLABUS)

Course Title: Business Statistics and Operations Research(For II year students of B.Com. (Honors)

Course Outcomes: At the end of the Course, the Students will be able to

CO1	Identify the strength and direction of a linear relationship between two variables by using correlation and regression analysis. Solve real time problems based on primary and secondary data.
CO2	Explain the meaning of the terms namely hypothesis, Null & Alternative hypothesis, Type I and Type II error, one tail test, two tail test, level of significance, Number of degrees of freedom, accept region, reject region, small sample, large sample, non-parametric test. Summarize the logic and framework of the inference of hypothesis testing. Solve problems on large sample test for a specified mean, test for equality of two means, test for a single proportion and test for equality of two proportions.
CO3	Demonstrate the various types of small samples tests viz. t test, F test, Chi square test and analysis of variance with given illustrations.
CO4	Define the nature and features of operations research. Explain the term various terms in LPP. Formulate and model a linear programming problem. Solve an LPP using graphical and simplex method. Identify a feasible solution and optimal solution using simplex method.
CO5	Identify the special features of the transportation balanced and unbalanced problems for minimization and maximization cases. Demonstrate the optimal solution by Modified Distribution (MODI) Method. Point out the importance of degeneracy situations in transportation model. Restate the Assignment mathematical model. Explain the theory of assignment problem and Use Hungarian method for solving assignment problem. Distinguish between a transportation and an assignment problem with suitable examples.

THIRD SEMESTER (SYLLABUS)

Course Title: Business Mathematics

(For II year students of B.Com. (Finance & Taxation))

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Restate the set notation, elementary set theory. explain the connection between set operations and logic. Classify the different types of functions and properties of injections, surjections, bijections, compositions and inverse functions. Categorize the different types of relations.
CO2	Demonstrate and solve certain real time business problems using ratios, proportion, variations, permutations and combinations.
CO3	Explain the different types of series such as Binomial series, exponential series and logarithmic series and illustrate with examples. Distinguish and solve the arithmetic progression, Geometric progression and Harmonic progression.
CO4	Point out the derivative of an algebraic, exponential and logarithmic function using the addition rule, product rule, quotient rule and chain rule. Point out the applications of differentiation to business situations. Identify the extrema of a function and classify them as minima and maxima.
CO5	Explain the meaning of simple interest, compound interest and annuity through secondary data. Restate the matrix and explain the different types of matrices using examples. Solve the system of linear and equations by matrix method.

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**FOURTH SEMESTER
(SYLLABUS)**

Course Title: Operations Research

(For II year students of B. Com (Finance & Taxation))

Course Outcomes: At the end of the Course, the Students will be able to

CO1	Define the nature and features of operations research. Explain the various terms in LPP. Formulate and model a linear programming problem. Solve an LPP using graphical Method.
CO2	Identify the special features of the transportation balanced and unbalanced problems for minimization and maximization cases. Demonstrate the optimal solution by Modified Distribution (MODI) Method. Point out the importance of degeneracy situations in transportation model.
CO3	Restate the Assignment mathematical model. Explain the theory of assignment problem and Use Hungarian method for solving assignment problem
CO4	Explore how problem solving and decision tree making interrelate. Distinguish the various models of replacement problems. Produce the solution for replacement of an item With and without time value of money. Solve Group Replacement Models.
CO5	Represent a real time problem using Network Diagram and find its critical path using Critical Path Method and Evaluate PERT computations- Variance and Expected time of completion of Project. Define the game theory problems. Solve the problems based on pure and mixed strategies, dominance method and graphical method.

**THIRD
SEMESTER
(SYLLABUS)**

Course Title: Business

**Mathematics (For II year
students of BBA)**

**Course Outcomes: At the end of the Course, the
Student will be able to:**

CO1	Summarize the concept of Arithmetic progression- nth term of an AP, sum to n terms of an AP, Geometric progression- nth term of a GP, sum to n terms of GP
CO2	Summarize the concept of straight line-length of line segment, section formula, gradient of slope of line, various forms of equation of straight line-simple problems
CO3	Summarize the concept of Differentiation- product rule, quotient rule, applications- Average cost, Marginal cost, Marginal revenue, elasticity, maxima and minima, point of inflection
CO4	Summarize the concept of matrices, addition, subtraction, multiplication of matrices, transpose, matrix inversion and solution to system of linear equation
CO5	Summarize the concept of simple interest and compound interest, Annuities-amount of annuity, freehold estate and leasehold estate, sinking fund, Amortization, Discount.


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**FOURTH SEMESTER
(SYLLABUS)**

**Course Title: Operations
Research(For II year
students of BBA)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	List the concepts and scope of Operations Research, Formulate general mathematical model of Linear Programming problem. Solve the LPP of graphical method
CO2	Summarize the transportation model. Compute initial basic feasible solution under the methods of northwest corner rule, row minima, column minima, least cost method and Vogel's approximation method. Solve the transportation model using Vogel's approximation method.
CO3	Distinguish the assignment problem of types balanced and unbalanced problem and also minimization and maximization problems. Solve assignment problem under Hungarian method. Summarize the sequencing problem of processing of n jobs through m machines.
CO4	Judge the network problems. Produce the optimal solution by Critical Path Method and PERT computations
CO5	Define the game theory problems. Solve the problems based on pure and mixed strategies, dominance method and graphical method.

**FIRST SEMESTER
(SYLLABUS)**

**Course Title:
Business Statistics
(For I year students
of BBM)**

**Course Outcomes: At the end of the Course, the
Student will be able to:**

CO1	Summarize the concept of mean, median and mode and able to solve problems in mean, median and mode .
CO2	Summarize the concept of mean deviation, standard deviation, quartile deviation and range and able to solve problem in mean deviation, standard deviation, quartile deviation and range
CO3	Summarize the concept of Karl Pearson's coefficient of skewness- Bowley's coefficient of skewness and kurtosis and able to solve simple problem in Karl Pearson's coefficient of skewness- Bowley's coefficient of skewness and kurtosis
CO4	Summarize the concept of Karl Pearson's coefficient of correlation, Spearman's rank, correlation coefficient, regression analysis and regression equations and able to solve the problem in Karl Pearson's coefficient of correlation, Spearman's rank, correlation coefficient, regression analysis and regression equations
CO5	Summarize the concept of index numbers- methods of constructing index numbers - Laspeyres method, Paasche's method, Fisher's method, Bowley's method, Marshall-Edgeworth method, unit test-time reversal test and factor reversal test and able to solve problem in Laspeyres method, Paasche's method, Fisher's method, Bowley's method, Marshall-Edgeworth method, unit test-time reversal test and factor reversal test



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**SECOND SEMESTER
(SYLLABUS)**

**Course Title: Operations
Research(For I year
students of BBM)**

Course Outcomes: At the end of the Course, the Student will be able to

CO1	Deal with history of operations research and introduce linear programming problem. Determine the optimality of the objective function of a linear programming problems
CO2	Determine the schedule for transporting goods from source to destination in a way which will minimize the shipping cost while satisfying supply and demand constraints
CO3	Assign a number of jobs to an equal number of machine so as to minimize the total time required for successful execution of all the jobs
CO4	Demonstrate pure and mixed strategy and saddle point of a game. Explain the concept of fair game. Complete the job in maximum possible time, keeping the minimal idle time of the machine
CO5	Schedule, organize and coordinate tasks within a particular project by using the activities of the project (PERT) Determine the project completion time and the critical path of the project

16.B.Sc. Physics shift II

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PROGRAM SPECIFIC OUTCOMES

PSO1:	Students will demonstrate an understanding of core knowledge in Physics namely Electromagnetism, Quantum Mechanics, Thermal Physics, etc., and be able to apply this knowledge to analyse a variety of physical phenomena.
PSO2:	Students obtain proficiency in Mathematics needed for a proper understanding of Physics.
PSO3:	Students develop strong technical skills because they are trained in programming languages.
PSO4:	Students develop problem solving skills, which makes their conceptual foundation in the subject strong.
PSO 5:	Students acquire the required skills to compete for higher studies or employment entrepreneurship.

FIRST SEMESTER

CORE 1 – MECHANICS AND PROPERTIES OF MATTER

Course Code: 37101

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Understand the basics of Newtonian mechanics, displacement, velocity, acceleration and Newtons laws of motion
CO 2	Analyze and differentiate the simple and compound pendulum. Understand the dynamics of a system of particles
CO 3	In hydrodynamics the derivation of Euler's equation, Bernoulli's theorem and its applications.
CO 4	Understand the concept of surface tension, viscosity and its variation with temperature
CO 5	Know the three types of strain and derive the relation between elastic constants
CO 6	Determination of the rigidity modulus of the rod using static torsion method
CO 7	Understand the inertial frames, Galilean invariance and postulates of special theory of relativity
CO 8	Realize the consequences of Lorentz transformation, significance of mass-energy relation and four vectors Establish the non-existence of the hypothesized stationary ether through the null result of Michelson-Morley experiment

SECOND SEMESTER

CORE 2 – BASIC ELECTRONICS



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Course Code: 37203

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Understand the concept of band gap energy and classification of materials based on it. Explain the characteristics of P-N junction diode and apply it to construct Half-wave and Full-wave rectifier
CO 2	Analysis the transistor characteristics in CE and CB mode. To analyse the working of RC coupled, Class A and Class B power amplifier
CO 3	Acquire knowledge about the concept of feedback and explain phase shift and Wien's bridge oscillators
CO 4	Design wave shaping circuits such as clippers, clampers and multivibrators
CO 5	Analyse the characteristics of special semiconductor devices such as FET, UJT and SCR and understand its real-time applications

CORE PRACTICAL I

Course Code: 37204

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	By getting the focal length the property of reversibility in thin lenses is understood proving that the image distance and object distance is interchangeable.
CO2	Determining the Young's modulus and Rigidity modulus correlates to the Physics concept of the property of elasticity. The measurement of surface tension and viscosity of water relates to the theory of properties of liquids.
CO3	Perform the procedure as per standard value and calculate the data to obtain quantitative result.
CO4	Develop the skill of interpreting the results and understand the applications of the experiments.

THIRD SEMESTER

CORE 3 – MATHEMATICAL PHYSICS


Course Code: 37306

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Evaluate the understanding of basic concept of linear vector space
CO 2	Identify a range of matrix methods that are essential for solving advanced problem in theoretical Physics.
CO 3	Apply special function skills to solve problems in Physics.
CO 4	Remember various processes involved in understanding the vector analysis to solve the equations of motion.
CO 5	Understand and evaluate the elementary complex analysis

CORE 4 – ELECTRICITY AND ELECTROMAGNETISM

Course Code: 37307


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Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	In Electrostatics, study the properties and boundary conditions obeyed by Electric field, mathematical techniques to obtain electric field and their applications as Conductors, Capacitors, Dielectrics
CO 2	Understand the foundations of magnetostatics, properties and boundary conditions obeyed by magnetic field, vector potential, magnetisation and applications
CO 3	Acquire knowledge about AC and DC circuits and their applications
CO 4	Understand Faraday's laws of electrolysis, self and mutual induction, measurement of horizontal and vertical component of Earth's magnetic field, Ballistic galvanometer and Induction coil
CO 5	Understand the mathematical framework of Maxwell's equations, Electromagnetic waves, Scalar and Vector potential, Poynting's theorem, Hertz Experiment

**FOURTH SEMESTER
CORE 5 – OPTICS**

Course Code: 37412

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	To understand the defects in lenses and methods to rectify them
CO 2	Interference and related experiments
CO 3	Diffraction and experimental explanations
CO 4	Understand the concept of polarisation and optical activity
CO 5	Principle of LASER and its applications

CORE 6 – QUANTUM MECHANICS

Course Code: 37413

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Find out the inconsistencies in Classical Physics while trying to understand microscopic physics
CO2	Recall different laws related to Black Body Radiation – Einstein's Theory of Specific Heat – Limitations of Bohr's Model
CO3	Compute the wavelength of matter waves
CO4	List out different experimental evidences for wave nature of particles.
CO5	Explain the postulates of Wave Mechanics and use Schrodinger's equation to compute Eigen values of physical observables
CO6	Evaluate the Commutation relations of angular momentum operators and Identify Pauli matrices
CO7	Solve the Schrodinger's equation for standard potentials like Hydrogen Atom

CORE PRACTICAL II



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Course Code: 37416

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Deduce the figure of merit of the given devices such as ammeter and galvanometer
CO 2	Measure specific resistance, refractive index, Young's modulus, Rigidity modulus, temperature coefficient of resistance etc., as per the standard procedure
CO 3	Ability to do the calculations on the data collected and compare with the standard values as required. Infer the correctness of the results from the experiment
CO 4	Plotting of graphs by means of which it is clear that the manner in which one quantity called the dependent variable changes in a given physical process, when certain arbitrary values are given to a second quantity, called the independent variable, all other factors being assumed to remain unchanged
CO 5	A thorough understanding of the underlying physical principles

FIFTH SEMESTER

CORE 7 – THERMAL PHYSICS & ACOUSTICS

Course Code: 37518

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Concept of temperature, its measurement, knowledge in specific heat capacity of solids, liquids and gases. Understanding the benefits of low temperature physics
CO 2	Become familiar with various thermodynamic process and work done in each of this process. Have a clear understanding about reversible and irreversible process, working of a Carnot engine, and knowledge
CO 3	Derive the expression of thermal conductivity and know the various laws related to black body radiation
CO 4	Attain the scientific knowledge about wave motion
CO 5	Familiarise with important terms in acoustics like intensity, loudness, reverberation, etc., Gain knowledge about production, detection, properties and uses of ultrasonic waves

CORE 8 – SOLID STATE PHYSICS

Course Code: 37519

Course Outcomes: At the end of the Course, the Student would be able to:



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CO 1	Understand the basic concepts of force between atoms and bonding thereby distinguish materials based on the type of bonding
CO 2	Importance of dielectric constant. Realising that the factors dielectric constant & relative permittivity are key to the operation of capacitors and the determination of the levels of capacitance achievable
CO 3	acquired knowledge on the nature of magnetic materials
CO 4	clear understanding about x-ray diffraction, understand the defects in solids
CO 5	Expected to gain knowledge of superconductivity, its underlying principles and its applications in modern world

OPEN ELECTIVE I – SPACE SCIENCE

Course Code: 37520 (f)

Course Outcomes: At the end of the Course, the Student would be able to:

CO1	Understand the basic concepts to space
CO2	Discuss the laws of solar system
CO3	Demonstrate formation of stellar objects
CO4	Analyze evolution and origin of galaxies
CO5	Summarize the basic laws of space science and formation of universe

SIXTH SEMESTER CORE 9 – NUCLEAR AND PARTICLE PHYSICS

Course Code: 37623


Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the Nuclear properties and different Nuclear Models
CO2	Evaluate problems in Half life and Mean life period and also to find the age of Earth
CO3	Understand the working of Radiation Detectors and Particle Accelerators
CO4	Compare between different Nuclear reactors and appreciate their applications
CO5	Distinguish the interaction, isospin and strangeness of different elementary particles
CO6	Solve problems under Nuclear Reactions

CORE 10 – ATOMIC PHYSICS

Course Code: 37624

Course Outcomes: At the end of the Course, the Student will be able to:


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CO 1	Acknowledge electric and magnetic fields and positive rays
CO 2	Recognize photoelectric emission, photo electric equation. Reach a conclusion how photoelectric emission is extrapolated in the construction of photoelectric cells, photo emissive cells, photo voltaic cells and photo conducting cells
CO 3	Reason Pauli's exclusion principle in L-S and J-J coupling
CO 4	Make out the experimental arrangement for the normal Zeeman effect. Deduce anomalous Zeeman effect, Paschen-Back effect, Stark effect
CO 5	Distinguish between characteristic X-ray spectrum and continuous X-ray spectrum Realise the volume of uses of X-rays. Derive the necessary expression to understand the significance of Compton effect

ELECTIVE I – INTEGRATED ELECTRONICS

Course Code: 37626 (a)

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Acquire knowledge of Operational Amplifiers and its applications
CO 2	Applying Op-Amp to solve simultaneous equations and second order differential equations. Learn how the op-amp is used to construct oscillators to generate Square wave and Sine wave
CO 3	Acquire the knowledge of principle, construction and working of D/A convertor and A/D converter
CO 4	Express the internal architecture of 555 Timer, and familiarize with the working Timer 555 as an Astable, Monostable multivibrator and Schmitt trigger
CO 5	Understand and necessitate that the semiconductor memories like RAM, ROM, EPROM, EEPROM are applicable in today's digital world

ELECTIVE II – MICROPROCESSOR FUNDAMENTALS

Course Code: 37627 (a)


Course Outcomes: At the end of the Course, the Student will be able to

CO 1	Familiar with the general architecture of a microcomputer system and architecture & organization of microprocessor 8085
CO 2	Recognize the instruction set of microprocessors 8085
CO 3	Describe the memory interfacing to 8085 microprocessors
CO 4	Explain the concept of interrupts in 8085 microprocessors
CO 5	Acquire basic knowledge on Programmable peripheral interface 8255 and explain modes of operation of 8255

Computer Core 6 – DIGITAL ELECTRONICS

Course Code: 37625

Course Outcomes: At the end of the Course, the Student will be able to:


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CO1	Identify and realise that different number system with different number bases play a very important part in the computer
CO2	Construct basic logic gate using NAND and NOR gates. To use Boolean Algebra to design digital circuits and also minimization of gates by using Boolean laws
CO3	Simplify digital circuits using Karnaugh Map and create circuits requiring lesser gates
CO4	Justify that encoder, decoder, multiplexer as well as demultiplexer are combinational logic circuits as their output at any time depends upon the combination of the input signals present at that instant only
CO5	To reach a conclusion that Flip-flops is a data storage element and are fundamental building blocks of <u>digital electronics</u> systems used in computers, communications. Identify different types of flip-flops and what led to the development of these flip-flops.
CO6	Using flip-flops to construct different types of Registers and Counters and conclude how useful sequential circuits are
CO7	Elucidate the fabrication steps involved in IC production

CORE PRACTICAL III

Course Code: 37628

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Identify that Interference phenomena is responsible for the formation of Newton's rings. Use the spectrometer to find the Refractive index of a glass by method of i-i' realise that RI depends upon the combination of raw materials used, together with the nature of the manufacturing process
CO2	Methodology to determine the Young's modulus by Koenig's method and Optic lever – Telescope arrangement. Correlate the experimental techniques with the relevant theory contained in Properties of Matter. Understand the necessity to record the data with high precision to result in highly accurate results
CO3	Acknowledge that the current produces a magnetic field and use it to determine the approximate (<i>indicative</i>) the value of the earth's magnetism by experiment namely Field along the axis of the coil using Deflection magnetometer and Vibration magnetometer
CO4	Ballistic Galvanometer is the device that is employed for assessing the amount of charge flow that is developed from the magnetic flux. It genuinely operates as an integrator calculating the amount of charge expelled from it which can be realised from experiments like Figure of merit, Internal resistance of a cell, Comparison of capacitances, Comparison of EMFs, Absolute capacitance of a capacitor – B.G.

CORE PRACTICAL IV ELECTRONICS

Course Code: 37629

Course Outcomes: At the end of the Course, the Student will be able to:



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CO1	Understand the properties and applications of semiconductor diodes in the form of Half wave, Full wave Bridge rectifier, Zener Regulated power supply
CO2	Understand the properties and working of transistors in CB and CE mode. Understand and analyse the biasing technique in emitter follower
CO3	Construct Hartley, Colpitts's oscillator circuits using transistors, obtain the frequency of oscillation and identify that they are sinusoidal, audio-frequency oscillators
CO4	Identify the IC chips of NAND and NOR are universal building block in digital circuits

CORE PRACTICAL V APPLIED ELECTRONICS

Course Code: 37630

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Use operational amplifier to realise mathematical operations like addition and subtraction of voltages establishing the versatility of op-amps
CO2	Realise the application of op-amp in the construction of oscillators like Wein's bridge, square wave oscillator, phase shift oscillators. Observe the calculated frequency of oscillation matches with the theoretical frequency
CO3	To become familiar with the Instruction set of Intel 8085 microprocessor. To provide practical hands on experience with Assembly Language Programming. Write algorithms draw flow charts and realize Programs using Microprocessor 8085 instruction set
CO4	Schmitt Triggers constructed using TIMER 555 is a fundamental circuit with several uses. One is signal processing and the hysteresis curve is a proof
CO5	On completion of the experiment D/A by binary weighted resistor method the importance, significance and the various terms like full scale voltage, accuracy, resolution of D/A converters is comprehended

ENVIRONMENTAL STUDIES

COURSE CODE:

OUTCOME:

1. Demonstrate a general understanding of the breadth and interdisciplinary nature of environmental issues.
2. Denote a general understanding of the qualitative and quantitative research methods to gain empirical evidence bearing on evaluation of environmentally sustainable alternatives
3. Reveal depth of critical analysis and writing of environmental problems that span popular, grey and primary publications.
4. Recall the ability to locate, interpret and apply published research and lessons from successful projects to a focused environmental solution with potential regional stakeholders.
5. Conduct and present (orally and in writing) independent research that is consistent with the highest standards and practices of research in environmental science.

EXTENSION ACTIVITY

COURSE CODE:

COURSE OUTCOME:



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1. Able to handle the social relation between the public and students.
2. Familiarize the students to handle the environmental issues.
3. According to the need for higher secondary students, educate the school students both theory and practical.
4. Eradicate the plastics in and around the school and college.
5. The value education helps the student to develop
 - ✓ **Character development**
 - ✓ **Personality development and**
 - ✓ **Citizenship education**

Non-Major Elective 1 – DIGITAL ELECTRONICS

Course Code: 37102

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Review of Number Systems and Codes: Binary, Octal and hexadecimal conversions
CO 2	Solving problems to perform binary addition and subtraction by 1's complement and 2's complement method
CO 3	Identify basic logic Gates. Justified that Universal Gates are NAND and NOR because the construction of all other gates are realised
CO 4	Recall laws of Boolean algebra, De Morgan's Theorem and construction of Truth Tables
CO 5	Calculate the Min term and Max term to simplify Boolean expressions using Karnaugh Map

Non-Major Elective 2 – LASER PHYSICS

Course Code: 37205

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Identify that the process of population inversion, optical pumping are necessary for the functioning of LASER
CO 2	Analyze the different types of LASER
CO 3	Comprehend the industrial applications of LASER
CO 4	Assimilate the medicinal applications of LASER and appreciate how it useful to the society
CO 5	Envision how LASER is revolutionising the field of Communication

ELECTIVE I – BIO-PHYSICS

Course Code: 37626 (b)

Course Outcomes: At the end of the Course, the Student will be able to:


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CO 1	Learn about Interactive Potentials for strong and weak bonds, non-central forces, bond energies and spring constants
CO 2	Explore the techniques and methods available such as X-ray diffraction and molecular structure, nuclear magnetic resonance, Scanning Tunnelling Microscopy, optical tweezers and Atomic Force Microscopy
CO 3	Learn important topics like Biological Polymers, Biological Membranes, Nerve Signals and Vertebrate Heart
CO 4	Master the concepts of Chemical Spectroscopy such as Absorption, Atomic and Molecular energy levels, Raman spectra, Electronic energy spectra of polyatomic molecules, UV absorption by proteins and nucleic acids. Understand Laser and its applications
CO 5	Comprehend the chemical and analytical applications of Radiation and Traces in the Health Industry.

ELECTIVE I – APPLIED PHYSICS

Course Code: 37626 (c)

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Recognize and present real-life examples of the concept and interrelate some of them
CO 2	Describe the link between Physics and the technology
CO 3	Identify technological applications of the topics covered in syllabus
CO 4	Understand the benefits of the course and potential to find his/her area of specialization

ELECTIVE II – PHYSICS OF MATERIALS

Course Code: 37627 (b)

Course Outcomes: At the end of the Course, the Student will be able to:

CO 1	Gain knowledge on phase diagrams and various material processing methods
CO 2	Explain the necessary understanding on various advanced materials
CO 3	An idea about various characterizations like XRD, Electron Microscopy, Atomic Force Microscopy
CO 4	Describe why each of the fundamental properties of materials covered in the course (stress, strain, elastic constant, creep, fatigue, wear, hardness, Poisson's ratio, toughness, ductility, flexural strength, impact strength, elongation) are important
CO 5	To research current applications of materials understand limitations of those materials, evaluate future trends in those applications

ELECTIVE II – INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Course Code: 37627 (c)

Course Outcomes: At the end of the Course, the Student will be able to:



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CO 1	Understand Kepler's Laws, Sky coordinates, phases of the Moon, the Moon's orbit and eclipses and Planetary motions.
CO 2	Learn about the formation of Solar System and the various types of planets and atmospheres in the cosmos
CO 3	Understand how galaxies are formed, the various of galaxies, the Big Bang. Learn about the history and fate of the universe
CO 4	Explore the vast array of astronomical techniques and tools available at our disposal. Understand the techniques in use to detect dark matter
CO 5	Learn about the structure and evolution of Stars, White Dwarfs and Chandrasekar Limit, Virial Theorem, stages of nuclear burning, Schonberg-Chandrasekar limit and supernovas

OPEN ELECTIVE I – OPTICS AND PHOTONICS

Course Code: 37520 (b)

Course Outcomes: At the end of the Course, the Student will be able to:

CO1	Understand the basic concepts of Fourier optics
CO2	Discuss the periodic media and coatings
CO3	Demonstrate working of laser beams
CO4	Analyze the fiber and integrated optics
CO5	Demonstrate the concepts photonic device and also summarize the basic understanding of Fourier optics and functioning of devices

17. DEPARTMENT OF PSYCHOLOGY

PROGRAM SPECIFIC OUTCOMES OF B.SC PSYCHOLOGY PROGRAM

- To acquire basic knowledge on various theories, principles and concepts of Psychology



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- To develop relevant skills expected of Psychology professionals in an employment context.
- To encourage the application of concepts and processes of psychology to nurture the development of qualities, capacities and skills relevant to the individual and the society.
- To discover one's strengths and weaknesses, figuring out one's self and identity, establishing social relationships and ways to organize everyday life and relationships in such a way that the level of subjective wellbeing increases.
- To acquire an attitude of scientific enquiry and critical thinking, ability to plan, design and conduct research, analyze data and interpret them.

COURSE OUTCOMES

CORE PAPER I - GENERAL PSYCHOLOGY I – 15-19/47101

CORE PAPER III - GENERAL PSYCHOLOGY II – 15-19/47205

- CO1 – To define the basic concepts of the field of psychology with an emphasis on applications of psychology in everyday life.
- CO2 – To explain various schools of thoughts in the field of psychology.
- CO3 – To illustrate the principles of psychology using examples from daily life
- CO4 – To explain, restate, and interpret basic theories in psychology.
- CO5 -- To relate the notions underlying different perspectives of psychology

CORE PAPER II – BIOLOGICAL BASES OF BEHAVIOUR – I – 15-19/47102

CORE PAPER IV – BIOLOGICAL BASES OF BEHAVIOUR –I I – 15-19/47206

- CO1 – To label the components of the nervous system.
- CO2 – To explain the anatomy of the nervous system
- CO3 – To identify the hormones and their function
- CO4 – To illustrate the relationship between biology and behavior
- CO-5 – To describe the manifestation of biological deficits in behavior

ALLIED PAPER I – PRINCIPLES OF SOCIOLOGY – 15-19/47103

ALLIED PAPER II – FUNDAMENTALS OF SOCIAL ANTHROPOLOGY – 15-18/47207

- CO1 – To explain every type and purpose of human thought and activity
- CO2 – To describe how the cultural and social structures shape human action and thought and vice versa.
- CO3 – To classify, quantify, identify, and perform functions that are very anthropological in their construct in observing societies in the whole
- CO4 – To identify all levels of human thought and activity from the individual and personal level to the global level.
- CO5 – To examine how human thought about race, romance, friend, family or foe is studied at the interpersonal level, where the surrounding social structure, family structure, community and legal system shape their beliefs and attitudes, and eventually determine what is and is not allowed under the law.

CORE PAPER V- DEVELOPMENTAL PSYCHOLOGY-I – 15-18/47309

CORE PAPER VII- DEVELOPMENTAL PSYCHOLOGY-II – 15-17/47412

- CO1 – To identify the developmental milestones of human beings
- CO2 – To predict the cognitive development attained from infancy to old age

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- CO3 – To identify and critically analyze the various psychological and social problems and changes occurring at the various stages of life span
- CO4 – To communicate with all age groups without being judgemental or stereotypical
- CO5 – To design an action plan to deal effectively with the issues arising at the various stages of life span.

ALLIED PAPER III – STATISTICS IN PSYCHOLOGY – 15-18/47310

- CO1 –To interpret and classify a great deal of information.
- CO2 – To describe the information in the form of visual representation
- CO3 --To infer different elements of a sample or population.
- CO4 -- To summarize what already exists in a given population
- CO5 -- To compute, predict and prepare the results of a study

ALLIED PAPER IV – MARKETING AND CONSUMER BEHAVIOUR – 15-17/47413

- CO 1 - To cite how consumer decisions are affected by their behaviour
- CO 2 - To explain consumer behavior for the purpose of helping a firm or organization to achieve its objectives.
- CO3 - To judge the likes and dislikes of the consumer and conduct extensive consumer research studies to design and develop the product and market respectively.
- CO 4 - To examine how the consumer attitude gets affected or changes with respect to marketing strategies.
- CO 5 - To conclude that marketing starts with the needs of the customer and ends with his satisfaction

CORE PAPER IX – PSYCHOPATHOLOGY – I – 15-17/47515

CORE PAPER XIII – PSYCHOPATHOLOGY – II – 15-16/47620

- CO1 – To explain psychological abnormality
- CO2 – To list down, diagnose and identify disorders
- CO3 – To identify serious personality problems and deal with people having problems of adjustment and definitely contribute to the welfare of the humanity
- CO4 – To discriminate, differentiate the symptoms of disorder and classify them

CORE PAPER X – PSYCHOLOGICAL RESEARCH AND MEASUREMENT – 15-17/47516

- CO1 – To list down the steps in research process
- CO2 – To explain the method of research
- CO3 – To apply the research method to solve the societal problems
- CO4 – To interpret the results of the study and generate new theories.
- CO5 –To prepare and present the research report and critically evaluate and detect the faults in the study conducted.

CORE PAPER XI – APPLIED PSYCHOLOGY – 15-17/47517

- CO1 – To list down various sub-fields of psychology
- CO2 – To match the branches of psychology with their corresponding objectives and outcomes.
- CO3 – To distinguish between different fields of psychology and their respective function
- CO4 – To associate the underlying notions of branches of psychology and their relevance in the past, present and future.
- CO5 – To integrate the principles and functions and apply them in the field.

CORE PAPER XII – SOCIAL PSYCHOLOGY – I – 15-17/47518

CORE PAPER XV – SOCIAL PSYCHOLOGY – II – 15-16/47622

- CO1 – To identify human behavior in groups
- CO2 – To describe socio-cultural causes and motives of human behavior in groups.



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- CO3 – To list down the importance and significance of social psychology in the modern world
- CO4 -- To appraise the relationship between socio-cultural factors and mental health
- CO5 – To design methods to change the attitudes of the people in a desired way.

CORE PAPER XIV – ORGANISATIONAL PSYCHOLOGY – 15-16/47621

- CO 1- To state the importance of understanding the dynamics of organizational behavior
- CO2- To solve the problems that come up between the different tiers of management, between the employees and management and among the employees.
- CO 3- To examine the reasons for decrease in productivity of the employees
- CO 4- To apply the knowledge gained from individuals, groups and the effect of structure on behavior to make organizations work more effectively.
- CO5- To evaluate and relate organizational functioning and productivity of the human resource with motivation, leader behavior and power, interpersonal communication, group structure and processes, learning, attitude development, and perception, change processes, conflict, work design, and work stress.

BACHELOR IN ARTS TOURISM AND TRAVEL MANAGEMENT


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PROGRAM SPECIFIC OUTCOMES (PSO):

PSO 1	Knowledge about the hospitality and tourism industry practices.
PSO 2	Ability to understand the process and apply specific practices to improve effectiveness and productivity in tourism operations.
PSO 3	Demonstrate ability to perform basic and supervisory level job functions in tourism and hospitality industry
PSO 4	Conduct him/her in a professional and ethical manner, and practice industry-defined work ethics.
PSO 5	Actively engage in the world as global citizens
PSO 6	Ability to update to current practices followed globally in hospitality and tourism and to adapt the same to Indian context
PSO 7	Apply the concepts and skills necessary to achieve guest satisfaction.

BA - Tourism and Travel Management			
SEMESTER	PAPER NO	TITLE OF THE PAPER	SYLLABUS OUTCOME
I	I	Principles of Tourism	The Students will be able to,
			1. Understand the basic concepts of Tourism industry
			2. Recognize the various elements of Tourism
			3. Realize the potential of Tourism industry in India
			4. Familiarize with Tourism National Policies
			5. Evaluate the impacts of Tourism
	II	Tourism Products of India	The Students will be able to,
			1. Understand the important Tourism Resources of India
			2. appreciate the natural and Manmade tourist resources available in India

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II			3. explore India as a preferable Tourist destination
			4. identify the importance of a destination in the diverse sectors of Tourism industry
			5. Analyze the important World Heritage Sites of India
	(Allied Paper I)	Transportation Management	The Students will be able to,
			1. understand the historical background of Travel
			2. explain the role of transportation in Tourism industry
			3. explore the types of Transportation available for tourists worldwide and with special reference to Transportation facility in India
			4. Identify the preferred mode of transportation in famous tourist circuits
			5. assess the growth of various Transport systems
	(Non Major Elective)	Tourism Geography	The Students will be able to,
			1. understand the basics of Indian Geography
			2. familiarize with the different types Maps
			3. explore the different Physiographic features across the world
			4. Identify the Reasons on why India is called a Sub - Continent
			5. assess the role of Government in promoting the physical wealth of India
	III	Travel Agency Management	The Students will be able to,
			1. understand the functions and business of a Travel Agency
			2. interpret the Travel Formalities
			3. prepare Tour Packages and itineraries
			4. analyze the Customer Trends in Travel Agencies
			5. explore Travel fairs around the world
	IV	Cultural Heritage of India	The Students will be able to,
			1. understand the richness and diversity of Indian culture

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			2. record the contemporary trends of India's culture
			3. appraise the co-existence of different cultural, religious practices and cuisines of India
			4. recognize the existence of different fairs and festivals celebrated in India
			5. analyze the impact of culture and handicrafts in Tourism development of India
	(Allied paper II)	Event Management	The Students will be able to,
			1. identify the multi-disciplinary nature of Event Management
			2. understand the potential of MICE and Event Tourism
			3. familiarize with the essentials of Event Management
			4. analyze the key issues faced by the Events industry
			5. explore the role of associations in promoting Events
	(Non Major Elective)	Tourism in Tamilnadu	The Students will be able to,
			1. indicate the geographical features of Tamilnadu state
			2. understand the Tourism resources available in Tamilnadu
			3. familiarize with the natural attractions of Tamilnadu
			4. assess the cultural resources in promoting Tourism in Tamilnadu
			5. explore the famous World Heritage Sites of Tamilnadu
III	V	Hospitality Management	The Students will be able to,
			1. understand the Hotels and Restaurants in terms of their ownership and levels of service
			2. record the organizational structure of Hotels and Restaurants
			3. identify the roles and responsibilities of various departments and job positions
			4. evaluate the role of Housekeeping in


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IV	VI	Tourism Entrepreneurship	Hotel Management
			5. explore the functions of supporting departments in Hotel industry
			The Students will be able to,
			1. understand basic concepts, characteristics and functions of entrepreneurship and need of tourism entrepreneurship
			2. indicate various types of entrepreneurship and the factors that affect growth of entrepreneurship
			3. identify the role of various governmental and non-governmental organisation in promoting entrepreneurship
			4. differentiate between the forms of business ownership
			5. formulate Business Plan
	(Allied Paper III)	Art and Architecture of India I	The Students will be able to,
			1. understand the rich heritage of India
			2. appraise the need of conservation and preservation of Indian heritage and culture
			3. identify the trends in Indian art and architecture
			4. explore the art and architecture of famous monuments in India
			5. analyze the styles of temple architecture in promotion of Tourism in india
IV	VII	Tourism Marketing	The Students will be able to,
			1. understand the marketing concepts and their application in the service industry
			2. indicate the importance of Marketing Mix
			3. identify the effectiveness of Marketing Communication
			4. explore the Marketing environment
			5. analyze the channels involved in Marketing
	VIII	Front Office	The Students will be able to,

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		Operations	1. understand Front Operations and Management in a star categorized hotel
			2. examine the functions of Front Office and other related departments
			3. identify the procedures related to Check-in and Check-out
			4. analyze the importance of Front Office coordination with other departments of a hotel
			5. familiarize with comprehension skills and soft skills for effective communication in a hotel
	(Allied Paper IV)	Art & Architecture of India II	The Students will be able to,
			1. understand the broad perspective on the various art forms and architectural marvels of the Medieval Indian History
			2. appraise the conservation and preservation of Indian heritage and culture
			3. identify the rich heritage of Medieval India
			4. analyze the techniques of Mughal architecture
			5. familiarize with the colonial architecture
		Industrial Visit / Long Tour with field report	The Students will be able to prepare a formal report and express their experience on the industry/destination they visited
		Environmental Studies	The Students will be able to,
			1. understand the core concepts and methods from ecological and physical sciences
			2. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems
			3. Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world
V	IX	Global Tourism	The Students will be able to,

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			1. understand tourism on global perspective
			2. appraise the famous tourist destinations across the world
			3. identify the promotional strategies of global destinations
			4. prepare an international tour package for the tourist
			5. familiarize with cross cultural diversities
	X	Human Resource Management	The Students will be able to,
			1. understand the basic elements of Human Resource practices
			2. appraise the process of recruitment in an organization
			3. identify the methods and mechanics of Human Resources utilization in Tourism sector
			4. assess the contribution of Human Resources practices in an organization
	XI	Eco Tourism and Sustainable Development	The Students will be able to,
			1. understand the nature, scope and the significance of Ecotourism and Sustainable Practices for Development
			2. appraise the innovative forms of sustainable tourism
			3. identify the Eco-tourism projects of India
			4. familiarize with various approaches and practices for Sustainable development
	(Elective Paper I)	Airport Management	5. implement theories of Sustainable principles through relevant case studies
			The Students will be able to,
			1. understand the basics of aviation industry
			2. appraise the structure of airport
			3. identify the qualities and attributes of

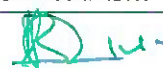


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VI	(Elective Paper II)	Basics of Computers	airport personnel
			4. familiarize with passenger, baggage and cargo handling
			5. handle crisis management with regard to airports
			The Students will be able to,
			1. understand the basics of computer hardware and software
	XII	Medical & Wellness Tourism	2. implement the usage of MsOffice in an organization
			3. appraise the basics of Internet
			4. familiarize with usage of computer with regard to tourism industry
			The Students will be able to,
			1. understand the basics of Medical Tourism
VI	XIII	Tourism Law and Ethics	2. differentiate Medical Tourism and Wellness Tourism
			3. appraise various healthcare systems
			4. identify the process of Medical Tourism in India
			5. familiarize with the organizations with regard to promotion of Medical Tourism
			The Students will be able to,
	XIV	Emerging Trends in Tourism	1. understand the basic Laws, Codes and Regulations pertaining to Tourism industry
			2. identify the human rights and ethics with regard to tourists
			3. appraise the characteristics and importance of various Laws, Codes and Regulations related to Tourism industry
			4. practice ethics in Tourism business
			5. familiarize with international and national bodies governing tourism legislations
VI	XIV	Emerging Trends in Tourism	The Students will be able to,
			1. understand the emerging sectors of Tourism industry
			2. appraise the niche sectors in tourism



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			3. identify the physiographic and natural resources in India
			4. assess the emerging patterns in Tourism and Travel Management
	(Elective Paper III)	Information Technology in Tourism	The Students will be able to,
			1. understand the role of computers in aviation industry
			2. appraise the Use of Information Technology and online tools in Tourism Industry
			3. identify the reservation softwares used in Travel Industry
			4. familiarize with Billing and settlement Plan in Travel Industry
			5. demonstrate the usage of CRS and GDS in Travel Industry
	(Elective Paper III)	Air Ticketing and Fare Construction	The Students will be able to,
			1. understand the basic concept of Airline ticketing and Fare Construction
			2. familiarize with air ticketing procedures
			3. identify international airfares, regulations and formalities in air travel
			4. construct air fares for international destinations
			5. appraise currency regulations

Department of Statistics

PROGRAM SPECIFIC OUTCOMES

B.L.V.

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B.Sc., Statistics

Program Specific Outcomes

PSO1	To Collect and handle the data .
PSO2	To carry out Statistics and Mathematical computation, both analytical and numerical to a reasonably good level .
PSO3	Identify the Suitable approaches and Statistical techniques using for a given data.
PSO4	Ability to solve the problem and Interpret the Solution.
PSO5	Facilitate numerical approximation to everyday life problems.

Course Title: Descriptive Statistics

Course Code		Credits	04
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Course Outcomes: At the end of the Course, the Student will be able

CO1	To know how to collect and classify the data and its limitations
CO2	To Present/compare the data using Diagrams and Graph
CO3	To know all Descriptive values of Statistics
CO4	To Apply the correlation analysis for different Types of data and methods
CO5	To know when apply the Regression Analysis.
CO6	Students come to know the Partial and Multiple correlation.

Course Title: Mathematics for Statistics-I

Course Code		Credits	05
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Course Outcomes: At the end of the Course, the Student will be able to:



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CO1	<ul style="list-style-type: none"> • Explain different types of matrices and algebra of matrices. • Use elementary row and column operations to find rank of a matrix. • Differentiate Hermitian and Skew-Hermitian matrices.
CO2	<ul style="list-style-type: none"> • Judge and classify the characterization of matrices and determinants. • Use determinant to find the inverse of a non-singular matrix • Illustrate the Cramer's rule techniques in solving system of linear equations. • Classify the consistency of system of homogeneous and non-homogeneous linear equations.
CO3	<ul style="list-style-type: none"> • Summarize different methods of differentiation. • Point out the derivative as a process of measuring changes. • Identify the nature of curves like increasing or decreasing.
CO4	<ul style="list-style-type: none"> • Explain Leibnitz theorem and Partial Differentiation • Formulate successive derivatives. • Illustrate maximum and minimum values of a function.
CO5	<ul style="list-style-type: none"> • Demonstrate integral as a result of reversing the process of differentiation. • Use properties of definite integrals. • Example of definite and indefinite integrals. • Point out the importance of Reduction formula and Bernoulli's formula.

Course Title: Practical -I

Course Code		Credits	04
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Course Outcomes: At the end of the Course, the Student will be able

CO1	To know how to collect and classify the data and form the frequency tables
CO2	To Present/compare the data using Diagrams and Graph
CO3	To find all Descriptive values of Statistics for the given data
CO4	To Apply the correlation analysis for different Types of data and methods
CO5	To know when apply the Regression Analysis and interpret the result
CO6	To know the Partial and Multiple correlation problem solving
CO7	To know the principle of least squares method and solve the problems

Course Title: Probability and Random Variables

Course Code		Credits	04
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Course Outcomes: At the end of the Course, the Student will be able


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CO1	To know the principles of Probability
CO2	To solve the simple problems based on Probability
CO3	To know the classification of Random Variables
CO4	To know the Expectation and its Properties
CO5	Find the descriptive values by using Expectation
CO6	To solve the bivariate problems based on probability and Random Variables

Course Title: Mathematics for Statistics-II

Course Code	
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Credits	05
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Course Outcomes: At the end of the Course, the Student will be able to:

CO1	<ul style="list-style-type: none"> List and work with many properties of sets and operations on sets. Explain the concepts real numbers bounds, supremum and infimum. Example of limits of real sequences. Differentiate between limit inferior and limit superior.
CO2	<ul style="list-style-type: none"> Summarize various methods to test the convergence of real sequence. Judge and classify the characterization convergence and divergence of series. Categories an alternating is conditional convergent or absolute convergent.
CO3	<ul style="list-style-type: none"> Explain the concept of limit and continuity through geometric process. Formulate as series of a function by Taylor's series. Illustrate sufficient conditions for Riemann integrability and Darboux theorem. Point out the fundamental theorem of integral calculus and mean value theorem.
CO4	<ul style="list-style-type: none"> Differentiate between proper and Improper Riemann integrals. Point out the importance of Gamma and Beta integrals. Summarize the transformation of variables to evaluate multiple integrals.
CO5	<ul style="list-style-type: none"> Define Laplace Transforms and summarize existence of Laplace Transforms. Compare the Laplace Transform and inverse Laplace Transform. Demonstrate the impotence of Laplace Transforms.



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