VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI

NAAC Re-accredited with Grade "A"(CGPA 3.23-Third Cycle) | CPE Status (Thrice) by UGC

Mentor College under Paramarsh Scheme by UGC

'Lead College' by S.G.B. Amravati University, Amravati.

2.6.1

PROGRAMME AND COURSE OUTCOMES FOR ALL COURSES

DEPARTMENT OF COMMERCE
Programme: Bachelor of Commerce

PO NO.	Programme Outcomes
PO1	Attain requisite skills and knowledge after the completion of the programme.
PO2	Achieve the basic knowledge of Economics.
PO3	Assimiliate basic knowledge of Accountancy & Statistics.
PO4	Efficiency in reading and writing skill.
PO5	Achieve requisite skills and knowledge of preparing cashbook, leadger books and balancesheet of company.
PO6	Become knowledgeable about marketing.
PO7	Create a self employment.
PO8	Assimiliate ethics of life.
PO9	Achieve Environmental awareness.
PO10	Attain fundamental knowledge of Computer.

Code of the Course/Subject	BC-13
Title of the Course/Subject	Principle of Accountancy
CO No.	Course Outcomes
CO1	Student important basic accounting knowledge at applicable to business i.e. meaning ofaccountancy.
CO2	Able to handling account transaction
CO3	Maintaining sub subsidiary books and all types of cash books
CO4	Calculation of depreciation method of assets
CO5	Preparation of all types of final account.

Code of the Course/Subject	BC-14
Title of the Course/Subject	Principle of Business Economics
CO No.	Course Outcomes
CO1	Application of Micro &Macroeconomic Concepts
CO2	Application of Utility & Indifference Curve Analysis
CO3	Application of Demand Pattern
CO4	Application of Supply and Production Pattern
CO5	Application of Cost & Revenue Pattern

Code of the Course/Subject	BC-15
Title of the Course/Subject	Principle of Business Management
CO No.	Course Outcomes
CO1	With this course, students will be able to have clear understanding of managerial functions.
CO2	Students will have the knowledge of planning process in the organization.
CO3	Students will be able to demonstrate the ability to directing, leadership and communicate effectively.
CO4	Students able to analyze isolate issues and formulate best control tools and techniques.
CO5	Application of Discriminative nature of monopolist.

Code of the Course/Subject	BC-16
Title of the Course/Subject	Computer Fundamental And Operating System-I
CO No.	Course Outcomes
CO1	Get information about evolution and application of computer & its development.
CO2	Know about different elements of computer system.
CO3	Aware about different types of memory.
CO4	Get to know about different input devices and output devices.
CO5	Learn to prepare a text document with complete formatting and page setting.

Code of the Course/Subject	BC-23
Title of the Course/Subject	Financial Accounting
CO No.	Course Outcomes
CO1	Rectification of Journal entry
CO2	Student acquire the knowledge of nonprofit organization
CO3	Prepare the all types of cooperative society account
CO4	Students should be acquired partnership farm accountancy
CO5	The bill of exchange contest and unconditional order to pay a create amount on as agree day.

Code of the Course/Subject	BC-24
Title of the Course/Subject	Business Economics
CO No.	Course Outcomes
CO1	Examine the difference between business and managerial economics.
CO2	Application of Discriminative nature of monopolist.

CO3	Application of monopolistic competition, oligopoly, and perfect competition
CO4	Application of demand and supply pattern of rent and wage.
CO5	Application of the theories of interest and profit.

Code of the Course/Subject	**BC-25**
Title of the Course/Subject	**Principle of Business Organization**
CO No.	**Course Outcomes**
CO1	To Familiar with business organization.
CO2	Understand the concepts related to Business policies.
CO3	Demonstrate the roles, skills and functions of management.
CO4	To diagnose and solve organizational problems and develop optimal managerial decisions
CO5	Apply the concept of organising for the effective functioning of a management

Code of the Course/Subject	**BC-26**
Title of the Course/Subject	**Computer Fundamental & Operating System II**
CO No.	**Course Outcomes**
CO1	Get basic introduction of Computer and mobile operating systems
CO2	Know concept of windows versions.
CO3	Know concept of modern communication and network topologies.
CO4	Create table, utilizing existing Template provided by Microsoft and add customization on Template according to user needs.
CO5	Identify steps in the process and complete an activity to create a mail merge.

Code of the Course/Subject	**B.C.-45**
Title of the Course/Subject	**Income Tax**
CO No.	**Course Outcomes**
CO1	Understand basic concepts of income tax
CO2	Compute total income of an Individual
CO3	Know how they can save taxes in a legitimate way through the basic understanding of deductions available under chapter VI A
CO4	Compute income from salary
CO5	Compute income from House Property

Code of the Course/Subject	**B.C. 46**
Title of the Course/Subject	**Indian Financial System**
CO No.	**Course Outcomes**
CO1	To understand the structure & function of Indian finance System.
CO2	Toprovide an insight in to the various types of bank & Its function.
CO3	Application of Capital Market.
CO4	Applicationof Stock Exchange.
CO5	Application of SEBI as a regulatory authority.

Code of the Course/Subject	**BC- 47**
Title of the Course/Subject	**Information Technology and Business Data Processing II**
CO No.	**Course Outcomes**
CO1	Student will learn all Screen element of Tally 9.0
CO2	Student will learn direct command area (calculator)
CO3	Students will be able to work necessary groups and list of Ledgers creation for smooth accounting flow
CO4	Students will be able to work on accounting of business by creating company in Tally
CO5	Student will able to work with various Indian Tax systems and its computation with tally

DEPARTMENT OF COMMERCE
Programme: Bachelor of Commerce (Accounting & Finance)

PO NO.	Programme Outcomes
PO1	Attain requisite skills and knowledge after the completion of the programme.
PO2	Achieve the basic knowledge of Economics.
PO3	Assimiliate basic knowledge of Accountancy & Statistics
PO4	Efficiency in reading and writing skill
PO5	Achieve requisite skills and knowledge of preparing cashbook, leadger books and balancesheet of company.
PO6	Become knowledgeable about marketing.
PO7	Create a self employment
PO8	Assimiliate ethics of life
PO9	Achieve Environmental awareness
PO10	Attain fundamental knowledge of Computer.

Code of the Course/Subject	BAF-04
Title of the Course/Subject	Financial Accounting - I
CO No.	Course Outcomes
CO1	To make aware with Basic Terminology of Accounting .
CO2	To make aware with Accounting system of Book keeping
CO3	To Know Financial position of an individual
CO4	To Make aware with Higher purchase and instalment system
CO5	To have a clear idea above contents and process of bill of Exchange

Code of the Course/Subject	BAF-05
Title of the Course/Subject	Investment Management
CO No.	Course Outcomes
CO1	Student will be able to have clear understanding of introduction of investment management and its types, company fix deposit, etc.
CO2	Students will have to knowledge of taxation, financial system of India .
CO3	Student will be able to have clear understanding of security exchange board of India and credit rating and information services of india limited.
CO4	Student will have to knowledge of stock exchange.

Code of the Course/Subject	BAF-06
Title of the Course/Subject	Business Economics
CO No.	Course Outcomes
CO1	Application of Micro &Macroeconomic Concepts
CO2	Application of Utility & Indifference Curve Analysis
CO3	Application of Demand Pattern
CO4	Application of Supply and Production Pattern
CO5	Application of Cost & Revenue Pattern

Code of the Course/Subject	BAF-13
Title of the Course/Subject	Financial Accounting - II
CO No.	Course Outcomes
CO1	Student accquire the knowledge of non profit organisation
CO2	Prepare the all types of cooperative society account
CO3	Students should be acquired partnership farm accountancy
CO4	The bill of exchange contest and unconditional order to pay a create amount on as agree day

Code of the Course/Subject	BAF-14
Title of the Course/Subject	Business Mathematics
CO No.	Course Outcomes
CO1	Student able to calculate the integers HCF & LCM
CO2	Student able to calculate percentage, discount, commission on various goods
CO3	Student able to know and calculate profit and loss, simple and compound interest

Code of the Course/Subject	BAF-15
Title of the Course/Subject	Business Environment
CO No.	Course Outcomes
CO1	Application of Business Environment to Local Business and Industrial Units
CO2	Application of GDP/GNP Concepts to categorization of economies of various countries
CO3	Application of LPG and FDI concepts to various sectors of Indian Economy and economies of other countries.
CO4	Application of foreign trade and its policy to various sectors of Indian economy.
CO5	Impact of WTO & IMF on various sectors of Indian Economy

Code of the Course/Subject	BAF-35
Title of the Course/Subject	Computer Application in Business
CO No.	Course Outcomes
CO1	Describe the usage of computers and why computers are essential components in business and society.
CO2	To understand the basic computer knowledge and also enable the learners to appreciate the practical details of computer
CO3	Provide hands-on use of Microsoft Office 2013 applications Word, Excel, Access and PowerPoint.
CO4	Completion of the assignments will result in MS Office applications knowledge and skills

Code of the Course/Subject	BAF-35
Title of the Course/Subject	Computer Application in Business (Practical)
CO No.	Course Outcomes
CO1	Student will learn all Screen element of Microsoft Word
CO2	Student will learn all Screen element of Microsoft Excel
CO3	Student will learn all Screen element of Microsoft Power Point
CO4	Students will be able to work on MS- WORD and create various documents. Also, they will be able to save and print documents
CO5	Students will learn various formatting tools, alignment setting, line spacing, change case etc in formatting documents
CO6	Students will be able to work on MS- EXCEL and creating various sheets like marksheet, salary sheets etc
CO7	Students will be able to work on MS- POWER POINT

Code of the Course/Subject	BAF-31
Title of the Course/Subject	Financial Accounting - III
CO No.	Course Outcomes
CO1	Understand the concept and significance of Bank Reconciliation Statement
CO2	Identify the causes of differences between the cash book and pass book in bank reconciliation.
CO3	Develop the skills to prepare different types of Bank Reconciliation statements
CO4	Gain knowledge about the accounting practices for local self-government institutions such as Gram Panchayats
CO5	Comprehend the sources of revenues for Gram Panchayats and understand the main features of their accounting
CO6	Understand the accounting procedures for Panchayat Samiti and Zila Parishad.
CO7	Gain knowledge about the accounting practices for local self-government institutions in urban areas and their final accounts.
CO8	Acquire knowledge about branch accounts and their accounting procedures.
CO9	Develop an understanding of accounting practices specific to agriculture farms.
CO10	Gain knowledge about the preparation of final accounts for banking companies.
CO11	Understand the accounting procedures for insurance companies.

Code of the Course/Subject	BAF-32
Title of the Course/Subject	Direct Tax Laws
CO No.	Course Outcomes
CO1	Understand basic concepts of income tax
CO2	Acquire knowledge of total income of an Individual
CO3	Know how they can save taxes in a legitimate way through the basic understanding of deductions available under chapter VI A
CO4	Compute income from salary
CO5	Compute income from House Property
CO6	Compute Income from Other Sources
CO7	Save tax in a legitimate way through proper deductions
CO8	Fill ITR -1
CO9	Understanding of form no. 16

Code of the Course/Subject	BAF-33
Title of the Course/Subject	Marketing Management
CO No.	Course Outcomes
CO1	To understand the various Concept of Marketing Management and Marketing Mix.
CO2	To understand the Concept of Product, Branding and new product development.
CO3	To understand the concept of Pricing Polices and pricing mix strategies.
CO4	To understand Marketing Channel and its Co-operation.
CO5	To understand the concept of Promotion and its tools.

Code of the Course/Subject	BAF-34
Title of the Course/Subject	Indian Financial Services
CO No.	Course Outcomes
CO1	To understand the structure & function of Indian finance System.
CO2	To provide an insight in to the various types of bank & Its function.
CO3	Application of Capital Market.
CO4	Application of Stock Exchange.

CO5	Application of SEBI as a regulatory authority.

Code of the Course/Subject	BAF-43
Title of the Course/Subject	Business Statistics
CO No.	Course Outcomes
CO1	. Differentiate between Descriptive Statistics and Inferential Statistics. Identify various types of data (qualitative and quantitative) and their characteristics. Demonstrate knowledge of methods for data collection, tabulation, and presentation.
CO2	Construct frequency distributions for given datasets to represent data in an organized manner. Apply central tendency measures (mean, median, and mode) to summarize and interpret data distributions. Comprehend the concept of index numbers and construct index numbers for various purposes
CO3	Understand the concept of dispersion and its importance in describing data variability. Compute absolute measures of dispersion (e.g., range) and relative measures (e.g., coefficient of variation). Interpret dispersion measures to assess the spread of data.
CO4	Define skewness and its significance in data distribution. Identify positively skewed, negatively skewed, and symmetric distributions. Calculate and interpret skewness measures to understand the shape of data distribution.
CO5	Understand the concept of correlation and its relevance in studying relationships between variables. Apply Karl Pearson's formula to calculate the coefficient of correlation for given datasets. Calculate correlation coefficients for both grouped and ungrouped data to analyze associations.
CO6	Define probable error as a measure of precision in statistical estimates. Calculate probable error to assess the reliability of statistical data and predictions.

Code of the Course/Subject	BAF- 41
Title of the Course/Subject	Management Accounting
CO No.	Course Outcomes
CO1	Define and explain the meaning and scope of Management Accounting. Identify the importance and limitations of Management Accounting in decision-making. Recognize the role of Management Accounting in supporting managerial decision-making processes.
CO2	Identify and apply various tools and techniques used in Management Accounting. Evaluate the advantages and limitations of different management accounting techniques. Demonstrate proficiency in using tools for data analysis and performance evaluation
CO3	Calculate and interpret key financial ratios to evaluate a company's financial performance. Analyze liquidity, profitability, efficiency, and solvency ratios to assess a company's financial health. Utilize ratio analysis to make informed decisions and recommendations for improvement.
CO4	Define the Break-Even Point and its significance in business operations. Evaluate the features, advantages, and limitations of Break-Even Analysis. Calculate and interpret Marginal Cost, Contribution, Profit-Volume Ratio, and Margin of Safety
CO5	Understand the meaning and importance of variance analysis in cost control. Identify different types of variances, including material, labor, and overhead variances. Apply variance analysis to assess deviations from budgeted figures and suggest corrective actions.
CO6	Analyze cash flow statements in accordance with Accounting Standard (AS-3). Assess a company's cash inflows and outflows to understand its liquidity position. Interpret cash flow analysis to evaluate the company's ability to meet financial obligations and invest in future growth.
CO7	Integrate the knowledge gained to analyze and solve practical business problems. Make sound managerial decisions based on financial analysis and management accounting principles.

Code of the Course/Subject	BAF-45
Title of the Course/Subject	Computerized Accounting
CO No.	Course Outcomes
CO1	Familiarized with basics of computerized Accounting
CO2	Understand utilization of Computerized Accounting Package for Businesses
CO3	Actual practice with Tally Software

Code of the Course/Subject	BAF- 44
Title of the Course/Subject	Financial Management
CO No.	Course Outcomes
CO1	To understand various sources of finance for raising capital/funds required for the business
CO2	To understand the proportion of borrowed capital and owned capital, considering their cost of capital.
CO3	To understand the working capital management in an organization.
CO4	To understand the various factors of capital structure.
CO5	To understand the different model of calculation of value of shares.

Code of the Course/Subject	BAF- 42
Title of the Course/Subject	Indirect Tax Laws
CO No.	Course Outcomes
CO1	Register under GST
CO2	Understand the working of GST network
CO3	How to make payments of GST
CO4	Claim for refund
CO5	Understand the various types of customs duties

DEPARTMENT OF COMMERCE
Programme: Master of Commerce

PO NO.	Programme Outcomes
PO1	To acquire a job as an Economist, Market Research Analyst, a banker, management consultant, stockbroker/trader, Actuary, Financial analyst, Financial advisors or Advisor to Tax Law Court etc.
PO2	To acquire the process of managerial economics, demand analysis, production theory, price determination and prizing practices, etc.
PO3	To acquire proficiency in the accounting concepts as well as tools and techniques used for taking managerial decisions.
PO4	To master the knowledge of ratio analysis, cash flow and budgetory control.
PO5	To achieve decision making abilities in the situation of uncertainty in dynamic business environment.
PO6	To master the conceptual framework of Management and organizational behavior.
PO7	To attain understanding of computer operating system and application of relevant softwares in managerial decision making.
PO8	To gain the knowledge of commercial banks and its transactions, nature and scope of insurance and its kinds.

Code of the Course/Subject	M.Com.NEP/12
Title of the Course/Subject	Managerial Economics
CO No.	Course Outcomes
CO1	To know the concepts of managerial economics economic and managerial theory
CO2	To provide the knowledge of demand analysis and consumer choice theory.
CO3	To understand production function and law of supply
CO4	To acknowledge price determination and pricing practices
CO5	To enable students to understand business cycles.

Code of the Course/Subject	M.Com.-NEP/13
Title of the Course/Subject	Advance Cost Accounting
CO No.	Course Outcomes
CO1	Understand the basics of Cost Accounting. Apply techniques to ascertain Cost Per Unit and Selling Price and solve typical problems related to cost determination.
CO2	Demonstrate knowledge of Machine Hour Rate and its application in calculating the cost of production.
CO3	Analyze and maintain Operating Cost Accounts, focusing on the context of the Transport service industry.
CO4	Differentiate between Job Costing and Batch Costing, and identify scenarios suitable for each method. Create cost estimates for specific jobs and batches, incorporating overhead allocation.
CO5	Comprehend the principles and methods of Contract Costing, particularly in relation to long-term projects.
CO6	Understand the concepts and processes involved in Process Costing, particularly in industries with continuous production.
CO7	Define Cost Audit and its role in ensuring cost control and efficiency. Evaluate the advantages and scope of Cost Audit, differentiating it from Financial Audit. Analyze the step-by-step Cost Audit procedure, including planning, execution, and documentation. Prepare a comprehensive Cost Audit Report, highlighting findings, recommendations, and potential areas of improvement.

Code of the Course/Subject	M.Com. NEP/14
Title of the Course/Subject	Service Marketing
CO No.	Course Outcomes
CO1	Students will understand seven phases of marketing of service in depth.
CO2	Student will understand strategic issues peculiar of service marketing
CO3	Students will understand an importance of new and innovative concepts of CRM, especially E-CRM
CO4	DemonstrateideacreationandimplementationofCRMfordifferentservicesector.

Code of the Course/Subject	M.Com. NEP/15-A
Title of the Course/Subject	Banking and Insurance Service
CO No.	Course Outcomes
CO1	To understand the structure & function of banking and insurance service
CO2	To enable students to understand the functions, importance and kinds of bank and insurance.
CO3	Application of Bank and insurance.
CO4	To understand the types of banking and insurance.
CO5	To understand the banking and insurance sectors in Indian economy.

Code of the Course/Subject	M.Com.-NEP/11
Title of the Course/Subject	Research Methodology & Intellectual Property Rights
CO No.	Course Outcomes
CO1	Give an overview of the research methodology and explain the technique of defining a research problem
CO2	Explain the functions of the literature review in research.
CO3	Explain carrying out a literature search, its review, developing theoretical and conceptual frameworks and writing a review.
CO4	Explain various research designs and their characteristics.

CO5	Explain the details of sampling designs, measurement and scaling techniques and also different methods of data collections.
CO6	Explain several parametric tests of hypotheses and Chi-square test.
CO7	Explain the art of interpretation and the art of writing research reports.
CO8	Explain various forms of the intellectual property, its relevance and business impact in the changing global business environment.
CO9	Discuss leading International Instruments concerning Intellectual Property Rights.

Code of the Course/Subject	**M.COM. NEP/23**
Title of the Course/Subject	**Organizational Behaviour and Development**
CO No.	**Course Outcomes**
CO1	Student Understand decision making process both at individual level and ingroup.
CO2	Student Understand Power, Politics, and Accomplishing organizational goals.
CO3	Students demonstrate ability to manage conflicts.
CO4	Students will determine Leadership style according to the situation.

Code of the Course/Subject	**M. Com. NEP/21**
Title of the Course/Subject	**Accounting for Managerial Decisions**
CO No.	**Course Outcomes**
CO1	Understand the basics of management accounting and its role in the overall field of accounting and understand the position, role, and responsibilities of a management accountant.
CO2	Define, understand the necessity, advantages, and limitations of ratio analysis. Classify and interpret different types of ratios for assessing liquidity, activity, leverage, and profitability
CO3	Understand the basics of fund flow statement. Learn the procedure for preparing a fund flow statement. Understand the purpose and importance of a cash flow statement. Follow the guidelines of Accounting Standard (AS-3) for preparing a cash flow statement
CO4	Understand standard costing as a control technique in cost accounting. Explain the method of cost control and the objectives of standard costing. Analyze the relationship between standard costing and budgetary control. Learn the process of setting and revising standards
CO5	Define variance and its importance in cost analysis. Identify and calculate material variance and labor variance. Analyze the relevance of variances in budgeting and standard costing.
CO6	Differentiate between marginal costing and absorption costing. Understand cost-volume-profit analysis in marginal costing.
CO7	Explain the assumptions and practical applications of break-even analysis. Apply break-even analysis in decision-making scenarios such as sales mix, make or buy decisions, and product line discontinuation. Solve problems related to marginal costing and break-even analysis.
CO8	Define budget and understand its essentials. Identify different types of budgets (functional, master, etc.), the concepts of fixed and flexible budgets and solve problems related to cash budget and flexible budget.
CO9	Define the purpose and objectives of reporting to management. Identify the reporting needs at different managerial levels. Discuss types of reports and modes of reporting. Explain the reporting requirements at various management levels

Code of the Course/Subject	**MCOM NEP-22**
Title of the Course/Subject	**Strategic Management**
CO No.	**Course Outcomes**
CO1	Demonstrate decision making ability and dynamism.
CO2	Will understand major theories, background work, concept and research output in the field of strategies management.
CO3	Demonstrateapropermeaningofthetoolsandtechniqueusedbyexecutivesinexecutingstrategiesandwillap preciateitsintegrativeandinterdisciplinarynature.
CO4	Demonstratepracticalsituationfordiagnosingandsolvingorganizationalissues.
CO5	Relate theories and device application of it.

Code of the Course/Subject	**M.Com. NEP/24-A**
Title of the Course/Subject	**Computer Application in Business**
CO No.	**Course Outcomes**
CO1	Word process allows students to create and edit the documents and also gives them the ability to generate productivity-related images like charts, tables and graphs.
CO2	Students should know basic data types in spreadsheets. Is able to determine databases and convert them. Know basic functions to calculate mathematical, financial, statistical and logical operations. Have skills of data visualization depending on data and task types.
CO3	Understand how to start MS –Excel and SPSS. Enter basic data into SPSS and Carry out statistical analysis that can test hypotheses. Develop various required graphs.
CO4	Enable students to gain expert knowledge, principles and procedure of computerized accounting and taxation. Also, they will be able to do critical thinking and problem-solving skills in analyzing financial information and taxation.

Code of the Course/Subject	**M.Com. – 34**
Title of the Course/Subject	**E-Commerce and Legal Security**
CO No.	**Course Outcomes**
CO1	Analyze the impact of E-commerce on business models and strategy.
CO2	Describe the major types of E-commerce.
CO3	Explain the process that should be followed in building an E-commerce presence.
CO4	Identify the key security threats in the E-commerce environment.

CO5	Describe how procurement and supply chains relate to B2B E-commerce.
CO6	To understand Electronic Payment Systems and Unified Payment Interface System

Code of the Course/Subject	M. Com. 33
Title of the Course/Subject	Corporate Tax Planning & Management
CO No.	Course Outcomes
CO1	Understand basic concepts of Corporate Tax.
CO2	Computation of Tax liability of company.
CO3	Knowledge about the capital structure of a company.
CO4	Awareness about advance tax payment.

Code of the Course/Subject	M.Com 31
Title of the Course/Subject	Research Methodology
CO No.	Course Outcomes
CO1	To understand basics and methods of research.
CO2	To evaluate research problems and apply to decide sampling techniques
CO3	To Comprehend Sources of Data Collection.
CO4	To define & write Review of Literature.
CO5	To apply data analysis and interpretation methods.
CO6	To write a Research Report

Code of the Course/Subject	M.Com.- 32
Title of the Course/Subject	Statistical Analysis
CO No.	Course Outcomes
CO1	Understand the concept, identify and describe the types of correlation (positive, negative, zero) and explore and explain the methods used to study correlation.
CO2	Understand the concept and solve problems involving regression equations and calculate regression coefficients.
CO3	Understand the concept of sampling and different sampling methods (random sampling, stratified sampling, cluster sampling, etc.). Differentiate between sampling and non-sampling errors. Identify and explain common sources of non-sampling errors. Understand the concept of sampling distributions and their properties (mean, variance, shape). Calculate and interpret sampling distribution characteristics.
CO4	Understand the concepts of statistical estimation and hypothesis testing
CO5	Differentiate between point estimation and interval estimation. Solve problems related to point and interval estimation of population mean. Calculate point estimates and construct confidence intervals for population means.
CO6	Calculate variance for proportions
CO7	Conduct statistical tests of hypotheses and identify type I and type II errors.
CO8	Solve problems involving the F-test for comparing variances or testing model significance.
CO9	Apply the t-test for small samples and z-test for large samples to test hypotheses about population means.
CO10	Understand the chi-square test for goodness of fit and its applications. Also understand, apply and interpret degrees of freedom in the context of chi-square tests.
CO11	Solve problems using the parabolic curve and binomial expansion method for interpolation and extrapolation.
CO12	Understand the concept and types of index numbers (price index, quantity index, composite index, etc.). Solve problems involving the simple (unweighted) aggregate method and weighted index number methods (Laspeyre's, Paasche's, Fisher's, Marshall-Edgeworth) for constructing index numbers.
CO13	Understand the concept of statistical quality control and different quality control methods (control charts, process capability analysis, acceptance sampling). Determine and set up control limits for control charts. Construct control charts (X-bar chart, R-chart, p-chart, c-chart) and interpret the results.
CO14	Understand the importance and applications of time series analysis. Identify and describe the components of time series (trend, seasonality, cyclical variations, irregular variations). Apply different methods (moving averages, least squares) to measure and analyze trends in time series data. Choose appropriate trend models (linear, exponential, quadratic) based on the merits and limitations of each model. Use methods (simple averages, ratio-to-moving-average) to measure and analyze seasonal variations in time series data, considering their merits and limitations.

Code of the Course/Subject	M.Com. 41
Title of the Course/Subject	Entrepreneurship and Skill Development
CO No.	Course Outcomes
CO1	The objective of the course is to improve entrepreneurship quality for self-employment.
CO2	To gives knowledge for start their own start-up.
CO3	This course is also guiding them how business skill developed for achieving business goals

Code of the Course/Subject	M.Com. 43 B
Title of the Course/Subject	Sales and Distribution Management
CO No.	Course Outcomes
CO1	The objective of the course is to improve marketing skill and Distribution management avenues.
CO2	To gives knowledge for strategy, planning budgeting, and forecasting of Sales.
CO3	This course is also guiding them how to manage inventory control system within an organization of Business Concern and Individual.

Code of the Course/Subject	M.Com. 45 A
Title of the Course/Subject	International Financing

CO No.	Course Outcomes
CO1	To understand the structure & function of International Financing.
CO2	To provide the knowledge of international flow of fund.
CO3	To make aware students about developments in International Monetary System.
CO4	To study the global financial markets.
CO5	To make aware students about World Bank and other International Financial Organization.

Code of the Course/Subject	M.Com.44 B
Title of the Course/Subject	Cooperative Management
CO No.	Course Outcomes
CO1	To develop understanding about the functioning of cooperative industry
CO2	To develop understanding about functioning of Agricultural Cooperative Societies
CO3	To develop understanding about functioning of Sugar Cooperative Societies
CO4	To develop understanding about Government policy on cooperation
CO5	To develop understanding about cooperative legislation in India

Department of Humanities

Programme : Bachelor of Arts (Political Science)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**Political Science 1025**
Title of the course/subject	**Sem. I Sub: Indian Political System**
CO 1	Understand and explain the significance of Indian constitution as the fundamental law of the land.
CO 2	To know the making process of the constitution and salient features of Indian constitution.
CO 3	Exercise the fundamental rights in proper sense at the same time identifies his responsibilities in national building.
CO 4	Analyze the Indian Political System, the powers and functions of the Union, State Government in detail.
CO 5	Critically analyzing the important institutions of Indian Union: The Executive: President, Vice-President, Prime Minister, Council of Ministers, State Executive: Governor, Chief Minister, Council of Ministers, The Legislature: RajyaSabha, LokSabha, State Legislature, The Judiciary: Supreme Court and High Court: Composition and jurisdictions.
CO 6	To make conscious of the social, cultural, economic and political environment that affects politics in India, at the national as well as regional levels.

Code of the course/subject	**Political Science 1025**
Title of the course/subject	**Sem.II Sub: Indian Political System**
CO 1	Understand and explain the significance of Election Commission of India
CO 2	know the powers and role of Governor, Chief Minister & Council of Minister
CO 3	Understand structure & powers of Legislative Assembly and Legislative Council
CO 4	Explain the structure and jurisdiction of High Court and District Court
CO 5	Know the Composition Function and Powers of Grampanchayat& Gram Sabha

Code of the course/subject	**Political Science 1025**
Title of the course/subject	**Sem. III Sub: Comparative Government & Politics**
CO 1	Understand the Meaning and Approaches of Comparative Politics.
CO 2	Know the salient features of the Constitution and Executive of the Britain.
CO 3	Understand the supremacy of the British Parliament.
CO 4	Know about the salient features of the Constitution and Executive of USA.
CO 5	Analyze the election process of the President and the Vice-President of the USA.
CO 6	Understand the powers and functions of the President and Vice-President of USA.
CO 7	Know about the Legislature of the America.
CO 8	Understand the supremacy of the Supreme Court of the USA with its Jurisdiction.

Code of the course/subject	**Political Science 1025**
Title of the course/subject	**Sem. IV Sub: Comparative Government & Politics**
CO 1	Understand the concepts of Constitution and Constitutionalism
CO 2	Know about the salient features of the Constitution and executive of the China.
CO 3	Understand one House Legislature (NCP) with its Standing Committee.
CO 4	Analyse the comparative study of the British Constitution and American Constitution.
CO 5	Analyse the comparative study of the British Constitution and China's Constitution.
CO 6	Analyse the comparative study of the British Prime Minister and the President of the USA.
CO 7	Analyse the comparative study of British House of Lords and American Senate.
CO 8	Analyse the comparative study of the British Speaker and American Speaker.
CO 9	Analyse the comparative study of the Supreme Court of the USA and China's Supreme People's Court.

Code of the course/subject	**Political Science 1025**
Title of the course/subject	**Sem. V Sub: Modern Concepts & Policy in Politics**
CO 1	To sensitizes the student about the concepts of Leadership, Reservation, Nationalism, Communalism and Terrorism.

Code of the course/subject	Political Science 1025
Title of the course/subject	Sem. VI Sub: Concepts of Western & Indian Thinkers
CO 1	To unable the students to understand various political Concepts of Western And Indian Thinkers.

Department of Humanities

Programme : Bachelor of Arts (Psychology)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. I Sub: Fundamental of Psychology**
CO 1	To analyse methods and fields of Psychology and to understand the biological bases of behavior.
CO 2	To analyse cognitive processes.
CO 3	To apply cognitive theories of learning and types of reinforcement in daily life.
PO 4	To analyse memory mechanism and mnemonics in daily life.
PO 5	To represent data in tabular and graphical forms.

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. II Sub: Fundamental of Psychology**
CO 1	To understand various types of motives and conflicts of motives.
CO 2	To analyse the role of physical changes in emotions.
CO 3	To administer I.Q. tests and interpret the results.
PO 4	To administer personality inventories and interpret the results.

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. III Sub: Developmental Psychology**
CO 1	To understandthenatureofhumangrowthanddevelopment.
CO 2	To analyzetheprocessofhumandevelopment.
CO 3	To sensitize the students to theissuesofoldagepeople.
CO 4	To applytheoriesofhumandevelopmentinanalyzingcognitivedevelopment.
CO 5	To analyzetheproblemsofschoolgoingchildrenincludinglearningdisabilities.

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. IV Sub: Developmental Psychology**
CO 1	To understandtheconceptofabnormalbehavior.
CO 2	To analyzethecausesofabnormalbehavior.
CO 3	To sensitizethe students to theissuesofpeoplewithpsychologicalailments.

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. V Sub: Applied Psychology**
CO 1	To gain knowledge of the counseling process.
CO 2	To administer psychometric tests in counseling
CO 3	To apply counseling skill in practical setting including problems in childhood, adolescence and old age which were studied in Human Development Course of SEM III
CO 4	To understand ethical and professional issues in counseling.
CO 5	To illustrate how to use statistics techniques and Normal Probability Curve to analyze data.

Code of the course/subject	**Psychology 1114**
Title of the course/subject	**Sem. VI Sub: Applied Psychology**
CO 1	To define the concept of Psychotherapy, its objectives and Therapeutic process.
CO 2	To explain various therapeutic techniques.
CO 3	To apply therapeutic techniques under the supervision of an experienced therapist.
CO 4	To demonstrate the acquired therapeutic skills.

Department of Humanities

Programme : Bachelor of Arts (Sociology)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**Sociology 1024**
Title of the course/subject	**Sem. III Sub: Social Problems in India**
CO 1	To Create awareness amongst students about various social issues prevailing in India
CO 2	To Study various state and central level programmes related to social and economic issue in India.
CO 3	To Develop a broad understanding of the persistence of stratification in contemporary Indian Society

Code of the course/subject	**Sociology 1024**
Title of the course/subject	**Sem. IV Sub: Social Problems in India**
CO 1	To create awareness amongst students about various social issues prevailing in India
CO 2	To Study various state and central level programmes related to social and economic issue in India.
CO 3	To develop a broad understanding of the persistence of stratification in contemporary Indian Society

Department of Humanities

Programme : Bachelor of Arts (Economics)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. I Sub: Microeconomics**
CO 1	Apply knowledge and skill in the field of Economics and will be able to have the employability in these areas.
CO 2	Describe and apply the methods for analysing consumer behaviour through demand and supply, elasticity..
CO 3	Perform analysis to analyse the impact of economic events on Markets,
CO 4	To create a new approach towards the study of Economics.
CO 5	The course will illustrate how microeconomic concepts can be applied to analyze real-life situations
CO 6	Analyse the performance of firms under different market structures,
CO 7	Evaluate the factors affecting firm behaviour, such as production and costs
CO 8	To have better awareness regarding different Factors Pricing Rent, Wages, Interest, and Profit.

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. II Sub: Economy of Maharashtra**
CO 1	Develop ideas of the basic characteristics of Maharashtra's economy and its potential for natural resources.
CO 2	Understand agriculture as the foundation of economic growth and development, analyses the progress and changing nature of the agricultural sector and its contribution to the economy as a whole.
CO 3	Understand the role of Agriculture in Economy of Maharashtra.
CO 4	Study the issue of farmer’s suicide in Maharashtra
CO 5	Study the concept of FDI and its trends in Maharashtra.
CO 6	Consider the role of Industry and Service sector in Economy of Maharashtra.

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. III Sub: Macroeconomics**
CO 1	Apply knowledge and skill in the field of Economics and will be able to have the employability in these areas.
CO 2	Describe and apply the methods for measurement of national income, GDP and Per Capita Income
CO 3	Perform analysis to analyse the impact of Inflation and Deflation
CO 4	To create a new approach towards the study of Value of Money.
CO 5	The course will illustrate how macroeconomic concepts can be applied to analyze real-life situations
CO 6	Analyse the performance consumption function,
CO 7	Evaluate the factors and awerness of international trade.

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. IV Sub: Banking**
CO 1	Apply knowledge and skill in the field of banking.
CO 2	Describe and apply the methods for analysing commercial banks.
CO 3	Perform analysis to analyse the impact of economic events on banking
CO 4	To create a new approach of central banks
CO 5	The course will illustrate how cooperative and NABARD
CO 6	Analyse the performance of Banking Services,
CO 7	To have better awareness regarding IMF and World Bank.

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. V Sub: Indian Economy**
CO 1	Apply knowledge and skill in the field of Indian Economy.
CO 2	Describe and apply the methods for analysing economic planning

CO 3	Perform analysis to analyse the impact of new economic reform
CO 4	To create a new approach towards the agriculture and industrial sector.
CO 5	The course will illustrate how industrial policy and trade union
CO 6	Analyse the performance of external sector (poverty, unemployment and SHG)
CO 7	Evaluate the factors affecting environment and pollution,
CO 8	To get awareness regarding different Factors impacting global warming

Code of the course/subject	**Economics 1022**
Title of the course/subject	**Sem. VI Sub: Demography**
CO 1	Apply knowledge in the field of Demographic Economics
CO 2	Understand Theories of Population, Population Explosion
CO 3	Perform analysis to analyse the impact of fertility and mortality on population
CO 4	To create a new approach towards the urbanization
CO 5	The course will illustrate how demography concepts can be applied to analyze real-life situations
CO 6	To have better awareness regarding different Factors like Family Planning, urbanization, Migration.

Department of Humanities

Programme : Bachelor of Arts (History)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. I Sub: History of India from Early to 700 A.D.**
CO 1	Survey the sources of History of Ancient India
CO 2	Describe the social, economic, religious and institutional bases of Ancient India.
CO 3	Analyze development of the concept of Nation- State background of political history.
CO 4	Study ancient Indian Art & Architecture

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. II Sub: History of India from Early 701 A.D. to 1525 A.D.**
CO 1	Survey the sources of History in Sultanate period of India.
CO 2	Analyze the social, economic, religious and institutional bases of Sultanate period of India.
CO 3	Known development of the concept of Nation- State background of political history.
CO 4	Study Sultanate period of India Art & Architecture

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. III Sub: History of Medieval India from 1526 A.D. to 1756 A.D.**
CO 1	Survey the sources of History of Medieval India.
CO 2	Describe the social, economic, religious and institutional bases of Medieval India.
CO 3	Analyze development of the concept of Nation- State background of political history.
CO 4	Study medieval Indian Art & Architecture.

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. IV Sub: History of Modern India from 1757 A.D. to 1947 A.D.**
CO 1	Learn the colonialism in India.
CO 2	Understand the social, economic, religious and institutional bases of Modern India.
CO 3	Know development of the concept of Nation- State background of political history.
CO 4	Study of Modern Indian development of Democracy.

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. V Sub: History of Modern Word (from 1780 to 1920 A.D.)**
CO 1	Introduction to landmark events in World history.
CO 2	Understand policy of imperialism and changes in world political order.
CO 3	Emergence of State of Germany and its diplomatic policy.
CO 4	Critically analyse background of First World War and international peace making attempts that followed.

Code of the course/subject	**History 1021**
Title of the course/subject	**Sem. VI Sub: History of Modern Word (from 1921 to 1965 A.D.)**
CO 1	Analyse causes for the rise of dictatorship in Europe.
CO 2	Understand international crisis; inter world war period politics and events leading to Second World War and its aftermath.
CO 3	Understand world politics after World War and attempts to restore World peace.
CO 4	Introduction to political shifts in West Asia.

Department of Humanities

Programme : Bachelor of Arts (Marathi)

PO 1	The students acquire knowledge in the field of Social Sciences, literature and humanities which make them sensitive and sensible enough.
PO 2	The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.
PO 3	The programme also empowers the graduates to appear for various competitive examinations or choose the Post graduate programme of their choice.
PO 4	The B. A. programme enables the students to acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity.
PO 5	The students will be ignited enough to think and act over the solution of various issues prevailed in the human life to make this world better than ever.
PO 6	Programme provides the base to be the responsible citizen

Code of the course/subject	**Marathi 1011**
Title of the course/subject	**Sem. I Sub: शब्दगंध भाग १**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

Code of the course/subject	**Marathi 1011**
Title of the course/subject	**Sem. II Sub: शब्दगंध भाग १**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

Code of the course/subject	**Marathi 1011**
Title of the course/subject	**Sem. III Sub: शब्दगंध भाग १**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

Code of the course/subject	**Marathi 1011**
Title of the course/subject	**Sem. IV Sub: शब्दगंध भाग २**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

Code of the course/subject	Marathi 1011
Title of the course/subject	Sem. V Sub: **मृदगंध भाग ३**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

Code of the course/subject	Marathi 1011
Title of the course/subject	Sem. VI Sub: **मृदगंध भाग ३**
CO 1	वैचारक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करयाचा संस्कार व विचार मिळेल. महापुषांचे विचार व कार्य समजून घेता येईल. त्यांच्याजीवनआणिविचारांपासूनविद्यार्थ्यांनाप्रेरणामिळेल.
CO 2	ललित व कविता या विभागांतून गतकालीन आणि समकालीन जगन्याचे प्रश्न समजून घेण्यासाठी उपयुक्त असे मागदर्शन विद्यार्थ्यांना मिळेल.
CO 3	कौशल्य विकास आधारीत अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यास मार्गदर्शक ठरेल.
CO 4	वैचारिक ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम या चार विभागातील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवादकौशल्य, भाषिककौशल्य, लेखनकौशल्य आत्मसात करता येतील. लोकशाहीमूल्यांची जपवणूक करण्याचे तत्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची त्यांना प्रेरणा मिळेल. हि भाषिक कौशल्य विद्यार्थ्यांना रोजगारक्षम जाण्याकरिता सहाय्यक ठरतील.

DEPARTMENT OF ENGLISH
PROGRAMME: BACHELOR OF ARTS

PO NO.	Programme Outcomes
PO1	Comprehend various forms of literature like Prose, Poetry, Drama and Fiction
PO2	Develop the knowledge of grammatical system
PO3	Develop four language skills LSRW
PO4	Widen scope of employability and Entrepreneurship viz Teaching, Civil Services and Creative Writing

Code of the Course/Subject	CDSC ENG 1.1
Title of the Course/Subject	Compulsory English
CO No.	Course Outcomes
CO1	Understand the basic knowledge of English language and literature
CO2	Understand the relation between literature and real life.
CO3	Understand and interpret the prose, poem, short stories
CO4	Write the News Report, Letter, Essay, Paragraph etc.
CO5	Avail the pleasure of literary forms such as Novel, Poem, Play etc.
CO6	Develop interview technique, Reading Skills, Writing Skills and Speaking Skills.
CO7	Enhance the interest in English Language.

Code of the Course/Subject	AEC ENG 1.7
Title of the Course/Subject	Communication Skills in English
CO No.	Course Outcomes
CO1	Communicate effectively in different real life situations.
CO2	Register complaints, make enquiries and give opinions.
CO3	Make proper self introduction.
CO4	Respond well to questions at an interview.

DEPARTMENT OF ENGLISH PROGRAMME: BACHELOR OF ARTS
English Literature

PO NO.	Programme Outcomes
PO1	Understand Literary Movements that existed in different ages.
PO2	Define Literary Theories and Terms in Criticism.
PO3	Develop reading, writing and analytical skills.
PO4	Communicate their ideas critically and creatively.

Code of the Course/Subject	DSC ELT 1.2
Title of the Course/Subject	English Literature
CO No.	Course Outcomes
CO1	Analyse various forms of literature.
CO2	Acquaint them with the forms of structures and aesthetics of style and techniques of literary works
CO3	Analyse various elements of literature.
CO4	Communicate in English orally and in writing.
CO5	Kindle their critical thinking skills.

Code of the Course/Subject	GIC ENG 1.5
Title of the Course/Subject	English Literature
CO No.	Course Outcomes
CO1	Understand various soft skills.
CO2	Avail the pleasure of reading English short stories.
CO3	Use soft skills in day to day life.
CO4	Communicate in English orally and in writing.

DEPARTMENT OF ENGLISH
PROGRAMME: MASTER OF ARTS- ENGLISH

PO NO.	Programme Outcomes
PO1	To educate students in English literary and critical writing with a view to enable them to probe literary & critical theories & contexts that require substantive expertise in literature.
PO2	To develop and foster ideological sense and a sense of social awareness and cultural understanding
PO3	To acquire proficiency in expression skills and critical thinking skills through exposure to various forms & genre of writing.
PO4	To develop research, critical and analytical attitude & approach in the students.
PO5	To help emerge social thinkers & critics who can take up a study of various social problems and issues that ail the society and impede social change and progress and contribute to theand issues that ail the society and impede social change and progress and contribute to the process of social transformation and social progress.
PO6	To help grow great leaders, thinkers, artists, visionaries, pundits / experts, educationists,managers, consultants, guides, coaches, social analysts, reformers, social activists,socialpleaders & crusaders, think-tanks, journalists, critical and creative writers professionally invarious fields of knowledge.
PO7	To create an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and strategic implementation among the students.

Code of the Course/Subject	Research Methodology and IPR
Title of the Course/Subject	Research Methodology and IPR Th-Major
CO No.	Course Outcomes
CO1	To gain critical understanding and insight into the phenomenon of Renaissance
CO2	Understanding the factors behind the emergence of Shakespeare as a great dramatist
CO3	To critically analyse the chronology of events that led to the rise and glory of Elizabethan Literature
CO4	To improve one's performance in competitive exams like MPSC/UPSC/NET/SET.
CO5	The students will have an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and strategic implementation among the students

Code of the Course/Subject	DSCENG101 History of English Literature-1
Title of the Course/Subject	History of English Literature -1 DSC I.1 Major
CO No.	Course Outcomes
CO1	To gain critical understanding and insight into the phenomenon of Renaissance
CO2	Understanding the factors behind the emergence of Shakespeare as a great dramatist
CO3	To critically analyse the chronology of events that led to the rise and glory of Elizabethan Literature
CO4	To improve one's performance in competitive exams like MPSC/UPSC/NET/SET

Code of the Course/Subject	DSCENG102 Literary Criticism – 1
Title of the Course/Subject	Literary Criticism – 1 DSC-II.1 Major
CO No.	Course Outcomes
CO1	To be able to write critical review
CO2	To analyse and interpret texts
CO3	To compare and contrast different ideas
CO4	To apply critical sense and judgment to form an informed opinion Acquisition of critical attitude

Code of the Course/Subject	DSCENG103 Poetry – 1 (DSE)
Title of the Course/Subject	Poetry – 1 DSC III.1 Major
CO No.	Course Outcomes
CO1	The Student will be able to critically appreciate and interpret a piece of poetic work.
CO2	The Student will be fairly acquainted with the background and socio-political as well cultural
CO3	background of the poet and understand the factors behind his making and evolution.
CO4	The student will grasp the distinctive poetic style and technique of various poets.
CO5	The student will understand the socio-political and cultural importance of Poetry and Poetic art.
CO6	The student will be able to quote the memorable quotations in his speech and writing.
CO7	The student will be able to understand and apply the evocative power of language.
CO8	The student will understand and appreciate the subjective nature of Truth and Beauty.
CO9	The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

Code of the Course/Subject	DSEENG104 Drama – 1 (DSE 1.A)
Title of the Course/Subject	Drama – 1 (DSE 1.A) Major Elective
CO No.	Course Outcomes
CO1	The Student will be able critically appreciate a piece of dramatic art.
CO2	The Student will be fairly acquainted with the background and socio-political as well cultural
CO3	background of the dramatist and understand the factors behind his making.
CO4	The student will grasp the distinctive dramatic style and technique of various playwright
CO5	He will understand the socio-political and cultural significance of Play and dramatic art.
CO6	He will be able to quote the memorable dialogue and quotations in his speech and writing

DEPARTMENT OF BOTANY
Programme:BACHLORE OF SCIENCE (BOTANY)

PO NO.	Programme Outcomes
PO 1	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO 2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO 3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
PO 4	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO 5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO 6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO 7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Title of the Couse/ Subject	DIVERSITY Of MICROBES , PHYCOLOGY, MYCOLOGYAND PHYTOPATHOLOGY
Code of the Course Subject	BOT(1S)/Botany
CO 1	understand microbial diversity, reproduction and economic importance.
CO 2	differentiate the microbes, algae and fungi on the basis of morphology, cellular organization, nutrition and metabolic activities.
CO 3	classify and identify the various algal genera.
CO 4	classify and identify the various fungal genera.
CO 5	Systematize the plant diseases and their pathogens
CO 6	Apply understanding of microbial diversity, phycology and mycology for teaching primary to high school students

Title of the Couse/ Subject	Bryophytes, Pteridophytes, Gymnosperms and Morphology of Angiosperms
Code of the Course Subject	BOT(2S)/Botany
CO 1	Demonstrate an understanding of Archegoniate, Bryophytes, Pteridophytes and Gymnosperms, morphology of angiosperm and medicinal plants
CO 2	Identify and classify plants from Bryophytes, Pteridophytes and Gymnosperms
CO 3	Develop critical thinking on morphology, anatomy and reproduction of Bryophytes, Pteridophytes and Gymnosperms and on morphology of angiosperm
CO 4	Acquire skill of collection and preservation of Bryophytes, Pteridophytes and Gymnosperms

Title of the Couse/ Subject	ANGIOSPERM SYSTEMATICS, 06 ANATOMY, EMBRYOLOGY
Code of the Course Subject	BOT (3S)/Botany
CO 1	Understand the basic principles involved in identification, naming and classification of flowering plants.
CO 2	Know the systematic study and economic importance of plants belonging to the various families.
CO 3	Differentiate various tissue systems.
CO 4	Understand the normal and anomalous secondary growth in plants and their causes.
CO 5	Understand developmental stages in plant embryo and seed formation.
CO 6	Apply understanding this knowledge to explain the taxonomic diversity of plants and Imply the embryological and anatomical knowledge to differentiate the plant taxa.

Title of the Couse/ Subject	Cell Biology, Genetics and Plant Breeding
Code of the Course Subject	BOT (4S)
CO 1	Understand the structure and purpose of basic components of prokaryotic and eukaryotic cells
CO 2	Identify the concept that explains chemical composition and structure of cell wall and membrane
CO 3	Differentiate cell organelles on the basis of structure and function.
CO 4	Comprehend the effect of chromosomal abnormalities in numerical as well as structural changes.
CO 5	Have conceptual understanding of laws of inheritance, genetic basis of loci, alleles, their linkage and crossing over.
CO 6	Understand the basic concepts of plant breeding.
CO 7	Analyse the different selection and breeding methods applied in crop improvement

Title of the Couse/ Subject	Plant Physiology and Ecology
Code of the Course Subject	BOT(5S)/Botany
CO 1	Students will be able to understand various aspects of plant physiology like plant water relation, photosynthesis, respiration, and metabolism
CO 2	Students will understand the aspects of plant ecology like various factors and ecosystem composition and function.
CO 3	Students will be able to design various experiments/ models on plant physiology and plant ecology.

Title of the Couse/ Subject	Molecular Biology and Plant Biotechnology
Code of the Course Subject	BOT(6S)/Botany
CO 1	Students will be able to understand various aspects of plant physiology like plant water relation, photosynthesis, respiration, and metabolism

CO 2	Students will understand the aspects of plant ecology like various factors and ecosystem composition and function.
CO 3	Students will be able to design various experiments/ models on plant physiology and plant ecology.

DEPARTMENT OF BOTANY
Programme:MASTER OF SCIENCE (BOTANY)

PO NO.	Programme Outcomes
PO 1	explore the cutting edge technologies and skills currently used in plant sciences.
PO 2	Be aware of social, environmental issues and plant significance in natural interest.
PO 3	create interest in nature conservation and save the natural resources.
PO 4	study the concepts of genetics, plant breeding and their applicability.
PO 5	understand and correlate the various biochemical and physiological processes in plants
PO 6	study the evolutionary process in Bryophytes and Pteriodophytes.
PO 7	study the bioactive principles in plants and their defence mechanisms

Title of the Couse/ Subject	Cell and Molecular Biology
Code of the Course Subject	DSC I
CO 1	understand structural organization and functional role of cell, organelles and biomolecules.
CO 2	correlate the various life processes and their functioning
CO 3	understand the process of chromosomal organization and its role in cellular metabolism
CO 4	evaluate the various life processes and their regulations with special reference to regulation of gene expression.

Title of the Couse/ Subject	MOLECULAT TECHNIQUE
Code of the Course Subject	AEC I
CO 1	Get acquainted about the latest techniques used in plant sciences
CO 2	Be trained about the tools and techniques
CO 3	know the principle and applications of these techniques.

Title of the Couse/ Subject	Evolution and Diversity of Algae and Fungi
Code of the Course Subject	DSC II
CO 1	Understand the phycology with special reference to Indian work
CO 2	Identify Algae in diversified habitats (Terrestrial, fresh water, marine) Criteria used in classification of algae, Role of algae in human welfare
CO 3	Know General account of thallus organization, reproduction and life history of algae.
CO 4	Study important groups of algae Cyanophyta, Chlorophyta, Charophyta, Xanthophyta, Bacillariopyta, Phaeophyta & Rhodophyta.
CO 5	Study General Characters of Fungi Classification., Economic importance of fungi in medicine,
CO 6	Use Algae and fungi in Agriculture (Biopesticide and biofertilizer) & Fungi as plant pathogen.

Title of the Couse/ Subject	Economic Botany and Resource Utilization
Code of the Course Subject	DSC III
CO 1	Study the origin, divarication, utility and conservation strategies & natural resources
CO 2	Study importance of food, fiber, medicines & oil yielding plant.
CO 3	Study the plants and their value in the service & mankind
CO 4	Study the conservation of biodiversity

Title of the Couse/ Subject	Plant Development
Code of the Course Subject	DSC IV
CO 1	Deal with regulation of growth and development of plants in relation to bio-molecular interaction
CO 2	know the various structural and anatomical components of plant tissue and reproductive parts.
CO 3	Understand Structure and development of Flower, Male gametophyte, Female gametophyte, Seed development, dormancy.

Title of the Couse/ Subject	Plant Physiology
Code of the Course Subject	DSC V
CO 1	Grasp concepts of proteins, enzymes, basic plant signaling mechanisms, sensory photobiology. deal with physiology of nutrient uptake, photosynthesis and nitrogen metabolism

Title of the Couse/ Subject	Modern Techniques
Code of the Course Subject	AEC II
CO 1	learn about the latest techniques used in plant sciences
CO 2	get training on the tools and techniques
CO 3	know the principle and applications of these techniques

Title of the Couse/ Subject	Evolution and Diversity of Bryophytes and Pteridophytes
Code of the Course Subject	DSC VI
CO 1	understand evolutionary diversification of early land plants and morphology and reproduction in bryophytes, pteridophytes.
CO 2	know the Ecological and Economic Importance of bryophytes, pteridophytes.
CO 3	classify Bryophytes into various groups, study their importance
CO 4	classify Pteridophytes into various groups, study their importance and multiplication of important ferns

CO 5	know the applied aspects of Bryophytes and Pteridophytes.

Title of the Couse/ Subject	Genetics and Plant Breeding
Code of the Course Subject	DSC VII
CO 1	understand the concept of classical and modern genetics clearly.
CO 2	study the inheritance pattern.
CO 3	know the role of chromosomes in evolution and the factors leading to changes in them.
CO 4	study mutations and breeding and their significance in crop improvement.
CO 5	study the variation in populations.

Title of the Couse/ Subject	Plant Biochemistry and Pharmacognosy
Code of the Course Subject	DSC VIII
CO 1	study the plant biochemistry and its various aspects
CO 2	study the metabolism and regulation of bio molecules
CO 3	understand the medicinal properties of plants and its constituents
CO 4	study the evaluation and standardization methods of drugs

Title of the Couse/ Subject	Systematics and Taxonomy of Angiosperms
Code of the Course Subject	DSC IX
CO 1	The ultimate aim of taxonomy is to understand the evolution at work. Angiosperms being the dominant as well as most evolved plant group, the sources of characters for taxonomy are also varied.
CO 2	Itis also being practiced at various levels, from morphology to phylogenomic. This course aims to give comprehensive understanding in angiosperm taxonomy as well as its practice and applications.

Title of the Couse/ Subject	Paleobotany, Evolution and Diversity of Gymnosperms
Code of the Course Subject	DSC X
CO 1	To understand the phylogenetic significance of Gymnosperms
CO 2	To illustrate the diversity of past vegetation
CO 3	To know the distribution and economic potential of gymnosperms
CO 4	To contribute to the ancestry of present day dominant vegetation: Angiosperms
CO 5	To understand the significance of past vegetation in the formation of fossil fuel

Title of the Couse/ Subject	MOLECULAR BIOLOGY, BIOTECHNOLOGY AND PLANT BREEDING-I (Elective)
Code of the Course Subject	DSE I
CO 1	Follow a protocol independently, including locating materials and equipment, practicing good lab procedures and accurately performing all experimental procedures.
CO 2	Demonstrate proficiency in maintaining a safe work place, including observation of lab safety procedures
CO 3	Elucidate different techniques involved in genetic engineering.
CO 4	To prepare students for research and development in respective areas.

Title of the Couse/ Subject	MOLECULAR BIOLOGY, BIOTECHNOLOGY AND PLANT BREEDING-II (Elective)
Code of the Course Subject	DSE II
CO 1	Acquire a critical knowledge on molecular biology, biotechnology and plant breeding.
CO 2	These courses are designed to develop the communication and vocabulary skills in the students.
CO 3	Will be able to design and implement experimental procedures using relevant techniques.

Title of the Couse/ Subject	Applied Botany
Code of the Course Subject	DSC XI
CO 1	To provide detailed knowledge about virus and sub-viral particles, their taxonomy, growth, reproduction and role in nature.
CO 2	To explain the industrial aspects of microbiology for the production of various of industrial products of biological origin.
CO 3	The course explains the application of microorganisms in environment and the role of microorganisms in industrial, food and dairy technology
CO 4	To understand the salient features and economic importance of algal diversity.
CO 5	To encourage production and use of organic and biological sources of nutrients like biofertilizers, organic manure, compost for sustained soil health and fertility and improving soil organic carbon and to promote production and use of biopesticides, bio- control agents etc as alternative inputs in organic farming.
CO 6	To facilitate, encourage and promote development of organic agriculture in the country

Title of the Couse/ Subject	Plant Ecology
Code of the Course Subject	DSC XII
CO 1	Study of diversity and distribution of plant communities
CO 2	Effect of climate change on vegetation
CO 3	Restoration of plant communities.
CO 4	Conservation of plant and plant communities.
CO 5	Analyze the current theories, methods and interpretations with in the field of plant ecology

Title of the Couse/ Subject	Environmental Ecology
Code of the Course Subject	DSC XIII
CO 1	Study of environmental relationship
CO 2	Effect of Pollution.
CO 3	Restoration of plant communities.
CO 4	Conservation of plant and plant communities

Title of the Couse/ Subject	Plant Biotechnology and Genetic Engineering
Code of the Course Subject	SEC I
CO 1	Study of Tussive culture methods
CO 2	Able to micro-propagate the plants.
CO 3	Utilization of rDNA technology.

DEPARTMENT OF CHEMISTRY
Programme: Bachelor of Science (Chemistry)

PO NO.	Programme Outcomes
PO1	Attain requisite skills and knowledge after the completion of the programme.Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
PO4	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Code of the Course/Subject	CHE(1S)T
Title of the Course/Subject	Chemistry 1S
CO No.	Course Outcomes
CO1	1. Solve the conceptual questions using the knowledge gained by studying periodicity in atomic radii, ionic radii, ionization energy and electron affinity of elements.
CO2	2. Apply concepts of acids and bases as well as non-aqueous solvents and their industrial usage.
CO3	3. Compare different reaction intermediates, functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.
CO4	4. Choose correct synthetic approach to prepare derivatives of industrially important molecules
CO5	5. Solve different numerical problem of varying difficulty associated with gaseous and liquid state.
CO6	6. Apply the concepts from advanced mathematics to solve the derivation of different chemical formulae.

Code of the Course/Subject	CHE(2S)T
Title of the Course/Subject	Chemistry 2S
CO No.	Course Outcomes
CO1	1. apply the knowledge gained by studying types of bonding, solvation, hybridization and molecular geometries.
CO2	2. Draw the correct molecular structures, bond order and bond length.
CO3	3. synthesize commercially important compounds of varying carbon backbone.
CO4	4. Choose correct synthetic approach to prepare derivatives of industrially important molecules.
CO5	5. Solve numerical problems related to crystalline state.
CO6	6. Acquire skills to use chemical kinetics to develop mechanism of chemical reactions

Code of the Course/Subject	CHE(3S)T
Title of the Course/Subject	Chemistry 3S
CO No.	Course Outcomes
CO1	1. apply concepts of volumetric and gravimetric analysis
CO2	2. use commercial method for extraction of elements and acquaintance of transition series elements
CO3	3. compare functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.
CO4	4. select correct synthetic approach to prepare derivatives of industrially important molecules
CO5	5. solve different numerical problem of varying difficulty associated with thermodynamics, phase equilibrium and colligative properties.
CO6	6. apply the concepts from advanced mathematics to solve the derivation of different chemical formulae.

Code of the Course/Subject	CHE(4S)T

Title of the Course/Subject	Chemistry 4S
CO No.	**Course Outcomes**
CO1	1. Application of methods of synthesis of soaps and detergents
CO2	2. Commercial method for extraction of elements and acquaintance of transition series elements
CO3	3. Compare functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.
CO4	4. Choose correct synthetic approach to prepare derivatives of industrially important molecules
CO5	5. Solve different numerical problem of varying difficulty associated with electrochemistry and photochemistry
CO6	6. Apply the concepts of UV and IR spectroscopy for structure elucidation

DEPARTMENT OF CHEMISTRY
Programme: Bachelor of Science (Industrial Chemistry)

PO NO.	Programme Outcomes
PO1	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
PO4	. Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Code of the Course/Subject	CHE(1S)T
Title of the Course/Subject	Industrial Chemistry 1S
CO No.	Course Outcomes
CO1	1. Apply material balance equations and solve associated numerical problems of some important unit operations.
CO2	2. Solve the numerical problems on stoichiometry, mole concepts and unit conversions.
CO3	3. Describe the conventional and nonconventional energy sources and calculate heat of reactions.
CO4	4. Analyze the different types of fuels.
CO5	5. Apply the knowledge gained by studying the components of heat transfer, energy sources.
CO6	6. Apply the knowledge gained by studying the components fluid mechanics,liquid flow measurements.

Code of the Course/Subject	CHE(2S)T
Title of the Course/Subject	Chemistry 2S
CO No.	Course Outcomes
CO1	1. Apply the knowledge gained by studying unit operations like distillation, evaporation, extraction, leaching, crystallization, and drying.
CO2	2. Choose the correct mechanical separation techniques like size reduction, screening, mixing, and agitation.
CO3	3. Solve the conceptual questions by acquiring the knowledge of colloidal systems and their preparation and properties.
CO4	4. Apply the concept of catalysis.

Code of the Course/Subject	INC (3S) T
Title of the Course/Subject	Industrial Chemistry 3S
CO No.	Course Outcomes
CO1	1.Differentiate between Batch wise and Continuous Industrial Processes
CO2	2.Identify various nitrating agents, Sulphonating agents, Halogenating agents, Oxidizing agents, and their activities,
CO3	3.Compair Various organic Processes
CO4	4.Identify uses and mechanism of various industrial equipments.
CO5	5.Apply basic concepts to prevent corrosion.
CO6	6..Aware about hazards of Biomedical waste and its management

Code of the Course/Subject	INC (4S) T
Title of the Course/Subject	Industrial Chemistry (Vocational) 4S
CO No.	Course Outcomes
CO1	1.Understand the industrial processes of manufacturing of ceramics, glass and refractories.
CO2	2. Understand the mechanism of setting and hardening of cement.
CO3	3.Compare various industrial polymers and their industrial uses
CO4	4. Identify various sources of water pollution and its prevention.
CO5	5. Find out root causes air pollution its prevention

DEPARTMENT OF CHEMISTRY
Programme: Master of Science (Chemistry)

PO NO.	Programme Outcomes
PO1	Creative Thinking: Students will be able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems in chemistry. The skills of observations and drawing logical inferences from the scientific experiments will also be developed
PO2	Interdisciplinary Approach: Students will realize how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments. Also the knowledge of subjects in other faculties such as humanities, performing arts, social sciences etc. can have greatly and effectively influence which inspires in evolving new scientific theories and inventions.
PO3	Personality Development: Students will imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality. They will also realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.
PO4	Skills in research and industrial field: Students will build a scientific temper and will be able to learn the necessary skills to succeed in research or industrial field. In addition they will acquire the skills in handling scientific instruments, planning and performing in laboratory experiments.
PO5	Communication Skills: Students will develop various communication skills such as reading, listening, speaking, etc., which will help in expressing ideas and views clearly and effectively.
PO6	Environmental monitoring: Students will be able to design a solution to the environmental issues like Global warming, Climate change, Acid rain, Ozone depletion and will create awareness in society

Title of the Course/Subject	CHE(1S)T
Code of the Course/Subject	CHE 100
CO No.	Course Outcomes
CO1	1. Apply material balance equations and solve associated numerical problems of some important unit operations
CO2	2. Test the research hypothesis, understand the data collection and prepare the scientific research paper.
CO3	3. Identify various meta data sources for literature survey
CO4	4. Communicate research effectively using various online tools
CO5	5. Explore on various IPR components and patent writing
CO6	6. Apply electronic spreadsheets for chemical calculations, data visualization, and plotting.
CO7	7. Apply probability theorem and probability curves in statistical analysis.
CO8	8. Perform tests for rejection of data, including T-test, F-test, and Q-test.
CO9	9. Utilize the least squares method for deriving calibration graphs in chemical analysis.

Code of the Course/Subject	CHE101
Title of the Course/Subject	Chemistry
CO No.	Course Outcomes
CO1	predict the nature of bond and its properties through various electronic structural methods; bonding models
CO2	recognize and assign symmetry characteristics to molecules and objects,
CO3	understand and analyze structure-property correlation of carbonyls, clusters boron hydrides
CO4	design new metal carbonyls based on a fundamental understanding of their electronic properties
CO5	calculate EAN of carbonyls and nitrosyls.
CO6	appreciate specialized and advanced topics in inorganic and coordination chemistry
CO7	corelate structure and bonding with reactivity of boron clusters

Code of the Course/Subject	CHE 102
Title of the Course/Subject	General Organic Chemistry
CO No.	Course Outcomes
CO1	Implement rules of aromaticity to organic molecules
CO2	Evaluate the organic reactions based on the influence of the substituents on substrate molecules
CO3	Design organic reactions based on free radical chemistry in order to achieve the required product(s)
CO4	Sketch organic molecules in different projection formula and assign its configuration.
CO5	Compare the stability of different conformers
CO6	Apply their understanding about the organic reactions of industrial significance with respect to the chemo- selectivity, regioselectivity and enantioselectivity
CO7	Analyze the product distribution and the stereochemistry of various organic products.

Code of the Course/Subject	CHE 103
Title of the Course/Subject	Physical Chemistry - I
CO No.	Course Outcomes
CO1	1. Understand basic and advanced level statistical thermodynamics, and reaction kinetics, electrolytic conductance
CO2	2. Apply the concepts of statistical thermodynamics and reaction kinetics to solve complex problems.
CO3	3. Demonstrate the ability to use chemical dynamics to solve problems associated with enzyme kinetics, and complex reactions
CO4	4. Implement and build theoretical models for reaction rates, thermodynamics, conductometric and potentiometric titration

CO5	5. Solve numerical problems associated with statistical thermodynamics, reaction kinetics.

Code of the Course/Subject	**CHE 104 (ii)**
Title of the Course/Subject	**Organic Reaction Mechanism (DSE–I (ii))**
CO No.	Course Outcomes
CO1	Predict the orientation and stereochemistry of the product of addition reaction
CO2	Apply enolate chemistry to achieve molecular complexity
CO3	Predict the orientation and stereochemistry of the product of elimination reaction
CO4	Justify the formation of products in the reaction due to anchimeric assistance
CO5	Design organic reactions in order to achieve the required product(s).
CO6	Write the reactions and mechanism for the functionalization of aromatic ring

DEPARTMENT OF COMPUTER SCIENCE
Programme: Bachelor of Science (Computer)

PO NO.	Programme Outcomes
PO1	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology
PO3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group setting
PO4	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them
PO6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Code of the Course/Subject	1CS1
Title of the Course/Subject	Fundamentals of Computer and C Programming
CO No.	Course Outcomes
CO1	Understand the computer, I/O and peripheral devices.
CO2	Understand concept of Operating systems.
CO3	Apply the Programming concepts.
CO4	Learn C language.
CO5	Write Simple C Programs.

Code of the Course/Subject	1CSLAB1 (Practical)
Title of the Course/Subject	Laboratory/Practical of Fundamentals of Computer
CO No.	and C Programming
CO1	Write word processing task
CO2	Create worksheet and perform operations on it
CO3	Design, compile and debug programs in C language
CO4	Classify conditional expressions and looping statement to solve problems associated with conditions and repetitions
CO5	Demonstrate the programs using arithmetic and relational operators
CO6	Implement the concept of various string handling functions
CO7	Classify programming components that efficiently solve computing problems in real-world.

Code of the Course/Subject	1CS2
Title of the Course/Subject	Dastructures and OOPS
CO No.	Course Outcomes
CO1	Implement basic data structures such as arrays, stacks
CO2	use linked list, trees and queues.
CO3	Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data.
CO4	Describe the procedural and object-oriented paradigm with concepts of streams, classes, functions, data and objects
CO5	Perform programming on functions, inline functions, constructor and destructor.
CO6	Perform programming on the concept of function overloading, operator overloading, virtual functions and polymorphism.

Code of the Course/Subject	1CSLAB2 (Practical)
Title of the Course/Subject	Data Structure and OOPs
CO No.	Course Outcomes
CO1	Perform various operations Data structure using CPP
CO2	Develop the concept of dynamic memory allocation through linked lis
CO3	Design stack and queue with contiguous and non-contiguous data storage mechanism
CO4	Perform the various operations on binary tree
CO5	Implement sorting on 1-D array using different techniques

Code of the Course/Subject	2CS1
Title of the Course/Subject	Networking and Web Technology
CO No.	Course Outcomes
CO1	Understand Internet and Networking
CO2	Understand the fundamentals of data communication,networking, internet and their importance
CO3	Understand different networking topologies

CO4	Describe the seven layer OSI model with data transmission media
CO5	Understanding Switching and Multiplexing techniques

Code of the Course/Subject	**2CSLab1 (Practical)**
Title of the Course/Subject	**Networking and Web technology**
CO No.	**Course Outcomes**
CO1	Get Familiar with Internet and its uses.
CO2	Able to Create and send email with attachments.
CO3	Prepare HTML documents
CO4	Able to write code for webpage
CO5	Able to write CSS

Code of the Course/Subject	**2CS2**
Title of the Course/Subject	**RDBMS and Core Java**
CO No.	**Course Outcomes**
CO1	Understanding basics concepts of DBMS
CO2	Demonstrating SQL commands
CO3	Demonstrating PL/SQL concepts
CO4	Writing basic java programs using basics features of Java programming language
CO5	Demonstrating concepts of OOP's using classes, Inheritance, Interfaces etc.

Code of the Course/Subject	**2CS2 Lab2 (Practical)**
Title of the Course/Subject	**RDBMS and Core Java**
CO No.	**Course Outcomes**
CO1	Get Familiar with Relational Database.
CO2	Able to Create various Relational Database and Operations over it.
CO3	Prepare queries by using inbuilt functions.
CO4	Able to write programs using abstract classes.
CO5	Able to write multithreaded programs

DEPARTMENT OF COMPUTER SCIENCE
Programme: Master of Science (Computer)

PO NO.	Programme Outcomes
PO1	Problem Analysis Identify, formulate, review research literature and analyze complex engineering problems in Computer Science and Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences
PO2	Design / Development of Solutions Design solutions for complex engineering problems and design system components or processes of Computer Science and Engineering that meet the specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations
PO3	Conduct Investigations of Complex Problems Use research-based knowledge and research methods including design of experiments in Computer Science and Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO4	Modern tool usage Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex activities related to Computer Science with an understanding of the limitations.
PO5	The services to the society Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice in Computer Science and Engineering
PO6	Project Management Demonstrate knowledge and understanding of the computer science and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

Code of the Course/Subject	1MCS1
Title of the Course/Subject	Computer System Design
CO No.	Course Outcomes
CO1	Understand the theory and architecture of central processing unit.
CO2	Analyze some of the design issues in terms of speed, technology, cost,performance
CO3	Design a simple CPU with applying the theory concept
CO4	Use appropriate tools to design verify and test the CPU architecture.
CO5	Understand the theory of memory system design
CO6	Understand the architecture and functionality of central processing unit.
CO7	Exemplify in a better way the I/O and memory organization

Code of the Course/Subject	1MCS2
Title of the Course/Subject	Data Structure with OOP
CO No.	Course Outcomes
CO1	Learn the concepts of linear data structures such as arrays, linked lists,stacks and queues
CO2	Learn the concepts of non-linear data structures such as trees& Graph.
CO3	Learn and understand various data searching and sorting methods with its complexity
CO4	Demonstrate operations such as insertion, deletion, searching and traversing on data structures.
CO5	analyse and apply specific sorting and searching methodsdepending upon factors like type of data, volume of data.
CO6	Learn &Understand B-tree indexing, hashing,collisions processing and its applications.
CO7	Learn the fundamental concepts of data structures.
CO8	Identify and Apply the fundamental concepts of data structures
CO9	Apply Academic Skills & Critical Thinking Skills

Code of the Course/Subject	1MCS3
Title of the Course/Subject	Data Base Management Technologies
CO No.	Course Outcomes
CO1	Analyze Database Management System & its Architecture and design ER mode
CO2	Implement database queries using database languages and normalize the database design using normal forms.
CO3	Write queries and PL/SQL Code blocks for given requirements, using different SQL and PL/SQL concepts.
CO4	Apply different query processing, optimizing, indexing and hashing techniques in real-time database.
CO5	Apply Transaction Management concepts, concurrency control concepts
CO6	Use advanced database Programming concepts like Parallel databases,

Code of the Course/Subject	1MCS4
Title of the Course/Subject	Computer Network & Wireless Communications
CO No.	Course Outcomes
CO1	Apply cellular concepts to evaluate the signal reception performancein a cellular network and traffic analysis to design cellular network with given quality of service constraints.
CO2	Determine the type and appropriate model of wireless fading channel based on the system parameters and the property of wireless medium
CO3	Analyse and design receiver and transmitter diversity techniques.
CO4	Determine the appropriate transceiver design of multi-antenna systems and evaluate the data rate performance.
CO5	Design wireless communication systems with key 3G (e.g.,CDMA) and 4G (OFDM) technologies.
CO6	Describe and differentiate four generations of wireless standard for cellular networks

Code of the Course/Subject	1MCS 5 (SKILL)
Title of the Course/Subject	Advanced Java/ Ns2/ Tools
CO No.	Course Outcome
CO1	demonstrate operation of network
CO2	simulate and demonstrate the performance of GSM and CDMA
CO3	implement data link layer and transport layer protocols.
CO4	Demonstrate Installation procedure of the required software in groups and
CO5	document the same in the journa

Code of the Course/Subject	1MCS6(3) ELECTIVE
Title of the Course/Subject	Research Methodology
CO No.	Course Outcomes
CO1	draw upon foundational knowledge, learn, adapt and successfully apply analytical and computational approaches on changing societal and technological challenges
CO2	Demonstrate the ability to choose methods appropriate to research aims and objectives.
CO3	Understand the limitations of particular research methods.
CO4	The curricular skills acquired by students should be assessed at college/university department level through Assignments,Unit test, Internal Test, Group

Code of the Course/Subject	1MCS7
Title of the Course/Subject	Lab-I 1,2 - Programming(C/C++/Java/ALP
CO No.	Course Outcomes
CO1	Demonstrate the use of various OOPs concepts with the help of programs.
CO2	Describe the procedural and object oriented paradigm with concepts of classes, functions, data and objects.
CO3	Demonstrate the programs for the implementation of constructors,destructors and function overloading.
CO4	Use the syntax and semantics of java programming language.
CO5	Design event driven GUI and web related applications which mimic the real word scenarios.
CO6	Get Familiarized with the assembly level programming

Code of the Course/Subject	1MCS8
Title of the Course/Subject	Lab-II 3-SQL/ DBMS tools, MS-SQL, My Sql
CO No.	Course Outcomes
CO1	Demonstrate the Basics Concepts and SQL Queries of Database Management System.
CO2	Apply the Conceptual Design Model and Database Hierarchical Structure to construct the real-world requirement.
CO3	Analyze the various constraints to populate the database through SQL Queries.
CO4	Implement different working concepts of DBMS using SQL
CO5	Present the result of database creation and querying process,Queries.document it.

Code of the Course/Subject	2MCS1
Title of the Course/Subject	Operating System and Algorithms
CO No.	Course Outcomes
CO1	Analyze basic components of Operating Systems and various types of Operating Systems
CO2	understand and implement the mechanism of an OS to handle multiple processes and threads and their communication.
CO3	analyze different mechanisms involved in memory management OS.
CO4	find the loopholes in the system to resolve the problem of deadlocks
CO5	study the components and management aspects of concurrency management

CO6	study and analyze the problems in distributed Operating System
CO7	Exemplify in a better way the I/O and memory organization

Code of the Course/Subject	2MCS2
Title of the Course/Subject	Graphics Application programming
CO No.	Course Outcomes
CO1	Learn the fundamental concepts of Computer Graphics.
CO2	Identify and Apply the fundamental concepts of Computer Graphics in Animation, Virtual Reality.
CO3	Apply Academic Skills & Critical Thinking Skills
CO4	understand the mathematical modelling of graphical objects to be drawn/used in different kind of applications.
CO5	Learn and understand the concepts of computer graphics, including viewing,projection, perspective, modelling and transformation in 2D & 3D.
CO6	Learn and understand the algorithms to generate line segments, polygon and itstransformations, windowing and clipping.
CO7	Demonstrate operations such as various Transformation and Projection.
CO8	Demonstrate various algorithms for scan conversion and filling of basic object and their comparative analysis.
CO9	Implement display control, 3D geometry, primitives and conversions,

Code of the Course/Subject	2MCS3
Title of the Course/Subject	Software Engineering
CO No.	Course Outcome
CO1	identify the need for engineering approach to software development and various processes of requirements analysis for software engineering problems.
CO2	Analyse various software engineering models and apply methods for design and development of software projects.
CO3	Work with various techniques, metrics and strategies for Testing software projects.
CO4	Identify and apply the principles, processes and main knowledge areas for Software Project Management
CO5	Proficiently apply standards, CASE tools and techniques for engineering software

Code of the Course/Subject	2MCS4
Title of the Course/Subject	Data Mining and Data Warehousing
CO No.	Course Outcomes
CO1	use basic concepts and techniques of Data Mining
CO2	develop skills of using recent data mining software for solving practical problems.
CO3	gain experience of doing independent study and research.
CO4	study the methodology of engineering legacy databases for data warehousing and data mining to derive business rules for decision support
CO5	Develop and apply critical thinking, problem-solving, and decision- making

Code of the Course/Subject	SKILL 2
Title of the Course/Subject	Operating system (Windows/Android/Linux
CO No.	Course Outcome
CO1	implement the mechanism of an OS to handle multiple processes and threads and their communication.
CO2	simulate and demonstrate the performance mechanisms involved in memory management OS
CO3	demonstrate the loopholes in the system to resolve the problem ofdeadlock
CO4	simulate and demonstrate the performance the components and management aspects of concurrency managemen
CO5	simulate and demonstrate the performance of the problems in distributed Operating Systems

Code of the Course/Subject	2MCS6(4) ELECTIVE
Title of the Course/Subject	Mobile Computing
CO No.	Course Outcomes
CO1	Explain the basics of mobile Computing
CO2	Describe the functionality of Mobile IP and Transport Layer
CO3	Classify different types of mobile telecommunication systems
CO4	Demonstrate the Adhoc networks concepts and its routing protocols
CO5	Make use of mobile operating systems in developing mobile applications

Code of the Course/Subject	2MCS7
Title of the Course/Subject	Lab-III 3,4-SE-Tools/DM Tools
CO No.	Course Outcomes
CO1	dentify different actors and use cases from a given problem statement and draw use case diagram to associate use cases with different types of relationship.
CO2	. Draw a class diagram after identifying classes and association among them.
CO3	Graphically represent various UML diagrams and associations among them and identify the logical sequence of activities undergoing in a system, and represent them pictorially.
CO4	use modern engineering tools for specification, design, implementation and testing
CO5	translate end-user requirements into system and software requirements

Code of the Course/Subject	2MCS8
Title of the Course/Subject	Lab-IV 2 Graphic Programming & Tools
CO No.	Course Outcomes
CO1	Apply the basic concepts of C programming in developing the Apply the basic concepts of C programming in developing the codefor various Graphics applications.
CO2	Individually Apply C programming concepts to do the Programing for Computer Graphics.
CO3	Identify and apply a suitable transformation for a given application.

Code of the Course/Subject	2022-3MCS1/DSC 1
Title of the Course/Subject	Algorithm & Design
CO No.	Course Outcomes
CO1	Analyze the running time proved the correctness basic algorithms
CO2	Design efficient algorithms for computational problems using divide and conquer
CO3	Design optimal solutions using greedy algorithm.
CO4	Able to apply searching and traversing efficiently
CO5	Prove the hardness of NP hard problems using simple reduction.
CO6	Do performance analysis of simple approximation algorithm

Code of the Course/Subject	2022-3MCS2/DSC 2
Title of the Course/Subject	Web Computing
CO No.	Course Outcomes
CO1	Describe the basic concept PHP, Server-Side Scripting Language..
CO2	Design applications using Arrays and Function.
CO3	.Understand OOP concepts for application development.
CO4	Implement the knowledge of PHP-Database handling
CO5	Develop PHP framework for effective design of web application.
CO6	Implement JavaScript to develop dynamic web pages.

Code of the Course/Subject	2022-3MCS3/DSC 3
Title of the Course/Subject	3. Artificial Intelligence and Machine Learning
CO No.	Course Outcomes
CO1	Analyze artificial intelligence (AI) techniques and describe their principles..
CO2	Examine and demonstrate the important role that search algorithms play in problem-solving, inference, perception, knowledge representation, and learning.
CO3	Use the concepts of logic and knowledge representation to solve challenges in the real world
CO4	Recognize the features of machine learning that allow it to be used in solving a real-world problem.
CO5	Implement the various supervised learning techniquesfor tree-based and support vector machine models
CO6	Use several linear approaches for classification and regression, then optimize them using various regularization strategies.

Code of the Course/Subject	2022-3MCS4/DSC 4
Title of the Course/Subject	4. Distributed Computing
CO No.	Course Outcomes
CO1	Learn the fundamental concepts of distributed computing systems
CO2	Learn the concepts of message passing in distributed systems with inter Process Communication
CO3	Learn and understand Remote Procedure Call-RPC
CO4	Learn and understand Remote Procedure Call-RPC
CO5	Learn and understand Deadlock in distributed computing systemswith solutions

CO6	Learn and understand resource management and process management and also learn the concept of threads with issues in designing treads packages

Code of the Course/Subject	Skill -III 2022-3MCS5 SEC3
Title of the Course/Subject	Programming on algorithms and Design
CO No.	Course Outcome
CO1	Implement the various data structure used for the different application in the industry..
CO2	Simulate and demonstrate the various mechanism involved.
CO3	Demonstrate the loopholes in the system to resolve the problem divide and conquer
CO4	Simulate and demonstrate the performance of the greedy method simulate and demonstrate advanced problems of backtracking

Code of the Course/Subject	2022-3MCS6(1)/DSE 1 ELECTIVE
Title of the Course/Subject	Network Security
CO No.	Course Outcomes
CO1	Study the introduction about security over the network.
CO2	Learn the cryptographic algorithm
CO3	Learn and understand the types of authentication application and protocol.
CO4	Learn the Protocol used to provide authenticity to the client and data.
CO5	Understand the concept of network security and prevention from intruders.
CO6	Learn and understand Types of viruses

Code of the Course/Subject	2022-3MCS7 Lab-V
Title of the Course/Subject	2. HTM/JS/CSS/.net/PHP
CO No.	Course Outcomes
CO1	Demonstrate the use of various OOPs concepts with the help of programs.
CO2	Describe the procedural and object oriented paradigm with concepts of classes, functions, data and objects.
CO3	Demonstrate the programs for the implementation of constructors,destructors and function overloading.
CO4	Use the syntax and semantics of java programming language.
CO5	Design event driven GUI and web related applications which mimic the real word scenarios.
CO6	Get Familiarized with the assembly level programming

Code of the Course/Subject	1MCS8
Title of the Course/Subject	Lab-II 3-SQL/ DBMS tools, MS-SQL, My Sql
CO No.	Course Outcomes
CO1	Introduce the fundamentals of Internet, the principles of web design analyse a web page and identify its elements and attributes.
CO2	Create or construct basic websites using XHTML and Cascading Style Sheets.
CO3	Build dynamic web pages using JavaScript (Client-side programming) objects by applying different event handling mechanisms
CO4	Create XML documents and Schemas
CO5	Build interactive web applications using AJAX
CO6	develop modern interactive web applications using PHP, XML and MySQL

Code of the Course/Subject	2022-3MCS8 Lab-VI
Title of the Course/Subject	Based on AI Programming Tools /Python
CO No.	Course Outcomes
CO1	Apply various AI search algorithms (uninformed, informed, heuristic, constraint satisfaction,
CO2	**Understand the fundamentals of knowledge representation, inference.**
CO3	**Understand the fundamentals of theorem proving using AI and ML tools**
CO4	**Demonstrate working knowledge of reasoning in the presence of incomplete and/or uncertain information**

Code of the Course/Subject	2022-3MCS10 – GIC 5
Title of the Course/Subject	GIC5- Digital marketing
CO No.	Course Outcomes
CO1	Understand the concept of digital marketing.
CO2	**Analyse online marketing environment & Study impact of online marketing on the consumers.**
CO3	**Explain the impact of social media and other macro environments on digital marketing**

Code of the Course/Subject	2022-4MCS1/DSC 1
Title of the Course/Subject	1. CLOUD COMPUTING
CO No.	Course Outcome
CO1	Describe the basic concept of Cloud Computing and Its Models.
CO2	Analyze the application and virtualization infrastructures for cloud computing.
CO3	Exhibit in-depth understanding of key cloud-based services
CO4	Understand the necessity of management activity at cloud environment
CO5	Study different cloud deployment tools.
CO6	Understand various security aspects related to cloud

Code of the Course/Subject	2MCS4
Title of the Course/Subject	Data Mining and Data Warehousing
CO No.	Course Outcomes
CO1	use basic concepts and techniques of Data Mining
CO2	develop skills of using recent data mining software for solving practical problems.
CO3	gain experience of doing independent study and research.
CO4	study the methodology of engineering legacy databases for data warehousing and data mining to derive business rules for decision support
CO5	Develop and apply critical thinking, problem-solving, and decision- making

Code of the Course/Subject	2022-4MCS2/DSC 2
Title of the Course/Subject	2. Big Data
CO No.	Course Outcome
CO1	Identify current scenarios of big data and provide various facets of big data.
CO2	Illlustrate different types of big data technologies
CO3	Familiar with the big data technology framework and file systems
CO4	Understand the use of Apache Spark in Distributed processing System
CO5	Apply NoSQL to store big data and real time web application

Code of the Course/Subject	2022-4MCS3/DSC 3
Title of the Course/Subject	3. Cyber Security
CO No.	Course Outcomes
CO1	Analyse and evaluate the importance of personal data & its privacy & security.
CO2	Recognize the importance of firewall in cyber-attacks from unauthorized access in network.
CO3	Increase awareness about Cyber-attack vectors and safety against Cyber-frauds
CO4	Take measures for self -Cyber protection as well as societal Cyber- Protection.
CO5	Analyse and evaluate existing legal framework and laws on Cyber security
CO6	Analyse and evaluate the digital payment system security and remedial measures against digital payment frauds

Code of the Course/Subject	2022-4MCS4/DSC4
Title of the Course/Subject	4 BLOCKCHAIN TECHNOLOGY
CO No.	Course Outcomes
CO1	Describe the basic concept of Blockchain and Distributed Ledger Technology
CO2	Interpret the knowledge of the Bitcoin network, nodes, keys, wallets and transactions.
CO3	Implement smart contracts in Ethereum using different development frameworks
CO4	Develop applications in permissioned Hyperledger Fabric network
CO5	Understand different Crypto assets and Crypto currencies.
CO6	Analyse the use of Blockchain in different use cases and with AI, IoT and Cyber Security using case studies.

Code of the Course/Subject	2022-4MCS5/SEC 4(SKILL IV)
Title of the Course/Subject	Android Programming
CO No.	Course Outcomes
CO1	Develop Android apps with proficiency in Java, UI design, and user interaction
CO2	Implement core Android components, including Activities, Fragments, Services, Broadcast Receivers, and Content Providers.00
CO3	Manage data storage and retrieval using SQLite, Shared Preferences, and file-based techniques.
CO4	Integrate networking capabilities to handle HTTP requests, JSON/XML data, and RESTful APIs
CO5	Utilize multimedia features and device sensors for audio, video, camera, and location-based services

Code of the Course/Subject	2022-4MCS6 (1)/DSE1 ELECTIVE
Title of the Course/Subject	1. Software Testing
CO No.	Course Outcomes
CO1	Design test cases suitable for a software development for different domains.
CO2	Apply various software testing techniques, such as black-box testing, white-box testing, gray-box testing, and regression testing, to identify defects and verify the functionality of software systems.
CO3	Prepare test planning based on the document.
CO4	Document test plans and test cases designed.
CO5	Design test cases that adequately cover different aspects of software functionality, including boundary cases, error handling, and performance scenarios
CO6	Apply automated testing tools and frameworks to streamline the testing process and improve efficiency .

Code of the Course/Subject	2022-4MCS7 : Lab VII
Title of the Course/Subject	1,2 : Cloud Computing and Big Data
CO No.	Course Outcomes
CO1	Describe the basic concept of Cloud Computing and Its Models
CO2	Analyze and the application and virtualization infrastructures for cloud computing.
CO3	Exhibit in-depth understanding of key cloud-based services
CO4	Understand the necessity of management activity at cloud environment
CO5	Create Virtual environment using hypervisor.

Code of the Course/Subject	2022-4MCS7 /DSE2: Lab-VIII
Title of the Course/Subject	3. Block Chain Technology and Cyber Security
CO No.	Course Outcomes
CO1	Explain the fundamental characteristics of block chain using bitcoin.
CO2	Demonstrate the application of hashing and public key cryptography in protecting the block chain
CO3	Analyse the block chain applications in a structure manner
CO4	Handle the crypto currency
CO5	Perform a transaction in bitcoin testnets.

Code of the Course/Subject	2022-4MCS12 GIC
Title of the Course/Subject	GIC8- Business Intelligence
CO No.	Course Outcomes
CO1	Understand the concept of Business Intelligence and Get acquainted with the details of Decision Support System
CO2	Apply the concepts of Business Intelligence in real world applications and Explore and use the data warehousing wherever necessary.
CO3	Design and manage practical BI systems.

DEPARTMENT OF ELECTRONICS
Programme: Bachelor of Science (Electronics)

PO NO.	Programme Outcomes
PO1	Utilize the basic knowledge in Electronics science.
PO2	Identify electronic components and ICs.
PO3	Design system components that meet the requirement of public safety and offer solutions to the societal and environmental concerns.
PO4	Apply research based knowledge to design and conduct experiments.
PO5	Construct, choose and apply the techniques, resources and modern electronics tools required for Electronics applications.
PO6	Apply the contextual knowledge to assess societal, health, safety and cultural issues and endure the consequent responsibilities relevant to the professional electronics practice.
PO7	Examine the impact of electronics solutions in global and environmental contexts and utilize the knowledge for sustained development.
PO8	Develop consciousness of professional, ethical and social responsibilities as experts in the field of Electronics and Communication.
PO9	Perform effectively as a member/leader in multidisciplinary teams.
PO10	Demonstrate resourcefulness for contemporary issues and lifelong learning.

Code of the Course/Subject	1S-Electronics/ Digital Electronics
CO No.	**Course Outcomes**
CO1	Acquires knowledge about passive components, analysis and verification of network theorems with numericals.
CO2	Able to operate the measuring instruments such as Voltmeter, Ammeter, etc. and CRO.
CO3	Acquires knowledge of function of diodes, rectifiers and voltage regulators & design simple dc power supply.
CO4	Acquires knowledge of types of transistors and their working in different modes, biasing & stabilization, fault detection in electronic circuits & design and construct of simple amplifiers.
CO5	Acquires knowledge of Switching and Optoelectronic devices, its working & applications.
CO6	Acquires knowledge of designing and fabrication process of Integrated Circuits and their scale of integration.

Code of the Course/Subject	2S-Electronics/ Basic Electronics
CO No.	**Course Outcomes**
CO1	Acquires knowledge of number systems and binary codes, their interconversion, arithmetic operations of binary Number System, Different Logic gates, design and construct of logic circuits using logic gates.
CO2	Acquires knowledge of Boolean Laws, Demorgan's Theorems & various Lagic Families used for ICs Designing and various minimisation techniques of logic equations.
CO3	Acquires knowledge of various multivibrators and flip-flops using transistors and its applications.
CO4	Acquires knowledge of different types of counters, shift registers and its IC version.
CO5	Acquires knowledge of different types of encoders, decoders, multiplexers and demultiplexers and itas IC version.
CO6	Acquires knowledge of different types of memories and its working and applications.

Code of the Course/Subject	3S-Electronics/ Electronic Devices & Circuits
CO No.	**Course Outcomes**
CO1	Acquires knowledge of small signal CE amplifier using hybrid parameters, need and types of cascaded amplifiers & coupling.
CO2	Acquires knowledge of different types of power amplifiers and how it works and where it to be used.
CO3	Acquires knowledge of Concept of feedback; Positive and negative feedback and its advantages and disadvantages, and various Oscillators and its applications.
CO4	Acquires knowledge of Operational Amplifiers, its characteristics and basic mathematical applications.
CO5	Acquires knowledge of advanced applications of Operational Amplifiers.

Code of the Course/Subject	4S-Electronics/ Communication Electronics & Microprocessor 8085
CO No.	**Course Outcomes**
CO1	Acquires knowledge of Modulation, its need and types, AM and FM transmitter and receiver.
CO2	Acquires knowledge of Fibre Optic Communication and Digital Communication
CO3	Acquires knowledge of Evolution of microprocessor and Basics and functional block diagram of Microcomputer Intel 8085.
CO4	Acquires knowledge of types of Addressing modes, classification of instruction set of 8085 and develops skill of writing programm.

CO5	Acquires knowledge of Basic interfacing concept, details about IC 8255 Programmable Peripheral Interface

Code of the Course/Subject	**5S-Electronics/ Measuring Instruments**
CO No.	**Course Outcomes**
CO1	Acquires knowledge of basic buildomg b;ocks of Instrumentation System and various types of transducers.
CO2	Acquires knowledge of various temerature sensors and temerature measuring devices.
CO3	Acquires knowledge of various applications of IC 555 timer as multivibrators in pulse or square wave generation and IC 565 Phase Locked Loop in various apllications in Communication.
CO4	Acquires knowledge of various Display Devices and Digital Instruments such as DVM, DFM & DCM and analog & Digital Recorders.
CO5	Acquires knowledge of different sensors and actuators for various applications in real time world.
CO6	Acquires knowledge of different types of electrodes used in biomedical instrumentation and various biomedical instruments used for health check up in various applications/ purposes.

Code of the Course/Subject	**6S-Electronics/Advanced Microprocessor & Microcontroller**
CO No.	**Course Outcomes**
CO1	Acquires knowledge of Microprocessor 8086, its Architecture and function of each block and each pins.
CO2	Acquires knowledge of insrtuction set of Microprocessor 8086 and writing skills of various programme for various applications.
CO3	Acquires knowledge of Microcontroller 8051, its Architecture and function of each block and each pins.
CO4	Acquires knowledge of insrtuction set of Microcontroller 8051 and writing skills of various programme for various applications.
CO5	Acquires knowledge of various interfacing devices compatible with 8051 in various applications.
CO6	Acquires knowledge of advanced microcontollers and its main blocks in details.

DEPARTMENTOF COSMETIC TECHNOLOGY

Programme: Bachelor Of Cosmetic Technology

PO Numbers	Programme Outcomes
PO1	To educate studentsabout every aspect of the beauty and wellness industry.
PO2	To develop research, critical and analytical approach and attitude in the students.
PO3	To educate students about how to formulate and develop the cosmetic products.
PO4	To educate the students about the application of the certain products on client.
PO5	To embibe and foster manageril skill and various approach to management, philosophy and individual behaviourial personality.
PO6	To educate the students about various reguatory agencies and their guidelines.

SUBJECT NAME	COSMETIC TECHNOLOGY
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To get well accquainted with ingredients used for the making the products.
CO2	Students will learn theformulation and development of every cosmetic products.
CO3	The students will learn the used of raw materials used in th manufacturing process of the cosmetic products.
CO4	The students will learn the application and uses of the finished products.

SUBJECT NAME	COSMETIC CHEMISTRY
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To get well accquainted with the chemical nature and chemical background of raw materials.
CO2	To study the physical and chemical properties of the raw materials.
CO3	To study the specification tests of chemicals to ensure the quality of the raw materials.
CO4	Students will leqarn anout the various phenomena of liquids like surface tension, viscosity and dielectric properties etc.

SUBJECT NAME	HERBAL COSMETICS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To study the identification tests of herbs used in manufacture of the cosmetic products.
CO2	To study the different propertis of herbs.
CO3	To get well versed with the aromatherapy and its uses
CO4	To study discription of different herbs.

SUBJECT NAME	DERMATOLOGY
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To study the anatomy and physiology of the skin, hair, nail and tooth.
CO2	To study about the skin allergies and its treatments.
CO3	To study drug and drug reaction caused on the skin by harmful chmicals/drugs.
CO4	To study skin types in detail and application of product based on the skin types.

SUBJECT NAME	COMPUTER APPLICATIONS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To get well accquainted with Microsoft Office.
CO2	Students will learn about the software and hardware.
CO3	Students have the introduction to the various computer languages.

SUBJECT NAME	MATHEMATICS AND STASTISTICS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn to define limit, continuity and stuudy basic properties.
CO2	Students will get to learn trigonometry and used of trigonometry in calculus.
CO3	Students will study the median, mean and mode of the data.
CO4	Study will learn the application of integration.
CO5	Students will learn differential calculus.

SUBJECT NAME	BEAUTY CULTURE AND CLINICAL COSMETICS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will have the clean understanding of the salon practises.
CO2	Students will be able to handle the various types of clientele visiting salons.
CO3	Students will be well versed with the theory as well as the practuical knowledge of how the salon industry works.

SUBJECT NAME	PERFUME AND COLORS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will get to learn distillation and the various types of distilltion,
CO2	Students will lern about the mnufacturing process of perfume.

CO3	Students will study about different uses of essential oils.
CO4	Students will study source and types of colors used in manufacture if cosmetics.
CO5	Students will study the estrification of various types of herbs and use of extract in cosmetics as flavors/perfume

SUBJECT NAME	COSMETIC ENGINEERING
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will study various machines used in the manufcture process of cosmetics.
CO2	Students will get well versed with the structre, mechanism and working of various types of machines.
CO3	Student will study different phenomena like size reduction, filteration, and drying.

SUBJECT NAME	COSMETIC ANALYSIS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	To carry out titrimetric analysis of various chemicals used in the manufacturing process of cosmetics
CO2	Students will learn about potientiometry, and polarimetry, refractrometry.
CO3	Student will learn about the sepration techniques like chromatography, spectrophometry, neflometry and turbidometry.

SUBJECT NAME	PHYSICAL COSMETICS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn in depth about the physical properties of raw materials.
CO2	Students will learn to apply the phenomena like rheology , micromeritics, cohesion, adhesion, thixotropy etc. in the cosmetic technology.
CO3	Students will learn about the complexometric analysis and its application.

SUBJECT NAME	COSMETIC MANAGEMENT
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn the management process and organisational behaviour concept.
CO2	Students will get to learn various approaches to management, philosophy, organisational culture, individual behaviour and personality.
CO3	Students will learn the nature and scope of marketing.
CO4	Students will learn human resource management, managerial skill development, and marketing development.

SUBJECT NAME	COSMETIC JURISPRUDENCE
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Student will learn about various regulatrory agencies like FDA, US.FDA, UKMCA, TGA, and its guidelines in the cosmetic industries.
CO2	Students will learn in detail about the drug and cosmetic act.
CO3	Students will learn about various acts such as factory act, contract act, sales promotion employee act, medicinal and toiletries act and their rules.

DEPARTMENT OF COSMETIC TECHNOLOGY

Programme: Master of cosmetic Technology

PROGRAMME OUTCOME No.	PROGRAMME OUTCOME
PO1	Ability to forsee possible problems and solve them.
PO2	Ability to apply knowlwdge of reserch and development and business managemen to solve problem related to industry.
PO3	Ability to develop a new formulation and develop them.
PO4	To apply the knowledge of active and active ingredients and use them in a product and optimise them.

SUBJECT NAME	RESEARCH METHODOLOGY
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn the concept of sampling and the characterstic of a good sample.
CO2	Students will learn about data management, collection and good research tools.
CO3	Students will learn about organisation of qualitative data.
CO4	Students will learn about introduction to intellectual property rights (IPR) such as patent, copyright and trademark,etc.

SUBJECT NAME	FORMULATION AND DEVELOPMENT
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about consideration of physical and chemical property inherant in the formulation and development process.
CO2	Students will learn about the formulatoon additives such as perfum, antioxidants, preservatives and solvents etc.
CO3	Students will learn about packaging of the cosmetic products in detail,
CO4	Students will learn about rules and regulations and legal provisions and packaging and labelling.
CO5	Students will learn about materials used for cosmetic packaging.

SUBJECT NAME	QUALITY ASSURANCE TECHNIQUES
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about quality and its related terms such as quality function, quality control and quality policy etc.
CO2	Students will learn about inspection and test and inspector error.
CO3	Students will get well accquainted with good laboratory practises.
CO4	Students will learn about analysis of the raw materials and evaluation of finished good related to its physiochemical properties.
CO5	Students will learn about identification of instrumental analysis and biological, toxological testing.

SUBJECT NAME	ADVANCE COSMETIC TECHNOLOGY
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about interficial phenomena and its biological membranes.
CO2	Students will get well used with the concept of the solubalisation.
CO3	Students will learn in detail about the surfactants, choice of surfactants in cosmaceuticals.
CO4	Students will learn about emulsions and equations incolved in stablity stress condition and physical parameters developed to evaluate emulsion stablity
CO5	Students will learn about suspension, rheology and micromeritics in detail and their classification, evaluation as well as biological applications.

SUBJECT NAME	SKIN CARE COSMETICS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about the standardization of actives and importance of standardization aspect as per WHO guidelines.
CO2	Students will learn about genral method used for isolation and purification of natural products.
CO3	Students will learn about study of chromatographic techniques applied to natural paroducts and recents trends in the field.
CO4	Students will learn about applications and mechanism of action of synthetic actives such as cleansing, skin pigmentation, freshners and perfumers,etc.
CO5	Students will learn about natural ingredients on skin.

SUBJECT NAME	STATIC AND QUALITATIVE TECHNIQUES

COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about classification and tabulation of data and understandind stastical measures.
CO2	Students will learn about parametric and non-parametric tests.
CO3	Students will learn about testing of hypothesis like type1 and type2 errors.
CO4	Students will learn about measurements of central tendancy and measures of variatons.

SUBJECT NAME	**HAIR CARE COSMETICS**
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about application of nanotechnology in hair care products.
CO2	Students will learn about extraction and isolation of active principles of herbs and synthetic actives and their incorporation in various cosmetic formulation.
CO3	Students will learn about study of natural ingredients acting on hair in the different categories such as hair growth promoters, hair tonics, hair colorants etc.
CO4	Students will learn about the nomenclature, characteristic and classification of chemical constituents and methods of isolation of herbs used for hair care and recent trend in the field.

DEPARTMENT OF COSMETIC TECHNOLOGY

Programme: Bachleor of Vocational (Cosmetics)

PROGRAMME OUTCOME NO.	PROGRAMME OUTCOMES
PO1	Students are made techno savy and are well educated about the various online tools available.
PO2	Students will learn about the various salon practises like spa, makeup, pedicure, and manicure.
PO3	Students will get well accquainted about the ettiquettes about the corporate world.
PO4	Students are embibed with soft skills.
PO5	Students are educated about the presentation skills.

SUBJECT NAME	ENGLISH COMMUNICATION SKILLS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about the skills needed for the good communication.
CO2	Students will learn in deep about how to prepare and maintain the work area.
CO3	Students are embibed with professional ettiquettes needed for a corporate life.
CO4	Students will get well accquainted with the industry and how to act and speak.

SUBJECT NAME	APPLIED COMPUTER SKILLS
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about the Microsoft Office in detail.
CO2	Students will get well accquainted with handling the online data with the help of online tools.
CO3	Students will learn get the introduction about the the computer languages like C++, Java etc.
CO4	Students are made techno savy with the use of computer and online tools available all over.

SUBJECT NAME	BEAUTY AND HAIR CARE SERVICES
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn basic anatomy and physiology of skin and hair.
CO2	Students will get well accquainted with depilation, waxing, its principle and method.
CO3	Students will learn about hair and scalp conditions.
CO4	Students will learn about the fundamentals of skin and types of skin.
CO5	Students will learn about scalp analysis, types of shampoo, and factors affecting hair styles.

SUBJECT NAME	MAKEUP AND NAIL CARE
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about history of makeup and color theory.
CO2	Students will get well accquainted with fundamentals of makeup.
CO3	Students will learn about identification of basic skin types and tones.
CO4	Students will learn about range of makeup products to suit skin types and groups.
CO5	Students will learn about anatomy of nails on hands and feet
CO6	Students will learn about manicure and pedicure.

SUBJECT NAME	SPA, COMMUNICATION AND MANAGEMENT
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will learn about the spa therapy techniques.
CO2	Students will learn about the range of exfoliants used in the spa therapy.
CO3	Students will get the operational knowledge of tools and equipments used in the spa therapy.
CO4	Students will learn and get well acquinted with the range of rejuvination products.

SUBJECT NAME	SOFT SKILLS DEVELOPMENT
COURSE OUTCOME NO.	COURSE OUTCOMES
CO1	Students will get well educated about interview skills and how to interact.
CO2	Students will get educated about how to introduce oneself infront of jury.
CO3	Students are educated about the resume writing.
CO4	Students are well educated about how to write the report and the presentation skills.

SUBJECT NAME	INDUSTRIAL ORGANISATION AND MANAGEMENT
COURSE OUTCOME NO.	COURSE OUTCOMES

CO1	Students will learn about principle of marketing and management.
CO2	Students are embibed with the concept of entreprenurship development.
CO3	Students will learn about capital and capital management.
CO4	Students will get to know about small scale and large scale funding agencies.

DEPARTMENT OF MATHEMATICS
Programme: Bachlor of Science (Mathematics)

PO NO.	Programme Outcomes
PO1	Enhance the knowledge of student in all basic sciences.
PO2	Identify ,formulate and develop solutions to computational challenges.
PO3	Develop scientific temper and think in a critical manner.
PO4	Build up progressive and successful career in academics, industry and society.
PO5	Develop students abilities and aptitudes to apply the mathematical ideas

Code of the Course/Subject	DSC-I / Mathematics
Title of the Course/Subject	Algebra and Trigonometry
CO No.	Course Outcomes
CO1	find inverse and normal form of matrices .
CO2	evaluate the characteristic equation, eigen value and corresponding eigen vector of a given matrix
CO3	evaluate relation between the roots and coefficients of equations
CO4	to study application of De Moivre's theorem .
CO5	compute summation of trigonometric series.

Code of the Course/Subject	DSC-II / Mathematics
Title of the Course/Subject	Differential and Integral Calculus
CO No.	Course Outcomes
CO1	define limit and study the basic properties .
CO2	classify continuity and discontinuity of the functions.
CO3	solve the differentiability and L'Hospital rule with their applications.
CO4	describe the geometrical applications of mean value theorems.
CO5	evaluate the reduction formulae for integration.

Code of the Course/Subject	DSC-III / Mathematics
Title of the Course/Subject	Ordinary Differential Equations
CO No.	Course Outcomes
CO1	Solve first order differential equations using different techniques..
CO2	solve higher order differential equations and orthogonal trajectories.
CO3	calculate complementary function and particular integral of the second order differential Equation.
CO4	Describe the different methods to solve second order differential equations.
CO5	illustrate applications of differential equations .

Code of the Course/Subject	DSC –IV/ Mathematics
Title of the Course/Subject	Vector Analysis and Geometry
CO No.	Course Outcomes
CO1	interpret the vectors, their products, differentiation and integration.
CO2	determine curvature and torsion .
CO3	apply the concepts of divergence, curls which are useful in physics.
CO4	describe the different forms of sphere and properties.
CO5	discuss the equations of cone and cylinder.

Code of the Course/Subject	GIC/ Mathematics
Title of the Course/Subject	Numerical Ability-I
CO No.	Course Outcomes
CO1	restate the ideas and concept of HCF & LCM of number and also find square root & cube roots.
CO2	illustrate the problem on numbers, ages, percentage, profit and loss.
CO3	analyze ratio and proportion , time , work and distance.
CO4	outline the problems on train, simple interest, compound interest, area measurement.
CO5	create the Bar graphs, Pie charts and Line graphs.

PO NO.	Programme Outcomes
PO1	enhance the knowledge of student in all basic sciences.
PO2	identify, formulate and develop solutions to computational challenges.
PO3	develop scientific temper and think in a critical manner.
PO4	build up progressive and successful career in academics, industry and society.
PO5	develop student's abilities and aptitudes to apply the mathematical ideas.

Code of the Course/Subject	DSC-V / Mathematics
Title of the Course/Subject	Advanced Calculus
CO No.	Course Outcomes
CO1	get knowledge of basic principles of limit and continuity, Taylor's theorem
CO2	understand Lagrange's multipliers method and Jacobian
CO3	understand the concept of improper integral and Beta-Gamma function
CO4	learn the definition of sequence and series and Sandwich theorem.
CO5	learn various tests for convergence and divergence of series.

Code of the Course/Subject	DSC-VI / Mathematics
Title of the Course/Subject	Partial Differential Equations
CO No.	Course Outcomes
CO1	study partial derivatives, differential equation, real valued functions of two variables and solve the system of homogeneous functions.
CO2	learn to evaluate partial differential equations, solution of some special type of equations
CO3	learn to solve methods of partial differential equation of second and higher order.
CO4	students will be familiar with techniques of Calculus of variations.
CO5	recognize various methods of separation of variables.

Code of the Course/Subject	DSC-VII / Mathematics
Title of the Course/Subject	Elements of Algebra
CO No.	Course Outcomes
CO1	learn the concept of Group, Subgroup and Cosets.
CO2	explain the significance of the notations of Cosets, Normal subgroups and Quotient group.
CO3	learn the concept of Homomorphism & Isomorphism and its Theorem.
CO4	study the properties of Ring and Ideals and Integral domain.
CO5	familiar with Fundamental concepts of Number theory.

Code of the Course/Subject	DSC –VIII / Mathematics
Title of the Course/Subject	Classical Mechanics
CO No.	Course Outcomes
CO1	learn radial and transverse component of velocities and acceleration.
CO2	learn to explain Degree of freedom, Generalized co-ordinates and constraints.
CO3	learn to expressing the central force motion and areal velocity.
CO4	explain the significance of coplanar forces, triangle law of forces, parallel forces and equilibrium forces.
CO5	learn to find work and energy, virtual work and uniform catenary.

DEPARTMENT OF MATHEMATICS
Programme: Masters of Science (Mathematics) National Education Policy (NEP 23)) 2023-24

PO NO.	Programme Outcomes
PO1	apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.
PO2	innovate, invent and solve complex mathematical problems using critical understanding, analysis and synthesis.
PO3	adjust themselves completely to the demands of the growing field of Mathematics by lifelong learning
PO4	affectively communicate about their field of expertise on their activities, with their peer and society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations
PO5	crack lectureship and fellowship exams approved by UGC like CSIR – NET and SET
PO6	Use the Mathematical Software LaTex and Scilab applicable for research.

Code of the Course/Subject	FSC
Title of the Course/Subject	Research Methodology and IPR
CO No.	Course Outcomes
CO1	understand the role of research methodology in Mathematics.
CO2	understand data collection methods and basic instrumentation
CO3	understand literature review process and formulation of a research problem
CO4	create awareness at intellectual property and patents
CO5	learn technical writing and communication skills required for research.

Code of the Course/Subject	DSC-I / Mathematics
Title of the Course/Subject	Real Analysis
CO No.	Course Outcomes
CO1	restate the ideas and concept of Riemann – Stieltjes integral with some of its properties and apply the fundamental theorem of integration.
CO2	apply the Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence of sequences.
CO3	differentiate between uniqueness theorem for power series, Abel's limit theorem and Tauber's first theorem.
CO4	recognize the functions of several variables, linear transformation, partial and higher order derivatives in an open subset of R.

Code of the Course/Subject	DSC-II / Mathematics
Title of the Course/Subject	Advanced Abstract Algebra
CO No.	Course Outcomes
CO1	recall the concepts of coset and normal subgroup and to prove elementary propositions involving these concepts.
CO2	recognize different types of subgroups such as normal subgroups, cyclic subgroups and understand the structure and characteristics of these subgroups
CO3	demonstrate the homomorphism, Sum and direct sum of ideals, maximal and prime ideals, nilpotent and nil ideals.
CO4	translate the transition of important concepts of homomorphisms and isomorphisms from discrete Mathematics to advanced abstract Mathematics.

Code of the Course/Subject	DSC-III / Mathematics
Title of the Course/Subject	Complex Analysis
CO No.	Course Outcomes
CO1	Identify Cauchy integral formula apply to find the value of function at inside point of the region.
CO2	Express the function in series of positive and negative power of variable in a given region.
CO3	Record the concept of singularities to find integral of complex valued function on some simple connected region and multi connected region.
CO4	Apply the residue theorem to compute several kinds of real integrals.

Code of the Course/Subject	DSE-I / Mathematics
Title of the Course/Subject	Advanced Discrete Mathematics-I (Optional)
CO No.	Course Outcomes
CO1	design the graphs, paths, circuits, cycles and subgraphs.
CO2	determine Circuit, Fundamental Circuit, cut sets, fundamental cut sets of the graph.
CO3	illustrate chromatic number
CO4	describe introductory computability theory its techniques.

Code of the Course/Subject	DSE-I / Mathematics
Title of the Course/Subject	Differential Geometry (Optional)
CO No.	Course Outcomes
CO1	discuss the local intrinsic properties of a surface, curves on a surface, surfaces of revolution.
CO2	design arguments in the geometric description of family of curves and surfaces in order to establish basic properties of geodesics.
CO3	apply Geodesics theorem and restate the Gaussian Curvature, Surface of constant curvature, conformal and Geodesic mappings
CO4	recognize the tensor calculus, tensor product of vector spaces, transformation formulae, contraction special tensors, and inner product.

Code of the Course/Subject	Practical / Mathematics
Title of the Course/Subject	Introduction to LaTeX
CO No.	Course Outcomes
CO1	Do typesetting of complex mathematical formulae using LaTeX.
CO2	use various methods to either create or import graphics into a LaTeX document.
CO3	Do typesetting of journal articles, technical reports, thesis, books, and slide presentations
CO4	Perform automatic generation of table of contents, bibliographies and indexes

Code of the Course/Subject	DSC-IV / Mathematics
Title of the Course/Subject	Advanced Linear Algebra and Field Theory
CO No.	Course Outcomes
CO1	recall the concepts of eigen values, eigen vectors and polynomials
CO2	explain quadratic form, linear transformation, canonical and normal form.
CO3	describe the concepts of algebraic extension of fields.
CO4	understand the concepts of Galois theory and its application.

Code of the Course/Subject	DSC-V / Mathematics
Title of the Course/Subject	Topology
CO No.	Course Outcomes
CO1	demonstrate the concepts such as topological spaces, open and closed sets, interior, closure and boundary
CO2	categorize some important concepts like continuity, compactness, connectedness, projection mapping etc. and prove related theorems.
CO3	relate the basic concepts of countability axiom, separation axioms and convergence in topological spaces.
CO4	distinguish between the regular, normal and completely regular spaces.
CO5	categorize some important concepts of metric spaces.

Code of the Course/Subject	DSC-VI / Mathematics
Title of the Course/Subject	Integral Equations
CO No.	Course Outcomes
CO1	understand the type of integral equations.
CO2	categorize Volterra integral equations of first and second kinds.
CO3	determine the solution of Fredholm integral equations of the second kinds

CO4	define the concepts of iterated kernels and reciprocals kernels.

Code of the Course/Subject	DSE-II / Mathematics
Title of the Course/Subject	Advanced Discrete Mathematics-II (Optional)
CO No.	Course Outcomes
CO1	Develop the logical tools among the students.
CO2	Interpret the concepts of Semigroups and Monoids
CO3	Categorize the concepts of Lattice and sublattice.
CO4	Apply the Boolean algebra to switching circuits.

Code of the Course/Subject	DSE-II/ Mathematics
Title of the Course/Subject	Riemannian Geometry (Optional)
CO No.	Course Outcomes
CO1	discuss the properties of Christoffel symbols, divergence, gradient and Laplacian
CO2	demonstrate the concepts of parallel vector field
CO3	interpret the concepts of curvature tensor.
CO4	categorize some concepts like Ricci tensor, curvature invariant and Einstein tensor.
CO5	summarize the concepts of Riemannian curvature , space of constant curvature, intrinsic symmetric and killing vectors.

Code of the Course/Subject	DSE-II / Mathematics
Title of the Course/Subject	Measure and Integration Theory (Optional)
CO No.	Course Outcomes
CO1	analyse Lebesgue outer measure, regularity and Lebesgue measurability
CO2	explain integration and non-negative function, the general integral, Riemann and Lebesgue integrals
CO3	demonstrate the concepts of four derivatives, differentiation and integration
CO4	discuss the measure and outer measure

Code of the Course/Subject	Practical / Mathematics
Title of the Course/Subject	Mathematics with Scilab
CO No.	Course Outcomes
CO1	install Scilab Software and execute loops and conditional statements
CO2	able to understand the basic concepts of programming
CO3	perform basic mathematical operations using Scilab Software.
CO4	analyze different types of data using plotting of functions in Scilab.
CO5	handle matrices and their operations in Scilab; Plot and visualize 2D and 3D graphs of various functions.
CO6	understand the main features of the Scilab program development environment to enable it's usage in the higher learning. Interpret and visualize simple mathematical functions and operations by using plots.

PO NO.	Programme Outcomes
PO1	Apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.
PO2	Innovate, invent and solve complex mathematical problems using critical understanding, analysis and synthesis.
PO3	Adjust themselves completely to the demands of the growing field of Mathematics by lifelong learning.
PO4	: Effectively communicate about their field of expertise on their activities, with their peers and society at large, such as, being able to comprehend and write effective reports and design documentation, and make effective presentations.
PO5	Crack lectureship and fellowship exams approved by UGC like CSIR – NET and SET.

Code of the Course/Subject	DSC-I / Mathematics
Title of the Course/Subject	Functional Analysis-I
CO No.	Course Outcomes
CO1	Discuss normed spaces, subspaces, continuity, Banach spaces and Hilbert spaces.

CO2	Analyze eight equivalent conditions of continuity on normed spaces and Banach spaces.
CO3	Sketch the proof of uniform boundedness principle, closed graph theorem, open mapping theorem, Hahn Banach theorem and its extension.
CO4	Classify operators on Banach spaces.
CO5	Evaluate linear equations in Banach spaces.
CO6	Differentiate different types of linear spaces.

Code of the Course/Subject	**DSC-II / Mathematics**
Title of the Course/Subject	**Advanced Mechanics**
CO No.	**Course Outcomes**
CO1	Apply the Variational principles to real physical problems
CO2	Develop mechanical systems, both in inertial and rotating frames, using Lagrange and Hamilton equations
CO3	Describe the motion of a mechanical system using Hamilton-Jacobi equation.
CO4	Convince the mechanism of canonical transformation.

Code of the Course/Subject	**DSC-III / Mathematics**
Title of the Course/Subject	**Operations Research**
CO No.	**Course Outcomes**
CO1	Describe mathematical tools needed to evaluate optimization problems.
CO2	Develop a report that describes the model and the solving technique.
CO3	Recognize the properties of the queuing system.
CO4	Analyze the results and propose recommendations in language understandable to the decision-making processes
CO5	Formulate Linear Programming problems.
CO6	Apply methods to solve LPP.
CO7	Compute Game Theory Problems.
CO8	Use Queuing Theory for Stochastic Process and Markov Chain.

Code of the Course/Subject	**DSC-IV / Mathematics**
Title of the Course/Subject	**General Relativity (Optional)**
CO No.	**Course Outcomes**
CO1	Represent Lorentz group, Time dilation, Space contraction.
CO2	Recognize contraction symmetric and skew symmetric tensors.
CO3	Express tensor algebra and calculus in curved space-time
CO4	Deduce Einstein field equations for different spacetimes.
CO5	Analyse gravitational waves, weak gravitational waves, gravitational waves in curved space time
CO6	Differentiate between Schwarzschild interior and exterior solutions

Code of the Course/Subject	**DSC-V / Mathematics**
Title of the Course/Subject	**Fluid Dynamics-I (Optional)**
CO No.	**Course Outcomes**
CO1	Equipped with essential concepts of Fluid Mechanics introducing them to research in applied mathematics.
CO2	Discuss the case of steady motion under conservative body forces, some potential theorem
CO3	Recognize the use of the equation of state of substance, the first law of Thermodynamics, internal energy of a gas.
CO4	Analyze the Milne-Thomson circle theorem, some of its application of the circle theorem,

Code of the Course/Subject	**DSC-V/ Mathematics**
Title of the Course/Subject	**Difference Equation-I (Optional)**
CO No.	**Course Outcomes**
CO1	Solve linear and nonlinear difference equations by various methods.
CO2	Discuss the initial value problems for linear systems, identify the stability of linear systems, to learn the phase plane analysis for linear systems and stability of nonlinear systems.

CO3	Apply the theory of difference equations in different engineering problems. Also, to make discrete mathematical models.
CO4	Judge the difference between the qualitative and quantitative behaviour of solutions of the difference equations and the corresponding differential equations.
CO5	Analyze the properties of Z-transform

Code of the Course/Subject	**DSC-V / Mathematics**
Title of the Course/Subject	**Advanced Complex Analysis-I (Optional)**
CO No.	**Course Outcomes**
CO1	Discuss the Gamma Function and its properties.
CO2	Apply the monodrama theorem and Its consequences properly.
CO3	Express an analytic function in terms of power series in the domain of analyticity.
CO4	Recognize the characteristics of a complex function in the neighbourhood.
CO5	Acquire the skill of contour integration to evaluate complicated real integrals via residue calculus
CO6	Differentiate the characteristics of analytic functions.
CO7	Analyze conformal mapping to compute geometric mappings.
CO8	Extend analyticity continuation to analytic function and its natural boundary.
CO9	Discuss convergence of a sequence of complex functions.

Code of the Course/Subject	**DSC-V / Mathematics**
Title of the Course/Subject	**Banach Algebras-I (Optional)**
CO No.	**Course Outcomes**
CO1	Understand the concept of normed linear spaces, Banach spaces and Hilbert spaces.
CO2	Compute the dual spaces of certain Banach spaces and Hilbert space.
CO3	Evaluate the orthonormal vectors and spectral properties of bounded Linear operators.
CO4	Obtain self-adjoint and normal operators.
CO5	Recognize properties of compact linear operators.

Code of the Course/Subject	**SEC (Skill Enhancement Course)**
Title of the Course/Subject	**Vedic Mathematics (Optional)**
CO No.	**Course Outcomes**
CO1	Understand the essentiality of Vedic Mathematics.
CO2	Overcome the fear of mathematics.
CO3	Appreciate the mathematical advancement of ancient India.
CO4	Understand the contribution of ancient Indian mathematicians.

Code of the Course/Subject	**SEC (Skill Enhancement Course)**
Title of the Course/Subject	**Arc Radius Goba Verification and its Applications**
CO No.	**Course Outcomes**
CO1	Interpret new concepts to study the geometry
CO2	Recognize answer coming from formulas/theorems are fixed, complete and rational.
CO3	Present new concepts to the world by using these formulas.
CO4	Used to complete the incomplete, approximate concept based on the applications.

Code of the Course/Subject	**DSC-I / Mathematics**
Title of the Course/Subject	**Functional Analysis-II**
CO No.	**Course Outcomes**
CO1	Understand the concept of Hilbert spaces normal and unitary operators.
CO2	Explain spectral properties of bounded linear operators
CO3	Understand compact linear operators on normed spaces.
CO4	Acquire knowledge of spectral properties.
CO5	Learn positive operator and square root positive operators and projection operators

Code of the Course/Subject	DSC-II / Mathematics
Title of the Course/Subject	Partial Differential Equations
CO No.	Course Outcomes
CO1	Solve the first-order linear and non-linear partial differential equations by using Lagrange's and Charpit Methods respectively
CO2	Evaluate the solutions of linear partial differential equations of second and higher order with constant coefficients.
CO3	Classify second order PDE Classify the fundamental principles of partial differential equations to solve hyperbolic, parabolic and elliptic equations and solve standard partial differential equations using separation of variable method.
CO4	Evaluate the solutions of heat conduction problem·
CO5	Learn to choose an appropriate method for solving PDE and interpret the qualitative features of solutions.

Code of the Course/Subject	DSC-III / Mathematics
Title of the Course/Subject	Numerical Analysis
CO No.	Course Outcomes
CO1	Practice common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.
CO2	Express numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of system of equations, and the solution of differential equations.
CO3	Apply Trapezoidal Rule, Simpson's ⅓ rd Rule, Simpson's ⅜ th rule and find numerical integrated value.
CO4	Solve a different system of linear equations.
CO5	Analyze different methods of Numerical Solution Ordinary Differential Equation.
CO6	Evaluate boundary value problems using the Finite-difference Method.

Code of the Course/Subject	DSC-IV / Mathematics
Title of the Course/Subject	Relativistic Cosmology (Optional)
CO No.	Course Outcomes
CO1	Interpret the fundamental equations of dynamical cosmology.
CO2	Develop a different cosmological model of the universe.
CO3	Analyze the derivations of three different types of early universe.
CO4	Compare the derived cosmological model with the actual universe.
CO5	Learn the different kinematical properties of cosmological models.

Code of the Course/Subject	DSC-V / Mathematics
Title of the Course/Subject	Fluid Dynamics-II (Optional)
CO No.	Course Outcomes
CO1	Understand the concepts of gas dynamics
CO2	Explain the viscous flow
CO3	Find the Navier stokes equations of motion of viscous fluid and some solvable problems in viscous flow
CO4	Analyze magneto hydrodynamics
CO5	Verify various dynamical similarities.

Code of the Course/Subject	DSC-V/ Mathematics
Title of the Course/Subject	Difference Equations-II (Optional)
CO No.	Course Outcomes
CO1	Recognize series solutions about ordinary and regular singular points.
CO2	Apply Power and Frobenius methods.
CO3	Discuss variable coefficient ODE.
CO4	Express the orthogonality of special functions.

Code of the Course/Subject	DSC-V / Mathematics
Title of the Course/Subject	Lie Groups (Optional)

CO No.	Course Outcomes
CO1	Understand topological groups
CO2	Analyze Local groups
CO3	Solve the system of commutator of two infinitesimal transformation and Lie group of transformation explain the significance of Lie algebra

Code of the Course/Subject	DSC-V / Mathematics
Title of the Course/Subject	Banach Algebras-II (Optional)
CO No.	Course Outcomes
CO1	Recognize the definition of Banach Algebra and Examples.
CO2	Realize the maximal ideal space and its applications.
CO3	Apply the Gelfand Transforms, the spectral mapping theorem for disc algebra.
CO4	Analyze the C*-algebras, self-adjoint, unitary, normal, positive and projection elements in C*-algebras.

Code of the Course/Subject	Project for Sem-III and IV
Title of the Course/Subject	Research / Innovative Project / Dissertation
CO No.	Course Outcomes
CO1	Aware about the Survey of literature.
CO2	Relates to real world problems through mathematical modelling.
CO3	Formulate the problem and apply the suitable techniques for solution.
CO4	Write the dissertation/ Project.

DEPARTMENT OF MANAGEMENT
Programme: Bachelor of Business Administration

PO NO.	Programme Outcomes
PO1	Attain requisite skills and knowledge after the completion of the programme
PO2	Achieve the basic knowledge of Economics
PO3	Assimiliate basic knowledge of Accountancy & Statistics
PO4	Efficiency in reading and writing skill
PO5	Achieve requisite skills and knowledge of preparing cashbook, leadger books and balance sheet of company
PO6	Become knowledgeable about marketing
PO7	Create a self employment
PO8	Assimiliate ethics of life
PO9	Achieve Environmental awareness
PO10	Attain fundamental knowledge of Computer

Code of the Course/Subject	BBA-101
Title of the Course/Subject	Business Communication in English I (AEC)
CO No.	Course Outcomes
CO1	Student will get to know about the principles of effective communication
CO2	They will get information about type of communication and barriers to communication
CO3	Student will learn about drafting of business letter
CO4	Student will learn about interdepartmental communication
CO5	Student will get to learn about drafting different business letter such as sales latter, purchase latter
CO6	Student will be able to draft a report.

Code of the Course/Subject	BBA-102
Title of the Course/Subject	Principle of Business Economics
CO No.	Course Outcomes
CO1	Application of Micro &Macroeconomic Concepts
CO2	Application of Utility & Indifference Curve Analysis
CO3	Application of Demand Pattern
CO4	Application of Supply and Production Pattern
CO5	Application of Cost & Revenue Pattern

Code of the Course/Subject	BBA-103
Title of the Course/Subject	Principles of Business Management & Creativity Innovation
CO No.	Course Outcomes
CO1	To develop the knowledge of Branch accounting
CO2	To know the Concept of Planning and its implementation in management
CO3	To analyze the concept of organizing and its significant in management
CO4	To familiarize the concept of Directing and importance of motivation in management
CO5	To develop the various techniques and tool of Controlling

Code of the Course/Subject	BBA-104
Title of the Course/Subject	Basic Accounting
CO No.	Course Outcomes
CO1	To know the meaning, Nature, Function and usefulness of Accounting
CO2	To understand the concept of various steps of Accounting
CO3	Journal entries, Ledger posting, Trial balance
CO4	To learn how to prepare Final Accounts of sole traders with adjustments
CO5	To understand the concept of joint venture
CO6	To know the different method of depreciation.
CO7	To develop the concept of bill of exchange
CO8	To know the different methods of depreciation.

Code of the Course/Subject	BBA-105
Title of the Course/Subject	Business Mathematics & Statistics
CO No.	Course Outcomes
CO1	To know the basic concept of Mathematics
CO2	To know the concept statistics

CO3	To understand the various concept of index number.
CO4	To know the basic concept of central tendency of measure
CO5	To know the basic concept of dispersion and skewness with index number
CO6	To know the concept of correlation analysis with its simple method

Code of the Course/Subject	**BBA-106**
Title of the Course/Subject	**Fundamental of Computer I**
CO No.	**Course Outcomes**
CO1	Students will get information about evolution of computer & its development
CO2	Students will know about different elements of computer system
CO3	Student will be aware about different types of memory
CO4	Student will get to know about different input devices and output devices
CO5	Students will learn to prepare a text document with complete formatting.

Code of the Course/Subject	**BBA-201**
Title of the Course/Subject	**Business Communication in English II**
CO No.	**Course Outcomes**
CO1	Student will able to communicate and give oral presentation
CO2	It will help the student to participate in GDPI rounds
CO3	Student will learn about drafting of different business letters.
CO4	Student will be able to draft official letter, application and resume.
CO5	Soft skill and grooming manners of student will be developed.
CO6	Student will get information about different technologies in communication

Code of the Course/Subject	**BBA-202**
Title of the Course/Subject	**Business Environment**
CO No.	**Course Outcomes**
CO1	Application of Business Environment to Local Business and Industrial Units
CO2	Application of GDP/GNP Concepts to categorization of economies of various countries
CO3	Application of LPG and FDI concepts to various sectors of Indian Economy and economies of other countries.
CO4	Application of foreign trade and its policy to various sectors of Indian economy.
CO5	Impact of WTO & IMF on various sectors of Indian Economy

Code of the Course/Subject	**BBA-203**
Title of the Course/Subject	**Business Law**
CO No.	**Course Outcomes**
CO1	Acquire basic concepts of law related to contract, its Essentials enforceability and remedies in case of breach.
CO2	Understand Sale, distinguish between sale and agreement to sale, understand implied conditions and warranty, and the rights of buyer and unpaid seller.
CO3	Acquire knowledge related to various Negotiable Instruments, endorsement dishonour of Negotiable Instruments, various types of Crossings of cheque and parties related to negotiable.
CO4	Get acquainted with the rights of consumers, the various remedies available to them. in case of violation of consumer rights, the machinery for grievance redressal.

Code of the Course/Subject	**BBA-204**
Title of the Course/Subject	**Fundamental of Accounting**
CO No.	**Course Outcomes**
CO1	To develop the concepts of non-trading institutions accounting procedure
CO2	To Develop the concept of Self balancing ledger system
CO3	To develop the concept of single entry system
CO4	To develop the concept of Hire purchases & Installment accounting.
CO5	To develop the knowledge of Branch accounting
CO6	To analysis the accounts of insolvency with laws insolvency and procedure accordingly

Code of the Course/Subject	**BBA-205**
Title of the Course/Subject	**Financial Services**
CO No.	**Course Outcomes**
CO1	Student will get an overview of financial sector in India
CO2	Students will know the concept of Indian money market and Indian Capital Market.
CO3	Students will get an overview of different financial services.

CO4	Students will get the information about Banking Sector
CO5	Student will understand the concept of Stock exchange and its operations.

Code of the Course/Subject	BBA-206
Title of the Course/Subject	Fundamental of Computer II
CO No.	Course Outcomes
CO1	Students will get basic introduction of operating system.
CO2	Students will get understand the procedure of Installing and uninstalling programs
CO3	Students will be able to determine the various means of modern communication.
CO4	Students will be practiced in preparing word document and table wizard.
CO5	Students will get to develop the skill of preparing power point presentation

Code of the Course/Subject	BBA-301
Title of the Course/Subject	Human Resource Management
CO No.	Course Outcomes
CO1	They will have an inclusive outlook about the recruitment and selection practices.
CO2	They will be able know methods of training and its relevance, usefulness in HR.
CO3	Students will become desires to know the actual process of compensation management in industry.
CO4	They will become familiar with common industrial disputes and its settlement.
CO5	They will learn the process of workers' participation in management.

Code of the Course/Subject	BBA-302
Title of the Course/Subject	Marketing Management
CO No.	Course Outcomes
CO1	To understand the various Concept of Marketing Management and Marketing Mix.
CO2	To understand the Concept of Product, Branding and new product development.
CO3	To understand the concept of Pricing Polices and pricing mix strategies.
CO4	To understand Marketing Channel and its Co-operation.
CO5	To understand the concept of Promotion and its tools.

Code of the Course/Subject	BBA-303
Title of the Course/Subject	Company Accounts
CO No.	Course Outcomes
CO1	Understand the process and legal requirements for issuing, forfeiting, and re-issuing equity shares.
CO2	Comprehend the format and requirements of Schedule VI Part I & II of the Companies Act 2013 for preparing the final accounts and financial statements of a company.
CO3	Understand the concept and accounting treatment for profit earned before the incorporation of a company and apply the appropriate methods for calculating and disclosing profit prior to incorporation in the financial statements.
CO4	Gain knowledge of the concept of amalgamation and understand the accounting treatment for amalgamation of companies.
CO5	Comprehend the concept of absorption and apply the relevant accounting procedures and treatments for recording the absorption of a company.

Code of the Course/Subject	BBA-304
Title of the Course/Subject	Secretarial Practice and Company Management
CO No.	Course Outcomes
CO1	Acquire knowledge about Company Management
CO2	Understand skills required for a Company Secretary

Code of the Course/Subject	BBA-305
Title of the Course/Subject	Direct Tax Laws
CO No.	Course Outcomes
CO1	Understand basic concepts of income tax
CO2	Compute income from salary, income from house property and income from other sources.
CO3	Understand the basic provisions of income from business and capital gains.
CO4	Know how to save taxes in a legitimate way through the basic understanding of deductions available under chapter VI A
CO5	Compute total income of an individual assessee and able to fill ITR -1

Code of the Course/Subject	BBA-306
Title of the Course/Subject	Computer Application I
CO No.	Course Outcomes
CO1	Familiarized with basic theoretical DBMS concept
CO2	Develop basic skill of electronic DBMS with MS. Access s/w
CO3	Use of spreadsheet package for businesses

Code of the Course/Subject	BBA-401
Title of the Course/Subject	Financial Management
CO No.	Course Outcomes
CO1	To understand various sources of finance for raising capital/funds required for the business.
CO2	To understand the proportion of borrowed capital and owned capital, considering their cost of capital.
CO3	To understand the working capital management in an organization.
CO4	To understand the various factors of capital structure.
CO5	To understand the different model of calculation of value of shares.

Code of the Course/Subject	BBA-402
Title of the Course/Subject	Sales & Distribution Management
CO No.	Course Outcomes
CO1	To know the concept of sales management
CO2	To understand the Sales Forecasting.
CO3	To understand the various aspects of Advertisement.
CO4	Application of Selling Skills and Various techniques of sales promotion
CO5	Application of Sales Distribution Strategy.
CO6	To understand the inventory and warehouse management.

Code of the Course/Subject	BBA-403
Title of the Course/Subject	Corporate Accounts
CO No.	Course Outcomes
CO1	Understand the concept of goodwill, and also able to understand various methods of valuation of goodwill.
CO2	Comprehend the meaning of shares and the need for their valuation, as also apply some of the methods.
CO3	Interpret and prepare the final accounts of a company during liquidation.
CO4	Prepare schedule wise final accounts for a banking company
CO5	Understand the concept of funds flow Statement and also able to prepare and interprete Funds Flow Statements.

Code of the Course/Subject	BBA-404
Title of the Course/Subject	Managerial Skills
CO No.	Course Outcomes
CO1	To know the various managerial skills
CO2	Application of Decision Making.
CO3	Application of Team Building
CO4	To understand the Problem Solving and Negotiation Skills

Code of the Course/Subject	BBA-405
Title of the Course/Subject	Indirect Tax Laws
CO No.	Course Outcomes
CO1	Register under GST
CO2	Understand the working of GST network
CO3	How to make payments of GST
CO4	Claim for refund
CO5	Understand the various types of customs duties

Code of the Course/Subject	BBA-406
Title of the Course/Subject	Computer Application – II
CO No.	Course Outcomes
CO1	Learn to the manage business accounting with computer
CO2	Students will get familiar with Components of Tally software and shortcut keys that are used in Tally 9.0.
CO3	Students will be able to Create Company, Ledger, Group, Vouchers and can do required transaction entries (In Tally)

CO4	Report Display and printing Students will be able to display financial reports, Accounts Books, Ratio analysis etc in tally. Also, they will be able to print the reports.
CO5	Students will able to do computation of GST, TDS & TCS in Tally (Indian tax system)

DEPARTMENT OF Management
Programme: Master of Business Administration

PO NO.	Programme Outcomes MBA
PO1	Apply knowledge of management theories and practices to solve business problems.
PO2	Foster analytical and critical thinking abilities for data based decision making.
PO3	Ability to develop value based leadership ability.
PO4	Ability to understand, analyze and communicate global, economic, legal and ethical aspects of business.
PO5	Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
PO6	Ability to foresee possible problems and solve them.
PO7	Ability to apply knowledge of Statistics, Accounting, Economics and Business Research to solve business problems.
PO8	Ability to develop knowledge and create innovative strategies in the chosen field of Finance, Marketing and HRM.

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 101
Title of the Course/Subject	Managerial Economics
CO	COURSE OUTCOMES
CO 1	Develop a fundamental understanding of supply, demand, buyer surplus, seller's surplus, and elasticities.
CO 2	Understand competitive markets and economic efficiency.
CO 3	Use firm and industry cost analysis for production and strategic decisions.
CO 4	Distinguish between different market structures and different business strategies

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 102
Title of the Course/Subject	Legal and Business Environment
CO	COURSE OUTCOMES
CO 1	Identify and evaluate the complexities of business environment and their impact on the business.
CO 2	Analyze the relationships between Government and business and understand the political, economic, legal and social policies of the country.
CO 3	Analyze current economic conditions in developing emerging markets, and evaluate present and future opportunities.
CO 4	Understand the Industrial functioning and strategies to overcome challenges in competitive markets.

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 103
Title of the Course/Subject	Financial Reporting, Statements and Analysis
CO	COURSE OUTCOMES
CO 1	Understand the basic concepts related to accounting, financial statements, process and principles with accounting equation.
CO 2	Explore the financial accounting concepts and preparation of financial statements with various analysis tools.
CO 3	Acquainting the knowledge regarding various cost accounting concepts with analytical skills for its application in managerial decision making.
CO 4	Abel to present the financial results and position of a company relative to its industry by developing skills for interpretation to adopt for financial reporting purposes.

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 104
Title of the Course/Subject	INDIAN ETHOS AND BUSINESS ETHICS
CO No.	Course Outcomes
CO	COURSE OUTCOMES
CO 1	Students will be acquainted with the fundamentals of Indian ethos and its relevance in the practical aspects.
CO 2	Students will comprehend the allied root reasons and nature of ethical issues.
CO 3	Aspirants will endeavor to find remedies for ethical issues being faced by organizations, employees, managers and policy makers.
CO 4	Students will reflect a personality well equipped by values and spread the same at workplaces in future.

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 105
Title of the Course/Subject	Organisational Behaviour
CO	COURSE OUTCOMES
CO 1	Aware the students regarding human interaction in an organisation.
CO 2	Finding what forces enhancing it for setting better results in attending the business goals.
CO 3	Formulate approaches to reorient individual, team, managerial and leadership behaviour in order to achieve organizational goals.

CO 4	Able to analyse the behaviour of individuals and groups in organisations in terms of the key factors that influence organisational behaviour and demonstrate skills required for working in groups

Code of the Course/Subject	MBA SEM- I CGS NEW MBA 106
Title of the Course/Subject	Computer Application for Business
CO	COURSE OUTCOMES
CO 1	Develop the basic understanding of the information system for businesses in decision making process along with focus on Information technology and security/privacy of MIS.
CO2	Word process allows students to create and edit the documents and also gives them the ability to generate productivity-related images like charts, tables and graphs.
CO3	Students should know basic data types in spreadsheets. Is able to determine databases and convert them. Know basic functions to calculate mathematical, financial, statistical and logical operations. Have skills of data visualization depending on data and task types.
CO4	Students will determine Leadership style according to the situation.

Code of the Course/Subject	MBA SEM- I CGS NEW MBA
Title of the Course/Subject	Business Statistics and Analytics for Decision Making
CO No.	Course Outcomes
CO 1	Develop an understanding of Business Statistics and Analytics and its managerial applications in the real business world.
CO 2	Make the student familiar with statistical techniques in Business Decision Making.
CO 3	Expand the knowledge of inferential statistics for developing criteria for decision making.
CO 4	Understanding of basic and advance quantitative models in management decision making.

Code of the Course/Subject	MBA SEM- II CGS NEW MBA 20
Title of the Course/Subject	Business Communication
CO No.	Course Outcomes
CO1	Demonstrate decision making ability and dynamism.
CO2	Will understand major theories, background work, concept and research output in the field of strategies management.
CO3	Demonstrateapropermeaningofthetoolsandtechniqueusedbyexecutivesinexecutingstrategiesandwillap preciateitsintegrativeandinterdisciplinarynature.
CO4	Demonstratepracticalsituationfordiagnosingandsolvingorganizationalissues.
CO5	Relate theories and device application of it.

Code of the Course/Subject	MBA SEM- II CGS NEW MBA 20
Title of the Course/Subject	Marketing Management
CO	COURSE OUTCOMES
CO 1	Develop an understanding of the underlying concept, theories and strategies involved in the marketing of product and services.
CO 2	Capable to apply the three steps of target marketing: market segmentation, target marketing, and market positioning.
CO 3	Able to evaluate different distribution channel options and their suitability for the company's product.
CO 4	Develop a suitable promotion mix (advertising, sales promotion, public relations, personal selling, and direct marketing etc.) for the product.

Code of the Course/Subject	MBA SEM- II CGS NEW MBA 20
Title of the Course/Subject	Corporate Finance
CO	COURSE OUTCOMES
CO 1	Aware of the basic concepts related to financial management, various techniques and tools to mange finance function.
CO 2	Gaining the knowledge of principles and concepts used in financial decision making and familiarizing the students with the valuation of firm.
CO 3	Able to find out the best course of action among several financial options with the technique of capital budgeting and restructuring.
CO 4	Assessing the impact of corporate investment decisions in financing of working capital needs and the long term capital needs of the business organization.

Code of the Course/Subject	MBA SEM- II CGS NEW MBA 20
Title of the Course/Subject	Research Methodology
CO	COURSE OUTCOMES
CO 1	This course is designed to consider modern days marketing condition.

CO 2	The business organisations which are intend to know buyers response, to know market, to know what external forces are, and to design effective marketing strategies.
CO 3	Examine the various facets of a research problem and Illustrate the relevant aspects of the research process from a data driven decision perspective.
CO 4	Derive inferences by applying various techniques of interpretation and be and write various types of research reports.

Code of the Course/Subject	**MBA SEM- II CGS NEW MBA 20**
Title of the Course/Subject	**Production and Operation Management**
CO	**COURSE OUTCOMES**
CO 1	Equip students with process of planning, organizing and controlling activities of production.
CO 2	Educate them on resources system used for transforming raw materials in to value added products.
CO 3	Explain the students various dimensions of production planning and control and their inter-linkages with forecasting.
CO 4	Students can measure performance related to productivity and will be able to conduct basic industrial engineering study on men and machines.

Code of the Course/Subject	**MBA SEM- II CGS NEW MBA 20**
Title of the Course/Subject	**Human Resource Management**
CO No.	**Course Outcomes**
CO	**COURSE OUTCOMES**
CO 1	Introduce the basic concepts, Principles, Functions & processes of Human Resource Management.
CO 2	Students are aware about the role, functions and functioning of human resource department of the organizations
CO 3	Understand the concepts of statistical estimation and hypothesis testing

Code of the Course/Subject	**MBA SEM- II CGS NEW MBA 20**
Title of the Course/Subject	**Entrepreneurship**
CO No.	**Course Outcomes**
CO	**COURSE OUTCOMES**
CO 1	Explore entrepreneurial path and acquaint them with the essential knowledge of starting new ventures.
CO 2	Students will learn tools and techniques for generating, testing and developing innovative startup ideas into successful enterprise.

Code of the Course/Subject	**MBA SEM- III CGS NEW (Common)**
Title of the Course/Subject	**301/ INTERNATIONAL BUSINESS ENVIRONMENT**
CO	**COURSE OUTCOMES**
CO 1	Get acquainted with the fundamentals of International trade and business.
CO 2	Analyse and evaluate International marketing environment and the export procedures.
CO 3	Analyse and evaluate Global logistics and Supply chain environment.
CO 4	Analyse and evaluate International financial environments and working of institutions.

Code of the Course/Subject	**MBA SEM- III CGS NEW (Finance)**
Title of the Course/Subject	**3101/ INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT**
CO	**COURSE OUTCOMES**
CO 1	Understand and get insights into investment analysis for investment decision making.
CO 2	Acquire knowledge and skills on Technical and Fundamental analysis.
CO 3	Understand concept of Equity valuation.
CO 4	Learn the concept of Portfolio management along with different theories.

Code of the Course/Subject	**MBA SEM- III CGS NEW (Finance)**
Title of the Course/Subject	**3102/ INDIAN FINANCIAL SYSTEM AND FINANCIAL MARKETS**
CO	**COURSE OUTCOMES**
CO 1	Understand the role, function, components and regulation of the financial system in reference to the macro economy.
CO 2	Identify the existence of regulatory authority and development of Banking and non-banking financial institutions.
CO 3	Know the instruments, participants, structure and operation of various financial markets working in India.
CO 4	Assess the important role of development banks in the Indian financial system and create strategies to promote financial inclusion.

Code of the Course/Subject	MBA SEM- III CGS NEW (Finance)
Title of the Course/Subject	3103/FINANCIAL DERIVATIVES AND RISK MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Describe and explain the fundamental features of a range of key financial derivatives instruments.
CO 2	Solve problems requiring pricing derivative instruments and hedge market risk based on numerical data and current market trends.
CO 3	Acquire ability to selection of various options strategies and able to determine option prices with Binominal and Black Sholes models.
CO 4	Estimate the value of interest rate and foreign exchange swaps; Be able to understand the structure of commodity market.

Code of the Course/Subject	MBA SEM- III CGS NEW (Finance)
Title of the Course/Subject	3104/BEHAVIOURAL FINANCE
CO	COURSE OUTCOMES
CO 1	Explain and demonstrate using empirical data the challenges to the efficient market hypothesis.
CO 2	Explain the nature and forecast the consequences of key behavioural biases of investors.
CO 3	Demonstrate the effect of Emotional Factors and Social Forces on investment
CO 4	Explain the psychological factors influencing decision-making.

Code of the Course/Subject	MBA SEM- III CGS NEW (Marketing)
Title of the Course/Subject	3201/ RETAIL MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Acquaintance budding managers with knowledge of planning, designing, implementation and assessment of retail strategies based on consumer needs and prevailing trends
CO 2	Understands evolution of retail industry, strategies and apply in retail sector.
CO 3	Understand characteristics of retail trading area, factors of site locations, information system requirements and techniques of customer retention
CO 4	Understand the role of ICT in retail management in today's market scenario.

Code of the Course/Subject	MBA SEM- III CGS NEW (Marketing)
Title of the Course/Subject	3202 / CONSUMER BEHAVIOR
CO	COURSE OUTCOMES
CO 1	Understand consumer behaviour in totality and its application in marketing.
CO 2	Understand marketing decisions and its interlink with consumer behaviour.
CO 3	Recognize social, technological, implications of marketing actions on consumer behaviour.
CO 4	Know the models and latest trends influence consumer behaviour.

Code of the Course/Subject	MBA SEM- III CGS NEW (Marketing)
Title of the Course/Subject	3203 / BRAND MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Train students to manage product, and building brand equity in the market of an organization
CO 2	Give students an insight of managing brand over multiple categories, over time and across multiple market segments
CO 3	Gain knowledge and skills in brand architecture and brand engagement.
CO 4	Build strategies for launching product across markets.

Code of the Course/Subject	MBA SEM- III CGS NEW (Marketing)
Title of the Course/Subject	3204 / SALES AND DISTRIBUTION MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Understand the importance of Sales & Distribution functions as integral part of marketing function in a business firm
CO 2	Develop insights regarding strategic competitive advantage. through Sales and Distribution function
CO 3	Develop understanding of the various aspects encompassing sales management, logistics and distribution management
CO 4	Understand and develop the importance of supply chain management and channel information system

Code of the Course/Subject	MBA SEM- III CGS NEW (HRM)
Title of the Course/Subject	3301/TALENT ACQUISITION AND DEVELOPMENT
CO	COURSE OUTCOMES
CO 1	Develop the ability to critically analyze and apply effective recruitment strategies by considering various factors of talent acquisition process and retain talent.

CO 2	Develop the ability to design and implement comprehensive selection processes that incorporate various assessment methods also they will gain insights into recruitment strategies employed by top multinational corporations (MNCs).
CO 3	Gain a comprehensive understanding of training concepts, and develop a holistic approach to designing and implementing effective training program which can create an integrated learning environment within training programs, fostering enhanced knowledge acquisition and skill development.
CO 4	Acquire the skills to effectively determine training needs and design training, they will gain the ability to evaluate training programs, assess their effectiveness, and make informed recommendations for improvement.

Code of the Course/Subject	**MBA SEM- III CGS NEW (HRM)**
Title of the Course/Subject	**3302/EMPLOYEE RELATIONS**
CO	**COURSE OUTCOMES**
CO 1	Understand and compare different perspectives on industrial and employment relations, and can evaluate the significance and implications of industrial relations in the emerging socio-economic context.
CO 2	Illustrate the role of trade union in the industrial setup and analyze the dynamics of trade union leadership and the influence of trade union politics and linkages.
CO 3	Comprehend the causes and impact of industrial disputes with proper understanding the provisions of the Industrial Dispute Act of 1947 and its significance in managing industrial conflicts.
CO 4	Understand importance and process of developing and maintaining harmonious relationships between the management and all level of employees and can and analyze its implications on employment relationships.

Code of the Course/Subject	**MBA SEM- III CGS NEW (HRM)**
Title of the Course/Subject	**3303/PERFORMANCE MANAGEMENT SYSTEM**
CO	**COURSE OUTCOMES**
CO 1	Explain the concept of performance management, challenges of performance management and different advantages of implementing well-designed performance management systems.
CO 2	Understand that performance management is an on-going process composed of several sub-processes, such as performance planning, execution, assessment, and review.
CO 3	Analyze different methods and approaches to performance measurement and also can identify some of the common challenges, problems with the performance appraisal process.
CO 4	Design a performance management system and also can develop key skills involved in effective performance management and employee development.

Code of the Course/Subject	**MBA SEM- III CGS NEW (HRM)**
Title of the Course/Subject	**3304/COMPENSATION AND BENEFIT MANAGEMENT**
CO	**COURSE OUTCOMES**
CO 1	Design rational and contemporary compensation systems in modern organization and analyses different types of rewarding procedures of employees on the basis of performance.
CO 2	Analyze, integrate, and apply the knowledge to solve compensation and reward related problems in organization Students will be able to justify the existing pay structure to employees.
CO 3	Gain the knowledge of the different softwares used for compensation management in this technological era.
CO 4	Summarize the important provisions of social security legislation in reference to Employee State Insurance Act 1948, Payment of Gratuity Act 1982, and Employee's provident Fund Act 1952.

Code of the Course/Subject	**MBA SEM- IV CGS NEW (Common)**
Title of the Course/Subject	**401/ STRATEGIC MANAGEMENT**
CO	**COURSE OUTCOMES**
CO 1	Understand the fundamental aspects of strategy, strategic management process and its intents.
CO 2	Analyses the importance of environmental and competitive analysis for formulating Corporate strategy .
CO 3	Categorizing different level of Corporate strategies and its alternatives in strategy formulation.
CO 4	Apply the strategic alternative and implement & control in corporate setting.

Code of the Course/Subject	**MBA SEM- IV CGS NEW (Finance)**
Title of the Course/Subject	**4101/MANAGING BANKS AND FINANCIAL INSTITUTIONS**
CO	**COURSE OUTCOMES**
CO 1	Understand functioning of banking industry and able to know about the various financial services provided by banks.
CO 2	Know about significance of modern banking products and schemes.
CO 3	Learn about the important concepts like investment banking and wealth management along with practical approach.
CO 4	Understand the technology driven banking system like e-banking, electronic fund transfer and electronic payment system.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Finance)
Title of the Course/Subject	4102/FINANCIAL MARKETS AND FINANCIAL SERVICES
CO	COURSE OUTCOMES
CO 1	Identify the functions of financial markets and institutions and examine their impact on financial system of a country.
CO 2	Describe the framework of Forex markets and mechanism of exchange rate determination.
CO 3	Analyse the salient features of various financial products, services and instruments.
CO 4	Acquire knowledge of modern financial services and familiarize with Fintech and Digital currency.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Finance)
Title of the Course/Subject	4103/PROJECT APPRAISAL AND FINANCE
CO	COURSE OUTCOMES
CO 1	Acquire the knowledge of Project Management and able to prepare Detail project report.
CO 2	Gain the knowledge about different sources of financing and financial appraisal technique.
CO 3	Understanding the concept of Corporate restructuring, Mergers and Acquisitions.
CO 4	Analyse various types of Project risk and preparation of project report.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Finance)
Title of the Course/Subject	4104/WORKING CAPITAL MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Evaluate Working Capital effectiveness of a company based on its operating and cash conversion cycles, and compare the company's effectiveness with that of peer companies
CO 2	Identify and evaluate the necessary tools to use in managing a company's net daily cash position.
CO 3	Estimating a company's management of accounts receivable policy, inventory, and accounts payable over time and compared to peer companies.
CO 4	Evaluating the choices of short-term funding available to a company and recommend a financing method.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Marketing)
Title of the Course/Subject	4201 / DIGITAL MARKETING
CO	COURSE OUTCOMES
CO 1	Familiarize aspirants with fundamental of digital Marketing
CO 2	Implement a process of planning of social media or digital marketing activities
CO 3	Use tools and techniques to manage digital and social media marketing programs
CO 4	Design social media programs that directly support business and marketing goals

Code of the Course/Subject	MBA SEM- IV CGS NEW (Marketing)
Title of the Course/Subject	4202 / INTEGRATED MARKETING COMMUNICATION
CO	COURSE OUTCOMES
CO 1	Recognise the significance of IC in the contemporary times and understand fundamentals thereof.
CO 2	Comprehend the advertising media related attributes thoroughly and modern media platforms.
CO 3	Enable aspirants to design the advertising body copy and campaign.
CO 4	Contribute to advertising arena with a due consideration for ethical and social aspects.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Marketing)
Title of the Course/Subject	4203/ SALES PROMOTION MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Learn sales promotion techniques for consumer, trade, company and sales force
CO 2	Develop sales promotion campaign, establishing its objectives, tools and program
CO 3	Understand its roles and purpose to serve in overall marketing communication, assessing effectiveness of tools used in promotion, know modern day tools of promotion
CO 4	To provide knowledge about Choice And Purchase Timing Models.

Code of the Course/Subject	MBA SEM- IV CGS NEW (Marketing)
Title of the Course/Subject	4204/SERVICE MARKETING
CO	COURSE OUTCOMES
CO 1	Have a greater understanding of services marketing, specialties of how it dominates the business landscape
CO 2	Acquaintance with major elements needed to improve marketing of services and adding value to the customers perception
CO 3	Appraise the nature and development of strategies of marketing of services
CO 4	Handling customers complaints and insight to service recovery management

Code of the Course/Subject	MBA SEM- IV CGS NEW (HRM)
Title of the Course/Subject	4301/Legal Framework Governing Human Relations
CO	COURSE OUTCOMES
CO 1	Students will gain a basic understanding of objectives and importance of laws relating to industrial disputes and management of trade union and the role of trade unions in changing environment.
CO 2	Understanding of various factors responsible for growth and development of labour laws.
CO 3	Student will be able to summarize the important provisions of Wage Legislations, in reference to Payment of Wages Act 1936, Minimum Wages Act 1948 & Payment of Bonus Act 1965.
CO 4	Student will be able to understand the laws related to working conditions in factories.

Code of the Course/Subject	MBA SEM- IV CGS NEW (HRM)
Title of the Course/Subject	4302/Organizational Change and Intervention Strategies
CO	COURSE OUTCOMES
CO 1	Understand theories and models that form the foundation of disciplines as well as the OD diagnostic process.
CO 2	Understand the ethics of OD professional and also can recognise ethical principles in organisational development.
CO 3	Comprehend the main approaches of change and will be equipped with knowledge and skills required for effective change and organisational development.
CO 4	Apply various in OD interventions and can develop a working knowledge of all aspects of OD intervention process.

Code of the Course/Subject	MBA SEM- IV CGS NEW (HRM)
Title of the Course/Subject	4303/TEAM DYNAMICS AT WORK
CO	COURSE OUTCOMES
CO 1	Students will be able to justify formation and development of teams and can explain the dynamics of Team & Team Building and different learning methodologies in team decision-making.
CO 2	Student will be able to justify the applicability of various theories of Motivation,T-group sensitivity training and Johari Window and also able to justify the Conflict resolution strategy.
CO 3	Student will be able to understand the development of team and can discover orientation through FIRO-B .
CO 4	Students will be able to determine the importance of Interpersonal Communication and can increases their self-awareness and strengthens ability to better understand others.

Code of the Course/Subject	MBA SEM- IV CGS NEW (HRM)
Title of the Course/Subject	4304/INTERNATIONAL HUMAN RESOURCE MANAGEMENT
CO	COURSE OUTCOMES
CO 1	Recognize, outline, and illustrate the enduring global contexts of International HRM understanding and key skills required by HR professionals working in an international context with multinational organizations.
CO 2	Demonstrate; appraise the implications of IHRM in the Host Country Context and managing alliances and joint venture.
CO 3	Differentiate the Context of Cross-border Alliances, prepare staffing international operations for sustained global growth, recruiting and selecting staff for international assignments, Interpret; analyze the International Industrial Relation issues and performance management.
CO 4	Evaluate, interpret issues of international training, development and also can able to comprehend HRM practices in different countries.

DEPARTMENT OF COMPUTER APPLICATION (BCA)
Programme: Bachelor of Computer Application

PO NO.	Programme Outcomes
PO1	Scientific Knowledge and Experimental Skills : The graduates must be able to demonstrate fundamental concepts in computer science and apply it in relative specialized areas like research & development, teaching and government, social or public services.
PO2	Communication skills : The graduates must be able to transmit complex technical information in clear and concise manner relating to computer hardware, software and its applications.
PO3	Critical Thinking & Problem Solving Ability: The graduates must be able to employ critical thinking and problem solving skills to find appropriate solutions for the given problems in the fields of computer technology
PO4	Team leading and working capability: The graduates must be capable to work independently as well as a team leader or a member.
PO5	Project Management: The graduates must be able to identify need, scope and beneficiaries to develop a project by observing responsible & ethical conduct and also with cyber security and safety.
PO6	Digital Proficiency to use Modern Digital Tools: The graduates must be capable to learn and use modern technology like data mining, handling & management, robotics and artificial intelligence.
PO7	Environmental and Societal Consciousness: The graduates must be aware about the environmental & the societal problems and must be capable to use and demonstrate the acquired knowledge to address these problems and to find appropriate solutions thereof.
PO8	Ethics and Human values: The graduates must be capable to think and behave rationally on the ethical issues they come across at their work place. Also, the graduates should adopt human values to keep harmony with individuals and with human beings.
PO9	National perspective: The graduates must be able to develop national perspective for their career in the chosen field so that they could play a vital role in contributing in national development.
PO10	Lifelong Learning: The graduates should adopt lifelong learning to keep pace with emerging trends in technology and research.

Code of the Course/Subject	1BCA1
Title of the Course/Subject	Fundamentals of Computers
CO No.	Course Outcomes
CO1	Acquire the basic knowledge about computer system functions.
CO2	learn the basic knowledge about various components, capabilities and limitations of computer.
CO3	Understand the various hardware and software components of computer.

Code of the Course/Subject	1BCA2
Title of the Course/Subject	Structured Programming Paradigms
CO No.	Course Outcomes
CO1	Formulate simple algorithms for arithmetic and logical problems
CO2	Translate the algorithms to programs (in C language)
CO3	build the basic skills of programming.
CO4	acquire the importance of C programming using various methodologies
CO5	learn the advance concepts of programming like structure, string handling, file handling.

Code of the Course/Subject	1BCA3
Title of the Course/Subject	Data Structure
CO No.	Course Outcomes
CO1	Describe how arrays, linked structures, stacks, queues, and trees are represented in memory and design and implementation with the help of algorithms.
CO2	Design common applications for arrays, linked structures, stacks, queues and trees.
CO3	Prepare programs that use arrays, linked structures, stacks, queues, trees.
CO4	Demonstrate different methods for traversing trees.
CO5	Compare alternative implementations of data structures with respect to performance.
CO6	Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
CO7	Analyze the computational efficiency of the principal algorithms for sorting and searching.

	1BCA4
Title of the Course/Subject	Fundamentals of Electronics in Computer Sciences
CO No.	Course Outcomes
CO1	learn the binary numbers used in computer system.
CO2	understand how logic circuit works inside microprocessor
CO3	understand concepts of digital systems.

CO4	understand how microprocessor works inside computer system.
CO5	use the concepts of assembly language programming.

Code of the Course/Subject	1BCAE1
Title of the Course/Subject	Communication Skills in English
CO No.	Course Outcomes
CO1	understand communication skills of English language
CO2	apply the four skills of language in his daily routine.
CO3	formulate/ compose his own sentences and able to speak English Language.
CO4	collaborate with others students in English.
CO5	communicate properly their ideas and concepts in English.

Code of the Course/Subject	
Title of the Course/Subject	Communication Skill
CO No.	Course Outcomes
CO1	Understand the paragraph, prose, poetry and communication skills
CO2	Apply the four skills of language in his daily routine.
CO3	Formulate/ compose his own sentences and able to speak English Language.
CO4	Collaborate with others students in English.
CO5	Communicate properly their ideas and concepts in English.

Code of the Course/Subject	1BCALAB1
Title of the Course/Subject	LAB-1 Computer Hardware Software Troubleshooting
CO No.	Course Outcomes
CO1	get Knowledge of Computer Hardware
CO2	Identify computer hardware Issues/Problems
CO3	determine faulty Computer hardware
CO4	Know Basic computer troubleshooting tips
CO5	get Knowledge of Operating System and device Drivers
CO6	Identify hardware Peripherals
CO7	Apply the knowledge to repair/maintain a computer.

Code of the Course/Subject	1BCALAB2
Title of the Course/Subject	LAB-2 Data Structures Using C
CO No.	Course Outcomes
CO1	design and analyze the time and space efficiency of the data structure.
CO2	identity the appropriate data structure for given problem.
CO3	Have practical knowledge on the applications of data structures
CO4	implement linear and non-linear data structure operations using C programs
CO5	solve problems implementing appropriate data structures
CO6	implement sorting and searching algorithms using relevant data structures

Code of the Course/Subject	1BCALAB3
Title of the Course/Subject	LAB-3 Fundamentals of Computer Electronics
CO No.	Course Outcomes
CO1	design and verify truth table of logic gates.
CO2	design and verify truth table of flip flops.
CO3	design programs of 8085.
CO4	design programs of 8086.

Code of the Course/Subject	1BCAOE1
Title of the Course/Subject	Information Technology & Business Data Processing
CO No.	Course Outcomes
CO1	understand Concept of Information Technology
CO2	understand Concept of Computerized Accounting and relevant software
CO3	Work in Tally

Code of the Course/Subject	1BCAOE2

Title of the Course/Subject	Computer Fundamentals
CO No.	Course Outcomes
CO1	Familiarize with the general concept of Computers.
CO2	Learn the concept operating systems
CO3	Understand different types and structures of operating systems
CO4	Familiarize with MS-Office

Code of the Course/Subject	2BCA1
Title of the Course/Subject	Computer System and Interfaces
CO No.	Course Outcomes
CO1	Translate bit strings to numbers using unsigned, 2's complement, and IEEE standard floating point representation systems
CO2	Reverse engineer machine code and assembly code to a behavioral (high-level) descriptions.
CO3	Experiment to determine efficient storage (specifically heap memory) allocation strategies.

Code of the Course/Subject	2BCA2
Title of the Course/Subject	Database Management System
CO No.	Course Outcomes
CO1	Understand the fundamental concepts of Database.
CO2	implement Normalization
CO3	Understand the role and responsibility of Database Administrator,
CO4	Be Familiar with SQL, a basic language of database and enhance the skill to perform the queries by using functions.
CO5	Create and use of store procedure and functions with the help of PL/SQL.
CO6	understand, design and implement Cursor, procedure , function and trigger.

Code of the Course/Subject	2BCA3
Title of the Course/Subject	Object Oriented Programming Paradigms
CO No.	Course Outcomes
CO1	Learn evolution of programming paradigms
CO2	Understand the concepts of object-oriented paradigm
CO3	Apply object-oriented concepts in programming
CO4	Use object-oriented thinking in problem-solving

Code of the Course/Subject	2BCA4
Title of the Course/Subject	Fundamentals of Computational Mathematics
CO No.	Course Outcomes
CO1	Apply appropriate numerical methods to obtain approximate solutions to difficult mathematical problems.
CO2	Understand relationship between variables using the method of Correlation and Trend Fit Analysis.
CO3	Develop formal reasoning among students using different techniques in numerical methods.
CO4	Understand regression and curve fitting with the help of least squares method.
CO5	execute programs of various Numerical Methods and Statistical Techniques for solving mathematical problems.
CO6	write programs to draw various graphs.

Code of the Course/Subject	2BCAE1
Title of the Course/Subject	Communication Skill
CO No.	Course Outcomes
CO1	Understand the paragraph, prose, poetry and communication skills
CO2	Apply the four skills of language in his daily routine.
CO3	Formulate/ compose his own sentences and able to speak English Language.
CO4	Collaborate with others students in English.
CO5	Communicate properly their ideas and concepts in English.

Code of the Course/Subject	2BCALAB1
Title of the Course/Subject	LAB-1
CO No.	Course Outcomes
CO1	Write ALP for 8085
CO2	Understand interfacing concepts

Code of the Course/Subject	2BCALAB2
Title of the Course/Subject	LAB 2
CO No.	Course Outcomes
CO1	Perform SQL commands
CO2	Perform PL/SQL program
CO3	Understand Database concept

Code of the Course/Subject	2BCALAB3
Title of the Course/Subject	LAB 3
CO No.	Course Outcomes
CO1	Perform programs on OOPs
CO2	Perform programs on functions, constructor and destructor.
CO3	Understand and implement concept of Inheritance.

Code of the Course/Subject	2BCAOEL3
Title of the Course/Subject	Fundamentals of C Programming
CO No.	Course Outcomes
CO1	use C Programming Language
CO2	Understand different data types in C Language
CO3	apply the techniques to write program in C Language.
CO4	describe the use of control structures, loops in C Language.

Code of the Course/Subject	2BCAOEL4
Title of the Course/Subject	e-Commerce
CO No.	Course Outcomes
CO1	understand information systems for business and management.
CO2	Understand organizational and managerial foundations of systems, the technical foundation for understanding information systems

Department of Research and PG Studies in Science and Management (MCA Depart.)
Programme: Master in Computer Application

PO NO.	Programme Outcomes
PO1	Computational Knowledge: Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate computing models for a given problem and/or requirements.
PO2	Problem Analysis: Apply fundamental knowledge of computing, mathematics and domain in order to analyze, identify, formulate and solve computing problems.
PO3	Design/Development of Solutions: Design and evaluate solutions, systems, components, processes for specified set of needs/requirements with appropriate consideration of societal values and industry standards..
PO4	Conduct investigations of complex Computing problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.Conduct investigations of complex Computing problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern Tool Usage: Use of modern tools for delivering milestones like project development, testing, management, etc. with cognizance of limitations of these tools
PO6	Professional Ethics: Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.
PO7	Lifelong Learning: Acknowledge the need for continual professional development and practice it through self-motivated, independent learning.
PO8	Project management and finance: Perform role-play of individual, team member and/or project leader while working on projects built on the computing and management principles to solve problems in various domains and environments.
PO9	Communication Efficacy: Demonstrate efficacy in verbal and non-verbal means of communication like reports, design documentation and presentations to elaborate about complex computing activities for concerned stakeholders.
PO10	Innovation and Entrepreneurship: Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of individual and society.

Code of the Course/Subject	MCA20101
Title of the Course/Subject	Advance Computer Architecture
CO No.	Course Outcomes
CO1	Explain fundamentals of parallel processing and pipeline processing
CO2	Analyze and classify different pipelined processors
CO3	Describe architectural features of advanced processors.
CO4	Demonstrate concepts of parallelism in hardware/software.

Code of the Course/Subject	MCA20102
Title of the Course/Subject	Data Structure & Algorithms
CO No.	Course Outcomes
CO1	Explain and identify fundamental concepts of data structures
CO2	Understand various data searching and sorting methods with its complexity
CO3	Demonstrate operations such as insertion, deletion, searching and traversing on data structures.
CO4	Design algorithms for solving problems with the help of fundamental data structures

Code of the Course/Subject	MCA20103
Title of the Course/Subject	Operating System
CO No.	Course Outcomes
CO1	Understand the concept of programs & processes along with the need of scheduling in operating systems
CO2	Recognize different states of process and schedulers to apply scheduling algorithms to meet the scheduling objectives and acquire the knowledge of dealing with deadlocks
CO3	Apply memory management techniques & virtual memory concepts to avoid page faults and computing page replacement strategies
CO4	Analyze and apply various protection and security mechanisms
CO5	Compare different operating system

Code of the Course/Subject	MCA20104
Title of the Course/Subject	Data Communication & Networks
CO No.	Course Outcomes
CO1	Understand the concepts of Data Communication Systems and its components.
CO2	Analyze various types of application layer protocols and its applicability in various domains.
CO3	Generalize all transport layer protocols to understand end-to-end communication over a network.
CO4	Demonstrate basic understanding of network layer protocols for data routing in network.
CO5	Analyze functional & procedural means to transfer data between network entities
CO6	Acquire introductory knowledge about digital wireless communication systems

Code of the Course/Subject	MCA20105
Title of the Course/Subject	Mathematics & Statistical Techniques

CO No.	Course Outcomes
CO1	Understand the foundations of mathematics
CO2	Apply mathematical ideas to model real-world problems.
CO3	Analyze data using Statistical Methods
CO4	Identify the type of statistical situation and solve statistical problems

Code of the Course/Subject	MCA20107
Title of the Course/Subject	Lab1- Object Oriented Programming in JAVA
CO No.	Course Outcomes
CO1	Development of skills for implementing core concepts of Java.

Code of the Course/Subject	MCA20108
Title of the Course/Subject	Lab2- Data Structure and Algorithms
CO No.	Course Outcomes
CO1	On completion of the course, the students will be able to get Skill of applying different data structures for solvingproblem

Code of the Course/Subject	MCA20109
Title of the Course/Subject	Lab3- Operating System
CO No.	Course Outcomes
CO1	Able to understand the Basics of Linux working .
CO2	Able to perform the shell scripting programs .
CO3	Able to create file handling utilities by using Linux shell environment.

Code of the Course/Subject	MCA20110
Title of the Course/Subject	Lab4- Mathematics & Statistical Techniques
CO No.	Course Outcomes
CO1	Students will be able to solve the problems of Mathematics and Statistical Techniques using programming logic

Code of the Course/Subject	MCA20201
Title of the Course/Subject	Client Server Computing
CO No.	Course Outcomes
CO1	Acquire knowledge of Server-Side programing by implementing Servlet and JSP.
CO2	Acquire the knowledge of J2EE architecture, MVC Architecture.
CO3	Distinguish Web Server, Web Container and Application Server
CO4	Understand and write the deployment descriptor and enterprise application deployment
CO5	Design and implement components like: Session, Java Beans, JSTL, Tag Extensions
CO6	Gain knowledge of frameworks such as Struts Architecture and Hibernate Architecture
CO7	Distinguish JDBC and Hibernate. Design and Develop various application by Integrating any of Servlets, JSPs, Database, Struts,hibernateafteranalyzing requirements and evaluating existing system.

Code of the Course/Subject	MCA20202
Title of the Course/Subject	Artificial Intelligence & Applications
CO No.	Course Outcomes
CO1	Adopt an approach in view of Problem solving with AI
CO2	Identify and apply suitable 'Intelligent Agents for various AIapplications.
CO3	Identify knowledge statement and represent it
CO4	Empower students for path planning of a robotic system.
CO5	To develop and survey embedded systems applications usingmachine learning

Code of the Course/Subject	MCA20203
Title of the Course/Subject	Advance Data Base Management Systems
CO No.	Course Outcomes
CO1	Describe the fundamental elements of relational database management systems
CO2	Apply the SQL queries on database for intended output
CO3	Analyze the database and remove the redundancy.
CO4	Explain basic database storage structures and access techniques
CO5	Ensure accuracy and integrity using transaction properties
CO6	Apply the concepts of database for data analytics, big data, parallel and distributed databases

Code of the Course/Subject	MCA20204
Title of the Course/Subject	Software Engineering
CO No.	Course Outcomes
CO1	Recognize evolving role of software project management

CO2	Understand and estimate cost for software project.
CO3	Identify &analyze aspect in s/w to manage time, process & resources effectively with quality concept.
CO4	Estimate software productivity using metrics and indicator & identify important issues for planning a project
CO5	Judge different testing techniques used to test software
CO6	Evaluate the role of user and software teams.

Code of the Course/Subject	**MCA20205**
Title of the Course/Subject	**ELECTIVE 1 – Data Security**
CO No.	**Course Outcomes**
CO1	Explain different security attacks
CO2	Analyze different security issues related to operating system
CO3	Apply and understand security aspect with respect to database
CO4	Solve network threats including detection of intrusion
CO5	Analyze and apply security protocols to improve the administration
CO6	Summarize different issues related to computer society and attempt to solve it.

Code of the Course/Subject	**MCA20205**
Title of the Course/Subject	**ELECTIVE 1 – Computer Graphics**
CO No.	**Course Outcomes**
CO1	Understand the core concepts of computer graphics, including viewing, projection, perspective, modelling and transformation in two dimensions
CO2	Demonstrate various algorithms for scan conversion and filling of basic objects and their comparative analysis
CO3	Interpret the mathematical foundation of the concepts of computer graphics.
CO4	Apply geometric transformations, viewing and clipping on graphical objects
CO5	Explore solid model representation techniques and projections.
CO6	Understand visible surface detection techniques and illumination models.

Code of the Course/Subject	**MCA20207**
Title of the Course/Subject	**Lab 5-Client Server Computing**
CO No.	**Course Outcomes**
CO1	Implement Servlets and JSP to understand Server-Side programming.
CO2	Design program to understand J2EE architecture, MVC Architecture
CO3	Distinguish Web Server, Web Container and Application Server, Serialization, Internationalization
CO4	Design and implement components like: Session, Java Beans, JSTL, Tag Extension and Filter
CO5	Acquire knowledge of frameworks such as Struts and Hibernate
CO6	Distinguish between JDBC and Hibernate
CO7	Design and Develop various application by Integrating any of Servlets, JSPs, Database, Spring, hibernate by analyzing requirements and evaluating existing system.

Code of the Course/Subject	**MCA20208**
Title of the Course/Subject	**Lab 6-Artificial Intelligence &Applications**
CO No.	**Course Outcomes**
CO1	Students will be able to develop basic Artificially Intelligent, Machine Learning and Robotics Applications

Code of the Course/Subject	**MCA20209**
Title of the Course/Subject	**Lab 7- Elective- 1 [Data Security]**
CO No.	**Course Outcomes**
CO1	Explain different security attacks
CO2	Analyze different security issues related to operating system.
CO3	Apply and understand security aspect with respect to database.
CO4	Solve network threats including detection of intrusion
CO5	Analyze and apply security protocols to improve the administration
CO6	Summarize different issues related to computer society and attempt to solve it.

Code of the Course/Subject	**MCA20210**
Title of the Course/Subject	**Lab 8- Mini Project**
CO No.	**Course Outcomes**
CO1	Mini project-the student's needs to complete at the end of the semester in order to strengthen the understanding of fundamentals through effective application of the course

Code of the Course/Subject	**MCA20301**
Title of the Course/Subject	**Data Analytics**

CO No.	Course Outcomes
CO1	Explain data analytics and analysis
CO2	Describe the need of python in analytics
CO3	Create array to store data
CO4	Analyze the data using pandas
CO5	Apply data preprocessing operations to clean the data
CO6	Perform operations to visualize the data

Code of the Course/Subject	MCA20302
Title of the Course/Subject	Cloud Computing
CO No.	Course Outcomes
CO1	Understand the core concepts of the cloud computing and its benefits along with its various models and services in cloud computing.
CO2	Use various types of Virtualization techniques using its open-source tools
CO3	Explain various types of cloud file systems.
CO4	Simulate cloud computing environments.
CO5	Outline various stages of SLA life cycle
CO6	Identify various security threats and issues in cloud environments

	MCA20303
Title of the Course/Subject	Web Technology
CO No.	Course Outcomes
CO1	Understand the concepts of different web technologies.
CO2	Use various types of scripting and markup languages like HTML5, CSS3.
CO3	Understand how to work in UI/UX design.
CO4	Illustrate Angular environments.
CO5	Describe Type Script, Object Oriented features.

Code of the Course/Subject	MCA20304
Title of the Course/Subject	Elective 2 - ii) Cyber Security & Digital Forensic
CO No.	Course Outcomes
CO1	Understand the concepts and foundations of Cyber Security
CO2	Identify security risks
CO3	Apply preventive steps
CO4	Investigate Cyber Crime and analysis of evidences
CO5	Acquire knowledge of Digital Forensics

Code of the Course/Subject	MCA20304
Title of the Course/Subject	Elective 2 - i) Animation & Movie Making
CO No.	Course Outcomes
CO1	Familiarize the students with various approaches, methods and techniques of Animation Technology.
CO2	Develop competencies and skills needed for becoming an effective Animator.
CO3	Exploring different approaches in computer animation.
CO4	Enable students to manage Animation Projects from its Conceptual Stage to the final product creation
CO5	Develop expertise in life-drawing and related techniques.
CO6	Apply Audio and Video Production Techniques to an Animation Project

Code of the Course/Subject	MCA20304
Title of the Course/Subject	Elective 2 - iii) Block Chain Technology
CO1	Understand how blockchain systems (mainly Bitcoin and Ethereum) work.
CO2	Describe secured interaction between blockchain
CO3	Design, build, and deploy smart contracts and distributed applications
CO4	Integrate ideas from blockchain technology into their own projects

Code of the Course/Subject	MCA20305
Title of the Course/Subject	Elective 3- i) Software Testing
	Course Outcomes
CO1	Describe fundamentals of testing
CO2	Explain the role of testing in SDLC
CO3	Discriminate among static and dynamic testing
CO4	Understand the test management mechanisms.
CO5	Design and develop the best test strategies in accordance to the development model.
CO6	Understand how to test the s/w for object-oriented designs

Code of the Course/Subject	MCA20305
Title of the Course/Subject	Elective 3- ii) Mobile Application Development
CO1	Identify various concepts of mobile programming that make it unique from programming for other platforms.
CO2	Critique mobile applications on their design pros and cons.
CO3	Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces.
CO4	Program mobile applications for the Android operating system that use basic and advanced phone features.
CO5	Deploy applications to the Android marketplace for distribution.

Code of the Course/Subject	MCA20305
Title of the Course/Subject	Elective 3- iii) Internet of Things
CO1	Identify the use of IoT from a global context
CO2	Design application using IoT.
CO3	Analyze the IoT enabling Technologies
CO4	Determine the real world problems and challenges in IoT

Code of the Course/Subject	MCA20305
Title of the Course/Subject	Elective 3- iv) Soft Computing
CO1	Describe soft computing concepts and techniques
CO2	Apply fuzzy logic and neural network to solve various engineering problems
CO3	Apply genetic algorithms in problem solving.
CO4	Evaluate and compare solutions by various soft computing approaches for a given problem

Code of the Course/Subject	MCA20307
Title of the Course/Subject	Lab 7 - Data Analytics using Python language
CO No.	Course Outcomes
CO1	Explain data analytics and analysis
CO2	Describe the need of python in analytics
CO3	Create array to store data
CO4	Analyze the data using pandas
CO5	Apply data preprocessing operations to clean the data
CO6	Perform operations to visualize the data

Code of the Course/Subject	MCA20308
Title of the Course/Subject	Lab 8 Web Technology
CO No.	Course Outcomes
CO1	Develop web applications using advanced web technologies i.e HTML5, CSS3, ANGULAR

Code of the Course/Subject	MCA20309
Title of the Course/Subject	Lab 9 Elective 2 - i) Animation & Movie Making
CO1	Create on videos using flash
CO2	Create on movies using action scrip

Code of the Course/Subject	MCA20309
Title of the Course/Subject	Lab 9 Elective 2 - ii) Cyber Security & Digital Forensic
CO No.	Course Outcomes
CO1	Apply the concepts of Cyber Security to real world problem

Code of the Course/Subject	MCA20309
Title of the Course/Subject	Lab 9 Elective 2 - iii) Block Chain Technology
CO1	Write basic Hadoop command
CO2	Implement the Hash Table
CO3	Create simple Blockchain
CO4	Use Geth to implement Ethereum
CO5	Prepare Case Studies on Blockchain Applications
CO6	Study Smart Contract Construction

Code of the Course/Subject	MCA20310
Title of the Course/Subject	LAB 10 ELECTIVE 3 - i) SOFTWARE TESTING
CO No.	Course Outcomes
CO1	Describe fundamentals of testing
CO2	Discriminate among static and dynamic testing
CO3	Understand the test management mechanisms
CO4	Design and develop the best test strategies in accordance to the development model

Code of the Course/Subject	MCA20310
Title of the Course/Subject	LAB 10 ELECTIVE 3 -ii) Mobile Application Development
CO1	Design and Develop Mobile Application using Android Studio Development tool.

Code of the Course/Subject	MCA20310
Title of the Course/Subject	LAB 10 ELECTIVE 3 - iii) Internet of Things
CO1	On completion of the course, the students will be able to Design and Develop IoT based application

Code of the Course/Subject	MCA20310
Title of the Course/Subject	LAB 10 ELECTIVE 3 - iv) Soft Computing
CO1	Describe soft computing concepts and techniques
CO2	Apply fuzzy logic and neural network to solve various engineering problems
CO3	Apply genetic algorithms in problem solving.
CO4	Evaluate and compare solutions by various soft computing approaches for a given problem

Code of the Course/Subject	MCA20403
Title of the Course/Subject	Online Subject - i) Management Information System
CO No.	Course Outcomes
CO1	Describe various organization structures, behaviors and its influence on MIS Design
CO2	Create reports for various subsystem in an organization based on their functionality and interrelationship
CO3	Explain the planning models and relevance of each in current scenario at various levels of management.
CO4	Analyze the decision making requirements to create an appropriate decision support system.
CO5	Compare different operating system

Code of the Course/Subject	MCA20403
Title of the Course/Subject	Online Subject - ii) Entrepreneurship Development
CO No.	Course Outcomes
CO1	Understand the systematic process to select and screen a business idea
CO2	Identify business opportunities in chosen sector.
CO3	Sub-sector and plan and market and sell products / services.
CO4	Effectively manage small business enterprise

Code of the Course/Subject	MCA20403
Title of the Course/Subject	Online Subject- iii) Enterprise Resource Planning
CO No.	Course Outcomes
CO1	Develop model for ERP for large projects
CO2	Develop model for E-commerce architecture for any application
CO3	Describe the advantages, strategic value, and organizational impact of utilizing an ERP system for the management of information across the functional areas of a business: sales and marketing, accounting and finance, human resource management, and supply chain
CO4	Demonstrate a working knowledge of how data and transactions are integrated in an ERP system to manage the sales order process, production process, and procurement process.
CO5	Evaluate organizational opportunities and challenges in the design system within a business scenario.
CO6	Use various platforms to implement the ERP

Code of the Course/Subject	MCA20403
Title of the Course/Subject	Online Subject- iv) Research Methodology
CO No.	Course Outcomes
CO1	Explain fundamentals of Research Methodology
CO2	Analyze and classify different problem identification technique
CO3	Describe data analysis and data interpretation.
CO4	Use of different research techniques and tools.

DEPARTMENT OF MBA
Programme: Master of Computer Management

PO NO.	Programme Outcomes
PO1	The student will be able to apply knowledge of computer science and management.
PO2	The student will be able to develop computer applications.
PO3	The student will be able to select modern computing tools and techniques and use them.
PO4	The student will be able to design a computing system to meet desired needs within realistic constraints such as safety, security and applicability.
PO5	The student will be able to function professionally with ethical responsibility as an individual as well as in multidisciplinary teams with positive attitude.
PO6	The student will be able to communicate effectively and present technical information in oral and written reports.
PO7	The student will be able to utilize the computing knowledge efficiently in projects with concern for societal, environmental, and cultural aspects.
PO8	The student will be able to create and design innovative methodologies to solve complex problems for the betterment of the society.

Code of the Course/Subject	1MCM1
Title of the Course/Subject	Computer Fundamental And Operating System
CO No.	Course Outcomes
CO 1	**Bridge** the fundamental concepts of computers with the present level of knowledge of the students.
CO 2	Computer characteristics, its **usage**, Limitations and benefits etc.
CO 3	**Understand** and learn operation and function of computer, its types .
CO 4	**Understand** the representation of data in computer.
CO 5	**Design** Algorithm and Flowchart.
CO 6	**Describe** the fundamentals of Computer Networking.
CO 7	**Understand** the functions of Oprating system.

Code of the Course/Subject	1MCM2
Title of the Course/Subject	Programming Methodology
CO No.	Course Outcomes
CO1	**Understand** the fundamentals of C programming.
CO2	Choose the loops and decision making statements
CO3	**Implement** different Operations on arrays
CO4	**Use** functions to solve the given problem
CO5	**Understand** pointers, structures and unions
CO6	**Implement** file Operations in C programming for a given application

Code of the Course/Subject	1MCM3
Title of the Course/Subject	Object Oriented Programming
CO No.	Course Outcomes
CO1	**Understand** and **Apply** Object oriented features and C++ concepts
CO2	**Apply** the concept of constructor, polymorphism
CO3	**Apply** the concept of inheritance.
CO4	**Develop** applications using Console I/O and File I/O, Implement exception handling
CO5	**Understand** and **Apply** Pointer concepts

Code of the Course/Subject	1MCM4
Title of the Course/Subject	Business Data Communication I
CO No.	Course Outcomes
CO1	**Understand** basic concepts of data communications
CO2	**Understand** Data Communcation Hardware and Data Transmission
CO3	**Understand** layering structure of OSI model, Analyse error detection, correction and error correction codes.
CO4	**Use** and **implement** LAN.
CO5	**Use** and **implement** MAN.

Code of the Course/Subject	1MCM5
Title of the Course/Subject	System Analysis And Design
CO No.	Course Outcomes

CO1	System Analysis and Design is method to **develop** and maintain the system that performs basic business functions.
CO2	**Understand** business objectives and processes.
CO3	The overall goal of System Analysis is to **understand** procedural components and modules.
CO4	The goal of System Design is to **design** whole software, which fulfils all the requirements of customer.
CO5	This leads to improve organizational systems, by **applying** software, which helps employees to perform business, tasks more effectively.
CO6	System Analysis is to study procedural components and modules.

Code of the Course/Subject	**1MCM6**
Title of the Course/Subject	**Computer Laboratory -I**
CO No.	**Course Outcomes**
CO1	**Demonstrate** the use of various OOPs concepts with the help of programs.
CO2	**Describe** the procedural and object oriented paradigm with concepts of classes, functions, data and objects.
CO3	**Demonstrate** the programs for the implementation of constructors,destructors and function overloading.
CO4	**Use** the syntax and semantics of C programming language.
CO5	**Demonstrate** the programs for the implementation of Arrays,User defined functions ,Structures and Pointer
CO6	Get Familiarized with the DOS and UNIX Commands.

Code of the Course/Subject	**2MCM1**
Title of the Course/Subject	**Principles Of Management**
CO No.	**Course Outcomes**
CO1	**Understand** management process, Role and Skills of manager
CO2	**Know** nature, importance, limitations of planning
CO3	**Undrstand** formal and informal organization.
CO4	**Know** staffing, apply Recruitment, Selection, Placement
CO5	**Develop** Communication, Leadership, Controlling

Code of the Course/Subject	**2MCM2**
Title of the Course/Subject	**Adv. Database Management System**
CO No.	**Course Outcomes**
CO1	**Understand** DBMS concepts, data models and Architecture.
CO2	**Use** SQL for database management.
CO3	**Apply** normalization process to construct the data base.
CO4	**Understand** Concurrency and recovery strategies of DBMS
CO5	Design and **implement** a small database project.

Code of the Course/Subject	**2MCM3**
Title of the Course/Subject	**Java Programming**
CO No.	**Course Outcomes**
CO1	**Understand** Java language syntax and semantics and cocepts.
CO2	**Understand** the fundamentals of object-oriented programming in Java, exception handling mechanism
CO3	**Understand** the principles of inheritance, packages and interfaces.
CO4	**Develop** program to solve specified problems. Basic AWT components, file-based I/O, and one-dimensional arrays.
CO5	**Use** the Java SDK environment to create, debug and run simple Java programs.
CO6	Designs will **demonstrate** the use of good object-oriented design principles including encapsulation and information hiding.

Code of the Course/Subject	**2MCM4**
Title of the Course/Subject	**Software Engineering I**
CO No.	**Course Outcomes**
CO1	Explain the fundamental concepts of software Engineering LifeCycle models.
CO2	**Describe** Software Engineering layered Technology and process frame work.
CO3	**Identify** and define the Software Metrics, Quality and Goals.
CO4	**Demonstrate** the Software Project Management skills .
CO5	Schedule Resources, Allocate,monitor and manage resources as per schedule.
CO6	**Describe** and Identify objects software configuration Management

Code of the Course/Subject	**2MCM5**

Title of the Course/Subject	Operation Research Techniques
CO No.	**Course Outcomes**
CO1	**Use** of Graphical Method, Simplex Methos in Linear Programming
CO2	**Know** types of Transportation, Assignment, Decision theory, Games theory
CO3	**Explain** Deterministic and Probabilistic inventory control models, Apply Sequencing Problems
CO4	**Apply** PERT, CPM
CO5	**Understand** Simulations, Revised Simplex, Dual Simplex Method, Dynamic Programming

Code of the Course/Subject	2MCM6
Title of the Course/Subject	Computer Laboratory -II
CO No.	**Course Outcomes**
CO1	**Use** the syntax and semantics of java programming language.
CO2	**Demonstrate** the programs for the implementation of Control structure,Objects &Classes
CO3	**Demonstrate** programs for the implementation of Class inheritance &Creating User Interfaces
CO4	**Understand** Database concept
CO5	Perform SQL commands using Database Objects
CO6	Perform PL/SQL program using Triggers,Procedures,functions,Packages and Cursors

Code of the Course/Subject	3MCM1
Title of the Course/Subject	Management Information System
CO No.	**Course Outcomes**
CO1	MIS is **define** as an integrated system of man and machine for providing the information to support the operations, the management, and the decision-making function in the organization.
CO2	**Understand** the leadership role of Management Information Systems in achieving business competitive advantage through informed decision making.
CO3	**Analyze** and synthesize business information and systems to facilitate evaluation of strategic alternatives.
CO4	Effectively communicate strategic alternatives to facilitate decision making.
CO5	**Describe** the role of information technology and information systems in business.
CO6	Record the current issues of information technology and relate those issues to the firm.
CO7	Interpret how to use information technology to solve business problems. **Illustrate** the impact of information systems in society.

Code of the Course/Subject	3MCM2
Title of the Course/Subject	Advance Java Programming
CO No.	**Course Outcomes**
CO1	Given info. On the use of connectivity (JDBC) & networking which helps For client server application, students will be able to **create** mgt. appl. Practices emphasized for network based client server application
CO2	Given info. Is used for creation of enterprise edition work with servelet's and session tracking mechanism; students will be able to **develop** the solution for human computer interaction
CO3	Student will be able to **create** network based applications and appltes
CO4	**Create** business applications. Implement Server side programming, Develop dynamic software componentsand database application.
CO5	**Design and develop** powerful GUI based components.
CO6	**Create** Animation using Applet, Thread and AWT controls.
CO7	Topics covered **include** exception handling, streams and file input/output, dynamic data structures, recursion, inheritance, and graphics.
CO8	It **develops** advanced Java programming skills that are required to fully utilize the capabilities of this object-oriented, general-purpose programming language.

Code of the Course/Subject	3MCM3
Title of the Course/Subject	Visual Computing
CO No.	**Course Outcomes**
CO1	**Understanding** different controls and objects,choose loops and decision making statements
CO2	**Use** of graphics objects , Create simple to advance graphics program
CO3	**Implement** file operations and use of visual basic applications
CO4	**Develop** Object Oriented Programming in VB, working with Collection ,API
CO5	**Understanding** Database Connectivity using various Objects

Code of the Course/Subject	3MCM4
Title of the Course/Subject	Business Data Comunication II
CO No.	**Course Outcomes**

CO1	**Understand** the underlying technologies of TCP/IP.
CO2	**Understand** Control Message Protocol, Routing Protocols
CO3	**Know** UDP, Broadcasting, Multicasting , Domain Name System
CO4	**Know** Transmission Control Protocol
CO5	**Understand** different applications protocols

Code of the Course/Subject	**3MCM5**
Title of the Course/Subject	**Software Engineering II**
CO No.	**Course Outcomes**
CO1	**Apply** Principles, tools and practices of software Designing
CO2	**Apply** transaction and data flow techniques.
CO3	Basic **Knowledge & understanding** of the analysis & design of complex systems.
CO4	**Understand** types of testing and bugs.
CO5	**Understand** flow graphs and apply path testing
CO6	**Apply** different testing techniques

Code of the Course/Subject	**3MCM6**
Title of the Course/Subject	**Computer Laboratory -III**
CO No.	**Course Outcomes**
CO1	**Demonstrate** the use of .net package and its Classes and Interfaces.
CO2	Learn to access database through java programs, using JDBC
CO3	**Create** dynamic web pages,using Servlets
CO4	Invoke the Remote methods in an application using RMI
CO5	Write windows Applications using Forms, Controls & Events
CO6	**Design,Create,** Build & Debugg visual basic applications
CO7	**Apply** Graphics Objects and ActiveX control

Code of the Course/Subject	**4MCM1**
Title of the Course/Subject	**Internet Technology**
CO No.	**Course Outcomes**
CO1	**Understand** different Objects to create interactive web page
CO2	**Understanding** components , use of functions
CO3	**Enhance** the web page using web Designing tools(HTML)
CO4	Give information to access backend with suitable connectivity controls
CO5	**Create** dynamic web applications using server-side technologies.

Code of the Course/Subject	**4MCM2**
Title of the Course/Subject	**E-Commerce**
CO No.	**Course Outcomes**
CO1	**Define** e-commerce and identify some business applications of e-commerce, IT Act 2000.
CO2	**Identify** technologies of WWW, E-Marketing, E-Advertising
CO3	**Know** various types of Security issues and solutions for E-commerce, Describe different Electronic payment systems
CO4	**Understand** E-CRM, E-Supply Chain, E-Strategy
CO5	**Understand** Mobile Commerce, Identify requirements of intelligent Web Sites

Code of the Course/Subject	**4MCM3**
Title of the Course/Subject	**Elective (DataWare Housing And Mining)**
CO No.	**Course Outcomes**
CO1	**Understand** the concepts of data warehouse and data mining
CO2	**Use** data pre processing techniques to build data warehouse
CO3	**Analyse** transaction databases for association rules.
CO4	**Use** classification methods and prediction techniques on transaction databases.
CO5	**Understand** various clustering techniques for categorizing data.
CO6	**Understand** methods for outlier analysis.
CO7	This helps improve profit and guide strategic decision making

Code of the Course/Subject	**4MCM4**
Title of the Course/Subject	**Computer Laboratory -IV**

CO No.	Course Outcomes
CO1	**Create** user interactive web pages using ASP
CO2	Performing operations **using** HTML Forms
CO3	**Create** simple Data binding applications using ADO Connectivity
CO4	**Creating** simple applications using ASP Components

Code of the Course/Subject	4MCM5
Title of the Course/Subject	Project/Seminar
CO No.	Course Outcomes
CO1	The student's need to complete Project at the end of the last semester in order to strengthen the **understanding** of fundamentals through effective application of the course.
CO2	**Demonstrate & apply** reasearch skills to complete a project
CO3	Presentation of Seminar

DEPARTMENT OF MANAGEMENT
Programme: Master of Human Resource Developement

PO NO.	Programme Outcomes MHRD
PO1	Effectively manage and plan key human resource functions within organizations
PO2	Examine current issues, trends, practices, and processes in HRM.
PO3	Ability to contribute to employee performance management and organizational effectiveness
PO4	Ability to understand, analyze and communicate global, economic, legal and ethical aspects of business.
PO5	Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
PO6	Ability to foresee possible problems and solve them with proper research and support mechanisms through projects
PO7	Ability to apply, implement, and evaluate employee orientation, training, and development programs.
PO8	Ability to facilitate and support effective employee and labour relations in both nonunion and union environments.
PO9	Learn the importance of Labour Legal provisions relations to social security.
PO10	Understand the concept of marketing, Marketing research and consumer behavior

Code of the Course/Subject	MHRD 101 Principles and Practices of Management
Title of the Course/Subject	MHRD 101 Principles and Practices of Management
CO No.	Course Outcomes
CO1	To make the students aware about management.
CO2	Learning about various aspects of management and development.
CO3	To make the students aware about the process of management.
CO4	To make the understanding about various other concept involved in management.
CO5	To know how management works as a profession.

Code of the Course/Subject	MHRD 102
Title of the Course/Subject	MHRD 102 Organizational Behaviour
CO No.	Course Outcomes
CO1	Gain understanding about some theories of organizational behaviour (human need theory, Maslow & Herzberg motivation process.
CO2	To learn leadership styles and managerial effectiveness.
CO3	To understand group dynamics.
CO4	To understand the process of organizational changes, Lewi's three step model and organization development.

Code of the Course/Subject	MHRD 103 Managerial Skill Development
Title of the Course/Subject	MHRD 103 Managerial Skill Development
CO	COURSE OUTCOMES
CO1	Gain knowledge about the essential management skills for efficient performance.
CO2	Understand the concept, process and importance of communication.
CO3	Identify the usage of business correspondence for effective written-communication.
CO4	Acquainted with key principles in public speaking for business.
CO5	Demonstrate the communication skills required in the workplace

Code of the Course/Subject	MHRD 104 Managerial Economics
Title of the Course/Subject	MHRD 104 Managerial Economics
CO No.	Course Outcomes
CO1	To develop a fundamental understanding of supply, demand, buyer's surplus, seller's surplus and elasticity.
CO2	Understand competitive markets and economic efficiency.
CO3	Use firm and industry cost analysis for production and strategic decision.
CO4	Distinguish between different market structure and different business strategies.

Code of the Course/Subject	MHRD 105 Business Ethics
Title of the Course/Subject	MHRD 105 Business Ethics
CO No.	Course Outcomes
CO1	Students will be acquainted with the fundamentals of Business Ethics and its relevance in the practical aspects.
CO2	Students will comprehend the allied root reasons and nature of ethical issues.
CO3	Aspirants will endeavor to find remedies for ethical issues being faced by organizations, employees, managers and policy makers.

CO4	Students will reflect a personality well equipped by values and spread the same

Code of the Course/Subject	MHRD 106 Quantitative Techniques
Title of the Course/Subject	MHRD 106 Quantitative Techniques
CO No.	Course Outcomes
CO1	Students will be familiar with some basic Quantitative methods with the help of various statistical and arithmetical tools and their applications in effective and Quick business decision making.
CO2	Have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis
CO3	Have basic awareness of data analysis-and hypothesis testing procedures
CO4	Form models for new business activities and increase their analytical ability to solve business problems using mathematical and statistical knowledge with any new situation.
CO5	Manage, Collect and Communicate with appropriate skill to collect raw data from the respondent for their project work.

Code of the Course/Subject	MHRD 107 Industrial Visit Short Tour
Title of the Course/Subject	MHRD 107 Industrial Visit Short Tour
CO No.	Course Outcomes
CO1	To give students a brief knowledge about what they are interested in
CO2	The Students will get to know the working environment in the industries
CO3	To provide students with an insight into the corporate world
CO4	To interact with workers, get to know mechanism of machine working and processes

Code of the Course/Subject	MHRD 201 Management of Training and Development
Title of the Course/Subject	MHRD 201 Management of Training and Development
CO No.	Course Outcomes
CO1	To know about Training and development practice perform in organization.
CO2	Gain understanding about learning processand training policy.
CO3	To know the goal of training budgets and audits.
CO4	Learn about the procedure evaluation of the training system.
CO5	Aware about how training and development perform in India.

Code of the Course/Subject	MHRD 202 Industrial Psychology and Sociology
Title of the Course/Subject	MHRD 202 Industrial Psychology and Sociology
CO No.	Course Outcomes
CO1	Understanding the basics of Industrial Psychology
CO2	To create awareness regarding individual at work place
CO3	Understanding Industrial Sociology and industrial climate
CO4	To know about the social responsibilities of the business
CO5	To acknowledge the students about business ethics and importance of it for global change

Code of the Course/Subject	MHRD 203 Strategic Human Resource Management
Title of the Course/Subject	MHRD 203 Strategic Human Resource Management
CO No.	Course Outcomes
CO1	To understand the role of HR in the formulation and implementation of strategy in an organization.
CO2	To learn about human resource forecasting with help of forecasting demand and supply.
CO3	To understand the concept of performance appraisal and how it differs from performance management.
CO4	To understand importance of career management and its practical applications.

Code of the Course/Subject	MHRD 204 Computer Applications in Human Resource Management
Title of the Course/Subject	MHRD 204 Computer Applications in Human Resource Management
CO No.	Course Outcomes
CO1	Become aware about managing data, software projects, and networks in a business context.
CO2	To understand types and structure of network.
CO3	To know the usage of human resource information system.
CO4	To learn theoretical knowledge and practical application of HTML.

Code of the Course/Subject	MHRD 205 Business Legislations

Title of the Course/Subject	MHRD 205 Business Legislations
CO No.	Course Outcomes
CO1	To understand and identify key concepts in business law and the field of management education.
CO2	To understand the legal framework of Indian Contract Act 1872 and its essentials for making a valid contract.
CO3	To understand the provisions of sales of goods act and its practice relating to contract of sales
CO4	To identify the provisions Indian Companies Act of 2013 relating to formation of companies & day to day affairs of company.
CO5	To examine the provisions of consumer protection Act and to illustrate the pros and cons of Partnership and Limited liability Partnership.

Code of the Course/Subject	MHRD 206 Research Methodology
Title of the Course/Subject	MHRD 206 Research Methodology
CO No.	Course Outcomes
CO1	This course is designed to consider modern day business research concepts and importance.
CO2	Students will understand the concept, significance and importance of research methodology to execute business research.
CO3	Examine the various facets of a research problem and Illustrate the relevant aspects of the research process from a data driven decision perspective.
CO4	Derive inferences by applying various techniques of interpretation and to study write various types of research reports.

Code of the Course/Subject	MHRD 301 Functional Areas in Management - I
Title of the Course/Subject	MHRD 301 Functional Areas in Management - I
CO No.	Course Outcomes
CO1	Understand the concept of marketing, Marketing research and consumer behavior
CO2	Understand the concept of market segmentation, product life cycle and new product development
CO3	Understand and learn about the role of promotional tools on marketing and channel management
CO4	Understand the basics of financial management and financial accounting
CO5	Understand the concept of long term financing and cash & receivable management

Code of the Course/Subject	MHRD 302 Labour Legislations
Title of the Course/Subject	MHRD 302 Labour Legislations
CO No.	Course Outcomes
CO1	To know the development and the judicial setup of Labour Laws.
CO2	To learn the importance of Labour welfare.
CO3	To learn the importance of Labour Legal provisions relations to wages, working conditions & Labour Welfare.
CO4	To Learn the importance of Labour Legal provisions relations to social security.

Code of the Course/Subject	MHRD 303 International Human Resource Management
Title of the Course/Subject	MHRD 303 International Human Resource Management
CO No.	Course Outcomes
CO1	To understand the concept and various factors that influence IHRM
CO2	To learn the cultural differences and behaviour that influrnce businsss communications and negotiations with various stakeholders.
CO3	To understand the right structure for enhancing the effeciency and effectivesness of multinationals
CO4	To learn how to build cross culture project team

Code of the Course/Subject	MHRD 304 Knowledge Management
Title of the Course/Subject	MHRD 304 Knowledge Management
CO No.	Course Outcomes
CO1	To understand the concept of knowledge management and its applications.
CO2	To learn about knowledge transfer methods.
CO3	To gain an understanding about building knowledge system.
CO4	To aware about data management, data management and role of internet in knowledge management.
CO5	To know about the ethical, legal and managerial issues in knowledge management.
CO 6	To understand managing knowledge project.

Code of the Course/Subject	MHRD 305 Management of Industrial Relations
Title of the Course/Subject	MHRD 305 Management of Industrial Relations

CO No.	Course Outcomes
CO1	Identify with the concept of Industrial relations in India.
CO2	Understand the evolution of Indian perspective for Industrial relations.
CO3	Familiarise with the Grievance and Disciplinary Procedure in Industry.
CO4	Comprehend the Industrial Conflicts and Trade Union dispute resolution.
CO5	Acquainted with the Union movements, Collective bargaining and Workers participation.

Code of the Course/Subject	MHRD 306 Computer Applications in Human Resource Management - II
Title of the Course/Subject	MHRD 306 Computer Applications in Human Resource Management - II
CO No.	Course Outcomes
CO1	Familiarized with basics of computerized HRM Practices
CO2	Understand utilization of Computerized HRP software Package for Businesses
CO3	Improved Employee management regarding performance, training and development
CO4	Student will understand how use of computer in human resource management help in decreasing time complexity, flexibility, record keeping problem

Code of the Course/Subject	MHRD 401 Dynamics of Human Resource Development
Title of the Course/Subject	MHRD 401 Dynamics of Human Resource Development
CO No.	Course Outcomes
CO1	To understand the concept and sub-system of human resources development.
CO2	To know about applications of HRD and welfare.
CO3	To understand the relationship between HRD and employee counselling.
CO4	Stay updated with the new developments in counselling.

Code of the Course/Subject	MHRD 402 Wage and Salary Administration
Title of the Course/Subject	MHRD 402 Wage and Salary Administration
CO No.	Course Outcomes
CO1	To learn about principles of salary and wages administration.
CO2	To know about the causes of wage inequality.
CO3	To understand the role of trade union in wage determination.
CO4	Become aware about the concept of compensation and benefits (Bonus and fringe benefits)
CO5	To learn about Indian as well as international practices regarding wage and salary administration and compensation.

Code of the Course/Subject	MHRD 403 Employees Empowerment
Title of the Course/Subject	MHRD 403 Employees Empowerment
CO No.	Course Outcomes
CO1	Understand the meaning of Employee Empowerment
CO2	To attain indepth knowledge of employee empowerment and strategies for it.
CO3	To know the process of employee empowerment in Indian context
CO4	To understand about how employees empowerment works on employees
CO5	To analyse the process of employee empowerment and addressing new issues of it.

Code of the Course/Subject	MHRD 404 Functional Areas in Management - II
Title of the Course/Subject	MHRD 404 Functional Areas in Management - II
CO No.	Course Outcomes
CO1	Understand the basics of production management
CO2	Understand the concept of material management and production planning control
CO3	Understand the concept of Capacity Planning, Aggregate planning and work study
CO4	Learn about the various Transportation and Assignment Models
CO5	Understand the concept of simulation and Decision Making in the context of production function.

Code of the Course/Subject	MHRD 405 Corporate Planning & Strategy
Title of the Course/Subject	MHRD 405 Corporate Planning & Strategy
CO No.	Course Outcomes
CO1	To study about the systems and practices of corporate planning.
CO2	To Understand the process of formulation and implementation of corporate plan as well as learn how to evluate and control corporate plan.
CO3	To aware about the significance of corporate strategy.
CO4	Understand the role of corporate planning in public sector.

Code of the Course/Subject	MHRD 406 Human Resource Accounting and Audit
Title of the Course/Subject	MHRD 406 Human Resource Accounting and Audit
CO No.	Course Outcomes
CO1	Register under GST
CO2	Understand the working of GST network
CO3	How to make payments of GST
CO4	Claim for refund
CO5	Understand the various types of customs duties

DEPARTMENT OF PHYSICS
Programme: Bachlor of Science (Physics)

PO NO.	Programme Outcomes
PO1	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
PO4	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Code of the Course/Subject	PHY/S1CS
Title of the Course/Subject	Mechanics, Properties of matters, Oscillations & Relativity
CO No.	Course Outcomes
CO1	Discuss the basic concepts of rotational dynamics.
CO2	Examine the phenomenon of simple harmonic motion and distinction between undamped, damped and force oscillations and the concept of resonance.
CO3	Explain the superposition of simple harmonic motion and acquire the knowledge of Ultrasonic waves, their production, detection and applications in different field.
CO4	Determine the constants of elasticity and relate it with appropriate things
CO5	Interpret the postulates of special theory of relativity. 6. Know the concept of Global positioning system (GPS)
CO6	Know the concept of Global positioning system (GPS)

Code of the Course/Subject	PHY/S1
Title of the Course/Subject	(Laboratory/Practical/practicum/handson/Activity)
CO No.	Course Outcomes
CO1	List out, identify and handle various equipment likes different types of pendulum.
CO2	Learn the procedures of operation of various oscillating objects.
CO3	Acquire skills in observing and measuring different types of errors.
CO4	Perform procedures and techniques related to experiments based on mechanics.
CO5	Conduct an experiments collaboratively and ethically

Code of the Course/Subject	PHY-S2/physics
Title of the Course/Subject	Electrostatics, Magnetostatics, Ultrasonic Waves and Acoustics, Network Theorems
CO No.	Course Outcomes
CO1	7. Discuss the concept of scalars & vectors and their properties.
CO2	8. Develop an understanding of Gauss law and its applications to obtain electric filed in different cases.
CO3	9. Formulate the relationship between electric displacement vector, electric polarization and dielectric constant.
CO4	10. Distinguish between the magnetic effect of electric current, electromagnetic induction and the related laws in appropriate circumstances.
CO5	11. Simplify electrical circuits by applying various network theorems.

Code of the Course/Subject	PHY/S2
Title of the Course/Subject	Physics Lab-2
CO No.	Course Outcomes
CO1	6. Simplify various electrical circuits by using network theorems.
CO2	7. Learn the procedures of operation of electrical components like capacitor, resistor and inductor.
CO3	8. Acquire skills in measuring dielectric constants of different materials.
CO4	9. Perform procedures and techniques related to experiments based on electrical and electronic circuits.
CO5	10. Conduct an experiments collaboratively and ethically

Code of the Course/Subject	3S Physics
Title of the Course/Subject	Thermal Physics, Statistical Mechanics & Solid State Devices-I
CO No.	Course Outcomes
CO1	1. Gain knowledge of the fundamental laws of thermodynamics, concept of enthalpy, develop critical understanding of concept of thermodynamic potentials and formulation of Maxwell's thermodynamic relations with its applications.
CO2	2. Understand the basic aspects of kinetic theory of gases, Maxwell's distribution law of velocities, Mean free path of molecular collisions and transport phenomena in ideal gases.
CO3	3. Examine the nature of black body radiations and understand Stefan-Boltzmann's Law, Rayleigh-Jeans Law and Wien's displacement Law with their significance.
CO4	4. Understand the properties of macroscopic systems using the knowledge of individual particles by different theories and comparison of Maxwell's-Boltzmann, Fermi-Dirac and Bose-Einstein statistics.
CO5	5. Explain the fundamental understanding of static and dynamic behaviour of P-N junction diode, Zener diode, light emitting diode and Transistor.
CO6	6. Understand concept of rectification, Ripple Factor and Filter Circuits and gain a knowledge of construction of Regulated Power supply.
CO7	7. Explain the structure and the operations of transistor and recognize the different types of transistor and their applications.

Code of the Course/Subject	3S Physics Practical
Title of the Course/Subject	Practical for Thermal Physics, Statistical Mechanics & Solid State Devices-I
CO No.	Course Outcomes
CO1	1. Understand basic concept of heat transfer and analyze process of heat transfer (conduction, convection and radiation)
CO2	2. Demonstrate an understanding of concepts involved in semiconductor devices operation and their characteristics.
CO3	3. Identify and handle different types of semiconductor devices like diodes & Transistors.
CO4	4. Acquire skills in observing and measuring different type of errors.
CO5	5. Perform procedures and techniques related to experiments based on Thermal and Semiconductor Physics.
CO6	6. Learn best practices for handling, cleaning and maintaining the instruments.

Code of the Course/Subject	4S Physics
Title of the Course/Subject	Physical Optics, Fluid Dynamics & Solid State Devices-II
CO No.	Course Outcomes
CO1	1. Understand the phenomenon of Interference of light and its formation in thin films, Newton's rings and Michelson interferometer (division of amplitude.)
CO2	2. Distinguish between Fresnel and Fraunhoffer diffraction and observe the diffraction patterns in case of double slit and diffraction grating.
CO3	3. Describe the construction and working of zone plate and compare the zone plate with convex lens.
CO4	4. Explain various methods of production of plane, circularly and elliptically polarized light and their detection.
CO5	5. Comprehend the basic principle of LASER, the working of He-Ne laser and Ruby laser and their applications in various fields.
CO6	6. Understand the parameters of fiber-optics and explore their applications.
CO7	7. Understand the kinematics of moving fluid by different theorems and Laws.
CO8	8. Gain Knowledge about different applications of transistor by operational amplifier and oscillator circuits.

Code of the Course/Subject	4S Physics Practical
Title of the Course/Subject	Practical for Physical Optics, Fluid Dynamics & Solid State Devices-II
CO No.	Course Outcomes
CO1	1. Understand the different optical phenomena like Interference, Diffraction and Polarization.
CO2	2. Determine the wavelength of light by different phenomena like Interference and diffraction.
CO3	3. Demonstrate an understanding of the key concepts of LASER & Fiber Optics
CO4	4. List out, identify and handle different types of passive and active devices (resistors, capacitors, inductors, diodes & Transistors.
CO5	5. Acquire skills in observing and measuring different types of errors.
CO6	6. Perform procedures and techniques related to experiments based on Optics and Semiconductor Physics.
CO7	7. Learn best practices for handling, cleaning and maintaining the equipment, components & devices

DEPARTMENT OF PHYSICS
Programme: Masters of Science (Physics) National Education Policy (NEP 23)) 2023-24

PO NO.	Programme Outcomes
PO1	Instill an inquisitive mindset in the students so that they are capable of independent and critical thinking
PO2	Train-up the students in such a way that they can objectively carry out investigations, scientific and/or otherwise, without being biased or without having any preconceived notions
PO3	Apply the knowledge and skill in the design and development of Electronics circuits to fulfil the needs of Electronic Industry
PO4	Become professionally trained in the area of electronics, optical communication, nonlinear circuits, materials characterization and lasers.
PO5	Develop research problems related to Physics and Materials characterization and applications.
PO6	As technology exploits the rules of Physics, students properly trained in Physics can be good researchers in the field of technology too.
PO7	Demonstrate highest standards of Actuarial ethical conduct and Professional Actuarial behavior, critical, interpersonal and communication skills as well as a commitment to life-long learning.

Code of the Course/Subject	FSC
Title of the Course/Subject	Research Methodology and Intellectual Property Rights
CO No.	Course Outcomes
CO1	Understand the steps in research and pure and applied research.
CO2	Formulation of selected problem and understand the research design.
CO3	Test the research hypothesis, understand the data collection and prepare the scientific research paper.
CO4	Understand Characterization techniques in Physics
CO5	Explore on various IPR components and patent writing.
CO6	Understand the adequate knowledge on patent and rights

Code of the Course/Subject	DSC-I / Physics
Title of the Course/Subject	Mathematical Physics
CO No.	Course Outcomes
CO1	Explain vector spaces and transformations, the algebra of matrix, partitioning of matrices; solve the eigen value problems.
CO2	Analyze limits and continuity for complex functions as well as consequences of continuity; apply the concept and consequences of analyticity and the Cauchy-Riemann equations;
CO3	Obtain the solution of second-order differential equation and apply the properties of Legendre Polynomial to solve boundary value problems.
CO4	Apply the knowledge of Bessel and Hermite functions for the solution of differential equation and related problems in physical sciences.
CO5	Solve transfer functions in Instrumentation using Laplace transforms.
CO6	Apply Fourier transforms to transform the signal into different domains.

Code of the Course/Subject	DSC-II / Physics
Title of the Course/Subject	Classical Mechanics
CO No.	Course Outcomes
CO1	Define and understand basic mechanical concepts related to advanced problems involving the dynamic motion of classical mechanical systems and describe and understand the motion of the forces in non-inertial systems.
CO2	Describe and understand the motion of a mechanical system using Lagrange's formalism.
CO3	Describe and understand the motion of a mechanical system using Hamilton's formalism.
CO4	State the concept of two body central force problem, reduction to the equivalent one body problem, equation of motion and first integral, Virial theorem.
CO5	Able to explain the Canonical Transformations, figure out the Small oscillations, principal axis transformation, normal coordinates and its applications to linear molecules.

Code of the Course/Subject	DSC-III / Physics
Title of the Course/Subject	Quantum Mechanics I
CO No.	Course Outcomes
CO1	Discuss and explain the key concepts and principles of quantum physics
CO2	Use quantum mechanical axioms and the matrix representation in quantum mechanics

CO3	Solve the Schrödinger equation for standard systems with both analytical and numerical methods, and then interpret the results.
CO4	Describe orbital angular momentum operators and their eigen values.
CO5	Describe angular momentum addition rules and CG coefficients.
CO6	Use approximate methods for solving the Schrödinger equation.

Code of the Course/Subject	**DSE-I (i):**
Title of the Course/Subject	**Computational Methods and C Programming**
CO No.	**Course Outcomes**
CO1	Understand digital world of computer where fast calculation is the key to success, those computational methods are of great practical importance. The syllabus gives the best available methods with numerical and practical examples.
CO2	Apply the methods of differentiation, integration to solve initial value problems and integral equation.
CO3	Understand the important principles, methods and processes used for calculating results to the desired degree of accuracy.
CO4	Develop and execute C to solve computational problrms.
CO5	Develop flowchart a powerful aid for programming to find solutions of difficult problems.
CO6	Understand critical features such as pointers that are central to C programming.

Code of the Course/Subject	**DSE-I (ii)**
Title of the Course/Subject	**Computational Methods and Scilab Programming**
CO No.	**Course Outcomes**
CO1	Apply the knowledge gained in computational and numerical methods to solve problems in physics.
CO2	Analyse computationally the given problems in physics by various theoretical models.
CO3	Evaluate the complex problems in physics based on specific theories, procedures and tools and evaluate the complex problems in physics based on specific theories, procedures and tools.
CO4	Familiarize students with the Scilab environment and its features, develop programming skills in Scilab for scientific computations.
CO5	Enable students to analyze and visualize data using Scilab, apply Scilab to solve physics problems and perform numerical simulations and enhance problem-solving abilities through coding and data analysis.

Code of the Course/Subject	**DSE-I (iii)**
Title of the Course/Subject	**Computational Methods and Python Programming**
CO No.	**Course Outcomes**
CO1	Apply the knowledge gained in computational and numerical methods to solve problems in physics.
CO2	Analyse computationally the given problems in physics by various theoretical models.
CO3	Evaluate the complex problems in physics based on specific theories, procedures and tools and evaluate the complex problems in physics based on specific theories, procedures and tools.
CO4	Familiarize students with the Python environment and its features, develop programming skills in Python for scientific computations.
CO5	Enable students to analyze and visualize data using Python, apply Python to solve physics problems and perform numerical simulations and enhance problem-solving abilities through coding and data analysis.

Code of the Course/Subject	**DSC IV- Physics**
Title of the Course/Subject	**Quantum Mechanics II**
CO No.	**Course Outcomes**
CO1	Be able to derive and apply time-independent perturbation theory to solve simple problems for which no analytic solutions exist
CO2	Be able to derive and apply the results of time-dependent perturbation theory up to first order and to derive and apply Fermi's golden rule, and explain the relevance of selection rules for atomic transitions and opto-electronic phenomena in solids.
CO3	Understand background allowed and forbidden transitions.
CO4	Learn the quantum mechanics of scattering and its role to understand matter at subatomic level.
CO5	Learn the quantum mechanics of identical particle systems.
CO6	Learn the advanced concepts of relativistic quantum mechanics involving the Klein Gordon and the Dirac equations.

Code of the Course/Subject	DSC V- Physics
Title of the Course/Subject	Electromagnetic Theory
CO No.	Course Outcomes
CO1	Acquire the extensive knowledge of electrostatics.
CO2	Acquire the extensive knowledge about dielectric properties of the substances.
CO3	Acquire the extensive knowledge of magnetostatics.
CO4	Understand the significance of Maxwell's equations, concept of electromagnetic fields and electrodynamics.
CO5	Apply the concepts of electrodynamics to explore power radiated by oscillating electric dipole and radiation pressure.
CO6	Explore the propagation of electromagnetic waves in various media and wave guides.

Code of the Course/Subject	DSC VI- Physics
Title of the Course/Subject	Atomic and Molecular Physics
CO No.	Course Outcomes
CO1	Describe structure atom by drawing the vector diagram and the physical interpretation of atom using quantum numbers.
CO2	Explain the quantum behaviour of atoms in external electric and magnetic fields.
CO3	Explain the coupling schemes and spectral line broadening in external fields to understand the fine structure of alkali elements.
CO4	Recognize the spectroscopy of many electron atomic systems and hyperfine splitting of spectral lines through Resonance Spectroscopy (ESR and NMR)
CO5	Understand the importance of rotational and vibrational energy levels by studying molecular spectroscopy.
CO6	Describe the Infrared and Raman spectra of polyatomic molecules and interpret the results from spectra.

Code of the Course/Subject	DSE-II (ii): Physics
Title of the Course/Subject	Spectroscopic Techniques
CO No.	Course Outcomes
CO1	Understand about interaction of electromagnetic radiations with mater.
CO2	Understand about ultraviolet-visible spectroscopy and their applications.
CO3	Understand infrared spectroscopy and experimental applications to determine molecular structure.
CO4	Understand Raman Effect, principle of Raman spectroscopy, mechanism of Raman Effect, instrumentation required and Applications.
CO5	Understand photoelectron spectroscopy, principle, instrumentation, and applications.
CO6	Understand Mossbauer spectroscopy, principle, instrumentation, and applications.

Code of the Course/Subject	DSE-II (iii): Physics
Title of the Course/Subject	Network Theorems and Solid State Devices
CO No.	Course Outcomes
CO1	Analyse ac and dc networks.
CO2	Use diodes, UJT and SCR to design circuits for various applications
CO3	Design and construct regulated power supply and SMPS.
CO4	Design and construct single stage and two stage amplifier circuits.
CO5	Design and construct oscillators and multivibrators.
CO6	Identify various transducers and use measuring instruments.

Code of the Course/Subject	Practical / Mathematics
Title of the Course/Subject	Mathematics with Scilab
CO No.	Course Outcomes
CO1	Install Scilab Software and execute loops and conditional statements
CO2	Able to understand the basic concepts of programming
CO3	Perform basic mathematical operations using Scilab Software.
CO4	Analyze different types of data using plotting of functions in Scilab.
CO5	Handle matrices and their operations in Scilab; Plot and visualize 2D and 3D graphs of various functions.
CO6	Understand the main features of the Scilab program development environment to enable it's usage in the higher learning. Interpret and visualize simple mathematical functions and operations by using plots.

Code of the Course/Subject	3PHY-1
Title of the Course/Subject	Statistical Mechanics
CO No.	Course Outcomes

CO1	Understand the concept of microscopic and macroscopic states and relationship between thermodynamics and statistics; classify ensembles, relate partition function with thermodynamic quantities.
CO2	Discuss statistics of indistinguishable particles, application of Fermi-Dirac and Bose-Einstein distribution to these particles.
CO3	Interpret classical (Maxwell-Boltzmann) statistics and quantum statistics (Bose and Fermi Dirac) statistics for different systems of particles.
CO4	Discuss phase transition, transport phenomenon and correlate space - time dependent fluctuations.
CO5	Understand the concept of super-fluidity, Landau's theory and non-equilibrium processes.

Code of the Course/Subject	**3PHY-2**
Title of the Course/Subject	**Atomic & Molecular Physics**
CO No.	**Course Outcomes**
CO1	Describe VAM and quantum numbers and understand spectroscopy of the hydrogen and alkali atoms
CO2	Discuss of quantum behaviour of atoms in external electric and magnetic fields and recognize the spectroscopy of many electron atomic systems and hyperfine splitting of spectral lines
CO3	Discuss Paschen Back effect, Stark effect, apply coupling schemes for two electron atoms and describe Resonance Spectroscopy (ESR and NMR)
CO4	Be able to apply knowledge to detailed understanding of vibrationalrotational spectroscopy of diatomic molecules, isotope shifts and the detailed concept of Infrared and Raman spectra of Polyatomic molecules.
CO5	Discuss the importance of rotational and vibrational energy levels by studying molecular spectroscopy.

Code of the Course/Subject	**3PHY -3 (i)**
Title of the Course/Subject	**Radiation and Plasma Physics**
CO No.	**Course Outcomes**
CO1	Discuss charged particle dynamics and radiation from localized time varying electromagnetic sources and the basic mathematical concepts related to electromagnetic vector fields.
CO2	Discuss and solve wave equation for electric field and magnetic fields in free space.
CO3	Be familiar with concepts of plasma physics and its relation with ordinary electromagnetics.
CO4	Discuss the concept and application of wave guide, plasma and confinement and effect of magnetic field on electromagnetic wave.
CO5	Be familiar with the Magnetosonic and Alfven Waves

Code of the Course/Subject	**3PHY -3 (ii)**
Title of the Course/Subject	**Spectroscopic Techniques**
CO No.	**Course Outcomes**
CO1	Discuss about interaction of electromagnetic radiations with mater and ultraviolet-visible spectroscopy and their applications.
CO2	Understand infrared spectroscopy and experimental applications to determine molecular structure.
CO3	Understand Raman Effect, principle of Raman spectroscopy, mechanism of Raman Effect, instrumentation required and Applications.
CO4	Understand the principal and theory of Mossbauer spectroscopy
CO5	Understand modern spectroscopic techniques such as EDS, EDAX, XRF and XPS.

Code of the Course/Subject	**3PHY -4 (i)**
Title of the Course/Subject	**Digital Techniques**
CO No.	**Course Outcomes**
CO1	Construct and describe the operations of basic logic gates.
CO2	Use the Boolean algebra for the combinational logic design.
CO3	design and discuss the operations of various digital devices such as converters, multiplexers, etc.
CO4	Discuss the operations of Flip – Flop, Shift Registers and counters.
CO5	Discuss the operations of various memory devices such as RAM, EPROM, EEPROM and their series and parallel expansion.

Code of the Course/Subject	**3PHY -4 (ii)**
Title of the Course/Subject	**Condensed Matter Physics -I**
CO No.	**Course Outcomes**

CO1	Discuss the concept of band theory using models and theorems functional materials from an experimental viewpoint, solid state theory and properties; classify different crystal lattice types and state its correlation with reciprocal lattice and crystal diffraction.
CO2	Describe the origin of magnetism in solids and discuss classical and quantum theories for the paramagnetic solids.
CO3	Discuss the properties and origin ferromagnetism in solids and related theories.
CO4	Describe the dielectric properties of insulators and polarization mechanisms, outline its application in day-to-day life
CO5	Explain basic concepts of superconductivity, its properties, important parameters related to possible applications

Code of the Course/Subject	**3PHY -4 (iii)**
Title of the Course/Subject	**Photonics -I**
CO No.	**Course Outcomes**
CO1	Discuss the significance of Maxwell equations in electrodynamics, EM wave, radiation; understand fundamentals of geometric optics.
CO2	Discuss and apply the fundamentals of modern optics.
CO3	Discuss and apply the concept fourier optics; understand the concept holography.
CO4	Discuss and apply the concept near field optics; evanescent waves.
CO5	Discuss the radiation pressure of laser light, optical tweezers and concept of atom laser.

Code of the Course/Subject	**4PHY-1**
Title of the Course/Subject	**Nuclear and Particle Physics**
CO No.	**Course Outcomes**
CO1	Understand the structure of atomic nuclei and basic properties of a nucleus such as binding energy and nuclear forces, the experiments to measure nuclear magnetic moment by Rabi's method and Block's method
CO2	Interpret ground state properties of Deuteron, discuss Meson Theory of Nuclear forces, beta decay and parity violation in the beta decay process.
CO3	Understand the concept of neutron physics, neutron energy sources and detectors.
CO4	Understand the process in particle detection and accelerations; identify and differentiate different nuclear detectors and particle accelerators.
CO5	Classify elementary particles and understand interaction between them.

Code of the Course/Subject	**4PHY-3 (i)**
Title of the Course/Subject	**Nano-science and Nanotechnology**
CO No.	**Course Outcomes**
CO1	Understand the concept of free electron theory and 1D, 2D, 3D nanomaterials, band structure in three dimensions.
CO2	Understand various chemical and physical methods for the synthesis of diverse types of nanomaterials (0D, 1D and 2D); derive information on the specific details of both bottom up and top-down synthesis
CO3	Understand working principles and analysis of size, topography and morphology analysis of nanomaterials based on SEM/TEM and scanning probe microscopies (AFM and STM).
CO4	Describe the size dependent properties of nanostructured materials using the concept of quantum confinement and summarize their electrical and mechanical properties.
CO5	Acquire the knowledge of carbon nanostructures and illustrate their potential applications.

Code of the Course/Subject	**4PHY-3 (ii)**
Title of the Course/Subject	**Advanced Microprocessor and Microcontroller**
CO No.	**Course Outcomes**
CO1	Describe 8086 microprocessor, architecture, hardware, pin diagram, interface, modes of operation, memory addressing, address decoding and memory system design.
CO2	Write and execute 8086 assembly language programming.
CO3	Describe 8051 microcontroller architecture, hardware, interfacing, memory, I/O pins and interrupts.
CO4	Write and execute 8051 microcontroller assembly language programming.
CO5	Build I/O interfacing for 8051 microcontroller

Code of the Course/Subject	**4PHY-4 (i)**
Title of the Course/Subject	**Microprocessor Programming and Interfacing**
CO No.	**Course Outcomes**
CO1	Describe 8085 microprocessor, architecture, blocks, basic instruction set.

CO2	Write and execute 8085 assembly language programs.
CO3	Build I/O interfacing for 8085 microprocessor.
CO4	Understand and build programmable interface with peripheral devices.
CO5	Describe interrupt structure of 8085.

Code of the Course/Subject	**4PHY-4 (ii)**
Title of the Course/Subject	**Condensed Matter Physics - II**
CO No.	**Course Outcomes**
CO1	Identify different type of defects and imperfections in crystals.
CO2	Explain various dislocations and stacking faults in close packed structures by experimental methods.
CO3	Interpret the Hartee & Hartee-Fock approximation; understand the basics of Fermi Liquid Theory.
CO4	Describe different types of point defects within the frame work of band model.
CO5	Identify different types of lattice disorders applying theoretical models, summarize impurity band semiconductor and amorphous semiconductors.

Code of the Course/Subject	**4PHY-4 (iii)**
Title of the Course/Subject	**Photonics - II**
CO No.	**Course Outcomes**
CO1	Discuss details about optical fiber, their classification, fabrication techniques and applications.
CO2	Describe optical communications, optical transmitters, optical receivers, system design and performance.
CO3	Discuss fundamentals of optical amplifiers, dispersion compensation and optical signal processing.
CO4	Discuss about optical devices, optical modulators, optical transducers, optical switches, optical logic gates, photonic circuits, and optical sensors.
CO5	Understand design, working and applications of optoelectronic devices like light emitting diodes (LED's), Diode lasers, fiber lasers and wave division multiplexing network optical devices.

DEPARTMENT OF ZOOLOGY
Programme: Bachelor of Science (Zoology)

PO NO.	Programme Outcomes
PO1	.Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO3	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
PO4	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO6	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO7	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Code of the Course/Subject	DSC -1-01S/Zoology
Title of the Course/Subject	Life and diversity of Animals (Non-chordata)
CO No.	Course Outcomes
CO1	Develop a deeper sense with respect to phylum Protozoa to Echinodermata relation to taxonomy, classification, body organization and general characteristics this strengthens students' capability in basic zoology.
CO2	grasp various the Systematic positions from Protozoa to Echinodermata their pathogenicity and its epidemiology.
CO3	describe unique characters and recognize life functions of Protozoa, Porifera, Coelenterate, Helminthes, Arthropoda, Annelida, Mollusca and Echinodermata
CO4	Improve ability and apply Knowledge of Non-chordates for its execution in Agriculture especially with the phylum Arthropoda.
CO5	Implement an extensive idea about economic and ecological significance of various non-chordates phylum's in human life

Code of the Course/Subject	DSC-2-02S/Zoology
Title of the Course/Subject	Life and diversity of Animals (Chordata) and concept of Evolution
CO No.	Course Outcomes
CO1	know what the chordates are
CO2	Learn about the different phylum of chordates
CO3	confidently explain the general characters and classification of Protochordates upto class Mammalia.
CO4	understand the level of organization in chordate
CO5	explain the origin and evolutionary relationship in different subphylums of chordates
CO6	describe specific features of Protochordates upto class Mammalia.
CO7	recognize and differentiate life functions of Protochordates upto class Mammalia
CO8	understand Migration in fishes and birds , parental care in Amphibians and Poisonous and non-poisonous snakes.
CO9	explain the adaptations in Birds and Mammals.

Code of the Course/Subject	DSC-3-03S/Zoology
Title of the Course/Subject	Cell Biology and Developmental Biology
CO No.	Course Outcomes
CO1	Describe the structure and function of cellular organelles
CO2	Describe various mode of cellular transport.

CO3	Compare active transport with passive transport
CO4	Describe structure of chromosomes
CO5	Differentiate between various types of chromosomes.
CO6	Define the basic concept of developmental biology, cell division, embryogenesis and emergence of adult organisms.
CO7	Describe zygote formation and different stages of embryonic development in frog and chick.

Code of the Course/Subject	**DSC-4-04S/Zoology**
Title of the Course/Subject	**Genetics and Ecology**
CO No.	**Course Outcomes**
CO1	Describe Mendel's Laws of Inheritance
CO2	Differentiate between a monohybrid and a dihybrid cross.
CO3	Deduce the type of gene interaction from ratio of offspring.
CO4	. Describe linkage and crossing over.
CO5	Describe various modes of sex determination
CO6	Identify the type of syndrome from karyotype
CO7	Describe various prenatal diagnostic techniques.
CO8	Describe effects of water, temperature and light as ecological factors
CO9	Identify the type of biotic interaction from given example
CO10	Describe components of ecosystem and structure of terrestrial and marine ecosystem.

DEPARTMENT OF ZOOLOGY
Programme: Master of Science (Zoology) /NEP

PO NO.	Programme Outcomes
PO1	Demonstrate the significance of the topics of syllabi and evaluate its relevance. Think creatively for its gravity and develop ideas.
PO2	Interpret scientific ideas and can do its analysis. Create experiments independently and draw inferences by sharing it with others.
PO3	Derive information from various digital sources. Develop skills for scientific writing and present the data and analyse it scientifically.
PO4	Articulate scientific ideas lay down a hypothesis; design the pathway to develop research ideas
PO5	Acquaint skills in handling the instruments and different techniques through practicals and developing the scientific temperaments for research.
PO6	Develop competence through healthy atmosphere and quality intercommunication with different groups.
PO7	Understand environmental and sustainability issues and its sensitivity in relation to regional relevance
PO8	Get the facility of different training and internship programs through job-oriented curriculum
PO9	Utilize the sources confidently and independently and develop self-sustenance.

Code of the Course/Subject	1ZOO (RM)
Title of the Course/Subject	Research Methodology and Intellectual Property Rights
CO No.	Course Outcomes
CO1	Fundamental knowledge and skills required to conduct effective research in the field
CO2	Covers various research methodologies, experimental design, analysis , interpretation, scientific communication and ethics in research.
CO3	Understand the role of research methodology in Science/Zoology.
CO4	Understand literature review process and formulation of a research problem.
CO5	Understand data collection methods and basic instrumentation.
CO6	Learn technical writing and communication skills required for research.
CO7	IPR aims to equip students with a comprehensive understanding of intellectual property laws, principles and practices
CO8	Create awareness about intellectual property rights and patents.

Code of the Course/Subject	1ZOO1
Title of the Course/Subject	Structure and Functions of Invertebrates
CO No.	Course Outcomes
CO1	Describe various methods of taxonomy
CO2	Differentiate between different methods of taxonomy.
CO3	Identify different types of feeding in invertebrates.
CO4	Describe mechanisms of chemoreception and photoreception in invertebrates
CO5	Conjecture the stage of metamorphosis in insects from concentrations of different hormones.
CO6	Differentiate between different modes of reproduction

Code of the Course/Subject	1 ZOO2
Title of the Course/Subject	General Physiology
CO No.	Course Outcomes
CO1	To develop a deep understanding of enzymes, hormones, respiratory pigments and neurotransmitter
CO2	To understand the concept of Thermoregulation, osmoregulation, chemiluminescence and camouflage with suitable examples.
CO3	To understand the various functional components of an organism
CO4	To explore the complex network of these functional components.
CO5	To comprehend the regulatory mechanism for maintenance of function in the body.
CO6	To understand the concept of special senses.

Code of the Course/Subject	1 ZOO 3
Title of the Course/Subject	Gamete Biology

CO No.	Course Outcomes
CO1	Study spermatogenesis and oogenesis in eukaryotes.
CO2	Determine different events and their mechanisms during fertilization and its consequent changes
CO3	Learn assisted reproduction techniques to overcome infertility
CO4	Understand Ex vivo and In vivo gene therapy etc
CO5	Learn about contraception and methods

Code of the Course/Subject	1 ZOO4 (TB)
Title of the Course/Subject	Tools And Techniques In Biology
CO No.	Course Outcomes
CO1	Student will develop real time problem solving skills using techniques like electrophoresis, chromatography based applications based questions and projects.
CO2	The course will help to understand the principles and applications of different biophysical techniques.
CO3	The Course will able to differentiate in between structure, size, shape, dynamics, polarity, and modes of interaction of biological molecules.
CO4	To get acquainted with Cytological and histological techniques.

Code of the Course/Subject	1ZOO4
Title of the Course/Subject	Wildlife Conservation and Management
CO No.	Course Outcomes
CO1	Define and Explain Wildlife Conservation: Students will articulate the definition and significance of wildlife conservation, discussing its role in preserving biodiversity and ecological balance.
CO2	Examine Wildlife Management Techniques: Students will demonstrate the ability to apply wildlife management techniques, including assessing wildlife populations, habitat management, and the establishment of wildlife corridors.
CO3	Analyze Legal and Policy Frameworks: Students will analyze the legal and policy frameworks governing wildlife conservation, with an understanding of international conventions and the roles of governmental and non-governmental organizations.
CO4	Evaluate Human-Wildlife Interactions: Students will evaluate the interactions between humans and wildlife, identifying potential conflicts and proposing strategies for mitigation.
CO5	Design Sustainable Wildlife Tourism Practices: Students will design and justify sustainable wildlife tourism practices, considering economic benefits and ethical considerations.
CO6	Promote Conservation Awareness through Education: Students will design educational initiatives to raise conservation awareness, emphasizing responsible wildlife viewing practices and ethical wildlife management.

Code of the Course/Subject	2 ZOO 1
Title of the Course/Subject	Structure and Functions of Vertebrates
CO No.	Course Outcomes
CO1	. Describe merits and demerits of different types of taxonomic keys.
CO2	Differentiate between binomial and trinomial nomenclature.
CO3	Describe rules of International Code of Zoological Nomenclature (ICZN).
CO4	Identify various derivatives of integument in vertebrates
CO5	Describe characteristic features of Agnatha
CO6	Differentiate between different types of kidneys
CO7	Justify position of protochordates among chordates

Code of the Course/Subject	2ZOO2
Title of the Course/Subject	MOLECULAR CELL BIOLOGY
CO No.	Course Outcomes
CO1	At the end of the course, the student has a strong foundation on the functions of the cell.
CO2	This course imparts students the knowledge about how cell to cell communication occurs to carry out different functions of the cell.
CO3	The course will help to understand the basic principles of signal transduction mechanisms, in particular the concepts of response specificity, signal amplitude and duration, signal integration and intracellular location

CO4	It will help the students to provide knowledge about cytoskeleton of the cells and how it gives strength , shape and motility to the cell.
CO5	Have an overview of the different intracellular transport pathways in the eukaryotic cell, and understand how proteins and lipids affect these processes

Code of the Course/Subject	**2ZOO3**
Title of the Course/Subject	**Ecology and Environment**
CO No.	**Course Outcomes**
CO1	Understand the concepts and principles of ecology.
CO2	Understand the structural and functional aspects of biodiversity and the need for its conservation.
CO3	Be aware of the suitable use of field techniques, data collection, mapping, analysis and interpretation.
CO4	Be able to take up interdisciplinary research and teaching in ecology and environment.
CO5	Making the people and the society aware towards better understandings of the environmental ethics, issues and challenges before the vast growing population of the state and the country as well.

Code of the Course/Subject	**2ZOO4**
Title of the Course/Subject	**Advanced Tools and Techniques**
CO No.	**Course Outcomes**
CO1	Here students are taught to deal with different tools and techniques applicable in biological
CO2	research including various types of microscopes, spectrophotometer and bioinformatics software. etc.
CO3	The theory session mainly focuses on understanding the principles and working mechanisms of different instruments.
CO4	Learning of Principle and applications of different radioactive material
CO5	Learning phylogeny construction by using bioinformatics software
CO6	Develop skills of advanced instrumentation

Code of the Course/Subject	**2ZOO4**
Title of the Course/Subject	**Advance Wildlife Conservation and Management**
CO No.	**Course Outcomes**
CO1	Understand the significance of ecosystem services and biodiversity in wildlife conservation, recognizing their importance in supporting human well-being and ecosystem health.
CO2	Analyze the role of biodiversity in ecosystem functions and comprehend the potential threats posed to wildlife and habitats.
CO3	Describe the principles of wildlife ecology and population dynamics, including factors influencing wildlife populations and their growth.
CO4	Recognize migratory patterns and behavioural adaptations in wildlife and understand their ecological significance
CO5	Apply the core principles of conservation biology to design effective strategies for wildlife protection.
CO6	Explore conservation approaches outside protected areas, considering community-based conservation and conservation breeding for endangered species.
CO7	Demonstrate the ability to engage local communities as partners in wildlife conservation, understanding their perspectives and involving them in decision-making processes.
CO8	Facilitate stakeholder dialogue and conflict resolution to address human-wildlife conflicts and promote coexistence

PO NO.	**Programme Outcomes**
PO1	Demonstrate the significance of the topics of syllabi and evaluate its relevance. Think creatively for its gravity and develop ideas.
PO2	Interpret scientific ideas and can do its analysis. Create experiments independently and draw inferences by sharing it with others.
PO3	Derive information from various digital sources. Develop skills for scientific writing and present the data and analyse it scientifically
PO4	Articulate scientific ideas lay down a hypothesis; design the pathway to develop research ideas
PO5	Acquaint skills in handling the instruments and different techniques through practical and developing the scientific temperaments for research
PO6	Develop competence through healthy atmosphere and quality intercommunication with different groups.
PO7	Understand environmental and sustainability issues and its sensitivity in relation to regional relevance

PO8	Get the facility of different training and internship programs through job-oriented curriculum
PO9	Utilize the sources confidently and independently and develop self-sustenance

Code of the Course/Subject	**3ZOO1/3ZOO2**
Title of the Course/Subject	**Molecular Cytogenetics-I and Molecular Cytogenetics-II**
CO No.	**Course Outcomes**
CO1	Molecular Cytogenetics gives the knowledge of biological mechanisms of variations and heredity
CO2	It also gives an elementary idea about different hereditary diseases and syndromes and their inheritance
CO3	It trains the students to perform laboratory exercises in Cytogenetics

Code of the Course/Subject	**3ZOO3/ 3ZOO4**
Title of the Course/Subject	**Animal Physiology-I and Animal Physiology-II**
CO No.	**Course Outcomes**
CO1	Animal physiology gives the knowledge of biological processes through the investigation of physiological processes
CO2	It enables to understand the chemical and molecular processes that occur in and between cells
CO3	It also provides knowledge about the theoretical processes related to hormonal action.
CO4	Trains the students to perform laboratory exercises in Animal physiology that is applicable to Pathology laboratory, medicine, forensics and pharmaceutical industry.

PO NO.	**Programme Outcomes**
PO1	Knowledge of various branches of Zoology and in particular Molecular Biology for Postgraduate studies is made possible.
PO2	This higher studies make the student for widening the horizon of knowledge for the sustenance of the stakeholders.
PO3	Awareness and relative action to reduce the hurdles of the lives of people through the steps for reduction of pollution and global warming.
PO4	Students acquainted to the skills in handling the instruments and different techniques through the practical and developing the scientific temperaments for research.

Code of the Course/Subject	**4ZOO1**
Title of the Course/Subject	**Biochemistry**
CO No.	**Course Outcomes**
CO1	Biochemistry gives the knowledge of biomolecules and the biochemical processes occurring inside the cell and the body as a whole
CO2	It trains the students to carry out laboratory exercises in biochemistry and biochemical investigations.

Code of the Course/Subject	**4ZOO2**
Title of the Course/Subject	**Enzymology and Biostatistics**
CO No.	**Course Outcomes**
CO1	Animal physiology gives the knowledge of biological processes through the investigation of physiological processes
CO2	It also gives some idea about clinical and pharmaceutical applications of enzymes.
CO3	It trains the students to carry out laboratory exercises related to enzyme activity and estimations of enzymes.
CO4	Biostatistics trains the students in handling and analyzing the biological clinical data.

Code of the Course/Subject	**4ZOO3/4ZOO4**
Title of the Course/Subject	**Animal Physiology-III and Animal Physiology-IV**
CO No.	**Course Outcomes**
CO1	Enzymology enables to understand the role and activities of various enzymes functioning in the body.
CO2	It enables to understand the chemical and molecular processes that occur in and between cells
CO3	It also provides knowledge about the theoretical processes related to hormonal action.

CO4	Trains the students to perform laboratory exercises in Animal physiology that is applicable to Pathology laboratory, medicine, forensics and pharmaceutical industry.