SRI RAMAKRISHNA
COLLEGE OF ARTS & SCIENCE

AN AUTONOMOUS INSTITUTION

(FORMERLY SNR SONS COLLEGE)

Affiliated to Bharathiar University

Approved by Govt of Tamilnadu, UGC & AICTE, New Delhi
Re-Accredited with "A" Grade by NAAC
AN ISO 9001:2015 Certified Institution

SRCAS/CP/M05

PROGRAMME OUTCOMES
&
COURSE OUTCOMES MANUAL

ACADEMIC YEAR: 2018 - 2019

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Abbreviations:

1. SRCAS – Sri Ramakrishna College of Arts and Science
2. CP – Core Process
3. MXX – Manual numbered as 'XX' – Example – M03, M04 etc.,
4. DXX – Document numbered as 'XX' – Example – D01, D02 etc.,
5. DXXX – Document numbered as 'XX' and another 'X' refers to course type – For example – in the document no. - D01L, 'L" refers to Language courses & in document no. – 'D0lE' , 'E' refers to Enhancement courses
6. PPO – Programme educational Objectives & Programme Outcomes
7. PCO – Programme Outcomes and Course Outcomes
8. CO – Course Outcomes
9. PO – Programme Outcomes
10. AY – Academic Year
11. NA – Not Applicable

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D01

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Excel in contemporary knowledge of Commerce to gain productive employment for their lifelong growth in different sectors of commerce, trade and industry.
PEO2	Become a successful and dynamic entrepreneur in the emerging environment with innovative thinking, leadership skills and effective communication.
PEO3	Expose as a competent professionals globally.
PEO4	Be capable of making a positive contribution to the society by enhancing social responsibility and moral values.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Excel in the Field of Accounting, Finance, Taxation and related areas of Commerce.
PO2	Possess with good administrative and managerial skills to succeed in the Competitive world.
PO3	Analyze and evaluate the possible opportunities in the business environment and to Excel in the field of entrepreneurship globally.
PO4	Obtain proficiency in fundamentals of law, relating to business and commercial activities.
PO5	Function effectively as an individual and as a member or leader in teams and in Multidisciplinary settings.
PO6	Prepare for Post graduate studies and professional courses to achieve success in their career.
PO7	Become socially responsible and value driven citizen committed to sustainable development.
PO8	Possess a solid foundation for professional growth and as a lifelong learner.

PROGRAMME NAME - BCom

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CO101 COURSE NAME: PRINCIPLES OF ACCOUNTANCY

CO1: Understand the concepts and conventions of Accounting and Accounting frame work.
CO2: Ascertain the Financial Position of the Business Concern.
CO3: Gain knowledge regarding Bills of Exchange, Account Current & Average Due Date.
CO4: Capable of understanding and acquiring the knowledge in the consignment and joint venture.
CO5: Gain Conceptual knowledge relating to treatment of accounting regarding Non-profit organization.

COURSE CODE: 18CO102 COURSE NAME: BUSINESS ORGANISATION

CO1: Understand the different forms of business organisation working in India and find the suitable form, size to the various needs.
CO2: Acquire the knowledge on various sources of finance for different capital requirement of business.
CO3: Get the basic knowledge of various sources of finance, stock market operations, Investors protection and its regulatory authorities.
CO4: Understand the nature, effect and causes of business combinations and its importance to industrial growth.

COURSE CODE: 18CO103 COURSE NAME: COMPUTER PRACTICAL – I (MS OFFICE)

CO1: Familiar with MS Office and its applicability in Business.

COURSE CODE: 18CO104 COURSE NAME: INFORMATION TECHNOLOGY IN BUSINESS

CO1: Understand the basic knowledge of computer systems and information technology in functional areas of business.
CO2: Suggest the right Information System for an organization based on its business processes.
CO3: Understand the recent development and implementation of Information Systems in business.

COURSE CODE: 18ES01 COURSE NAME: ENVIRONMENTAL STUDIES

CO1: Understand the principles of ecology and major concepts in environmental sciences.
CO2: Identify the key concepts in Environmental pollution that apply to air, land and water issues on a global scale and population growth.
CO3: Relate the Socio- Environmental issues and apply them to the analysis or question related to the environment.
CO4: Understand the human rights, women and child welfare in the environment.

COURSE CODE: 18ACO101 COURSE NAME: ADVANCED FINANCIAL ACCOUNTING

CO1: Understand the purpose of financial accounting.
CO2: Comprehend the qualitative characteristics of financial statements.
CO3: Exhibit the use of double entry system in recording transaction.
CO4: Prepare financial statements and the interpretation thereof.

COURSE CODE: 18ACO102 COURSE NAME: ORGANIZATION MANAGEMENT I

CO1: Understand the types of business & the way they are structured.
CO2: Understand the role of corporate governance.
CO3: Understand the impact of external environment in the organization.

SEMESTER II

COURSE CODE: 18CO201 COURSE NAME: FINANCIAL ACCOUNTING

CO1: Understand the procedures for calculating depreciation.
CO2: Apply the concepts of accounting to make effective financial decisions.
CO3: Apply the knowledge in the field of branch and departmental accounting areas in business.
CO4: Analyze the process of royalties and investment accounts.

COURSE CODE: 18CO202 COURSE NAME: BUSINESS ENVIRONMENT

CO1: Understand the nature and role of legal, economic, Political and technological environment.
CO2: Gain in-depth knowledge in industrial policy and its impact on privatization.
CO3: Capable of understanding the concept of globalization, FDI, MNCs and its importance.

COURSE CODE: 18CO203 COURSE NAME: MANAGEMENT CONCEPTS

CO1: Demonstrate their conceptual skills, understanding and application of principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for Organizing, directing and controlling.
CO3: Develop skills and ability to work in groups to achieve organizational goals and ability to lead teams.
CO4: Demonstrate their ability in applying the managerial concepts in real time problems.

COURSE CODE: 18ACO201 COURSE NAME: ADVANCED MANAGEMENT ACCOUNTING

CO1: Acquire knowledge and understanding of nature, purpose and scope of managerial information.
CO2: Understand the concept of costs.
CO3: Analyze the methods of costing - absorption & marginal costing.
CO4: Prepare budgets and standard costs for planning & control

COURSE CODE: 18ACO202 COURSE NAME: FINANCIAL REPORTING I

CO1: Understand the use and application of the IFRS (and Ind AS in India).
CO2: Account transactions using accounting standards.
CO3: Prepare financial statement of single entity.
CO4: Analyse & interpret accounting statements.

COURSE CODE: 18ACO203 COURSE NAME: ORGANIZATION MANAGEMENT II

CO1: Understand strategic, managerial & operating levels of management with regard to the principles of authority, responsibility & accountability.
CO2: Understand the role of various functions of management such as R & D, sales, marketing, production, purchase, administration, finance & accounting, support services, and human resources.

CO3: Understand management functions such as planning, organizing, decision - making, communicating, coordinating and control.
CO4: Understand the role of leadership with regard to different leadership styles.

COURSE CODE: 18MATC01 COURSE NAME: BUSINESS MATHEMATICS

CO1: Construct the set theory problems.
CO2: Solve the matrix problems.
CO3: Evaluate the simple differentiation and integration problems.
CO4: Calculate interest and annuities.
CO5: Gain knowledge about the Straight lines and circles.

SEMESTER III

COURSE CODE: 17CO301 COURSE NAME: COST ACCOUNTING

CO1: Justify the place and role of cost accounting in the modern economic environment.
CO2: Differentiate methods of schedule costs per unit of production and differentiate methods of calculating stock consumption.
CO3: Describe the various incentive scheme, overhead apportionment and reapportionment techniques that are applied to manufacturing and service business.
CO4: Determine the cost of each process where product passes from different stages of manufacturing to get its finished form.
CO5: Understand the tools and techniques used in transport and contract costing.

COURSE CODE: 17C0302 COURSE NAME: HIGHER FINANCIAL ACCOUNTING

CO1: Apply accounting techniques and methods for the formation, dissolution, partner changes, earnings distribution, and liquidation of partnerships.
CO2: Describe various accounting theories in translating financial statements.
CO3: Effectively define the needs of the various users of accounting data and demonstrate the ability to communicate such data effectively, as well as the ability to provide knowledgeable recommendations.

COURSE CODE: 17CO303 COURSE NAME: MANAGEMENT CONCEPTS

CO1: Demonstrate their conceptual skills, understanding and application of principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for Organizing, directing and controlling.
CO3: Develop skills and ability to work in groups to achieve organizational goals and ability to lead teams.
CO4: Demonstrate their ability in applying the managerial concepts in real time problems.

COURSE CODE: 17CO304 COURSE NAME: COMPUTER PRACTICALS II - TALLY

CO1: Enter the accounting transactions in computerized format and find the financial result concern.
CO2: Acquire the skill of financial decision making in a systemized manner.
CO3: Interpret the financial statements as well as evaluation of stock at the end.

COURSE CODE: 17CO305 COURSE NAME: MANAGEMENT INFORMATION SYSTEM

CO1: Plan, analyze, design, and implement information systems projects.
CO2: Analyze business decisions by applying analytics and decision-making models.
CO3: Plan, design, develop applications, and maintain relational database management systems.
CO4: Identify ethical issues embedded in decisions and be able to apply appropriate ethical principles.

COURSE CODE: 17COI01 COURSE NAME: PRINCIPLES OF TAXATION

CO1: Identify various Concepts of Taxation.
CO2: Compute total income from different Heads of Income.
CO3: Justify levy of Indirect Taxes.
CO4: Explain the application of GST in India.

COURSE CODE: 17MATC02 COURSE NAME: BUSINESS STATISTICS

CO1: Gain knowledge about basis of statistics.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using correlation and regression.
CO5: Apply the concepts of time series and probability.

SEMESTER IV

COURSE CODE: 17COC04 COURSE NAME: CORPORATE ACCOUNTING

CO1: Understand the basic concepts of issues of shares, debentures and underwriting of shares.
CO2: Analyse and compute profit prior to incorporation and post in corporation period and to find out the mechanism for redemption of preference shares.
CO3: Evaluate the financial position of the company.
CO4: Analyze and Compute various methods of goodwill and shares of the company.
CO5: Apply the procedure for liquidation of companies.

COURSE CODE: 17CO402 COURSE NAME: BANKING THEORY LAW AND PRACTICE

CO1: Identify the functions of various banks in India.
CO2: Justify creating legal relationship with banker, as a general / special customer of the bank.
CO3: Compare to deal in different negotiable instruments by understanding its legal features.
CO4: Formulate to endorse the cheque and offer the cheque for collection.
CO5: Utilize the various e- based services of the banks.

COURSE CODE: 17CO403 COURSE NAME: BUSINESS LAW

CO1: Create a valid contract and enforce their legal rights from others.
CO2: Discharge their legal obligations duly as per the requirements of law.
CO3: Apply technical skills to the provisions of some special contracts.
CO4: Create legally valid sale of goods with others and ability to enforce their rights during the non-performance of sale contracts.

CO5: Acquire special skills on consumer rights and its enforcement mechanism to redress their grievances.
CO6: Acquire knowledge on secure electronic records and its regulatory frame work.

COURSE CODE: 17BPSCE01 COURSE NAME: FINANCIAL MANAGEMENT

CO1: Familiar with various sources of finance, which a business house can mobilize effective management of finance.
CO2: Develop the ability to measure the capital structure and leverage analysis of a firm.
CO3: Describe the importance and various forms of cost of capital.
CO4: Analyse and implement investment decision, the process and methods of evaluation of various investment proposals.
CO5: Understand and analyse the concept of working capital and calculation of working capital requirements.

COURSE CODE: 17ECO04 COURSE NAME: ECONOMICS FOR DECISION MAKING

CO1: Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve and Supply curve
CO2: Understand the links between production costs and the economic models of supply.
CO3: Determine graphically and algebraically, the output and pricing decisions under different market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly.
CO4: Understand the basics of national income accounting, the components of the balance of payments and Tax system of India
CO5: Understand the concepts of Indian Economy.

COURSE CODE: 17CO404 COURSE NAME: E COMMERCE

CO1: Understand the basic concepts of E-Commerce.
CO2: Gain the knowledge about various models available and electronic payment system.
CO3: Understand various concepts in EDI and supply chain management.
CO4: Gain knowledge about marketing through internet, multimedia and video conferencing.

COURSE CODE: 17COE02 COURSE NAME: SUPPLY CHAIN MANAGEMENT

CO1: Gain knowledge about basic concepts of Supply chain management.
CO2: Acquire knowledge about legal aspects of buying.
CO3: Gain knowledge about purchasing and manufacturing scheduling.

COURSE CODE: 17COE03 COURSE NAME: CONSUMER BEHAVIOUR

CO1: Familiar with the concepts of consumer behavior.
CO2: Acquire knowledge on how consumer decides on taking decision to buy or not to buy a product.
CO3: Understand the terminologies of Consumer behavior and various theories of personality, motivation, learning and perception.
CO4: Conduct research in the area of consumer behavior.

SEMESTER V

COURSE CODE: 16CO501 COURSE NAME: HIGHER CORPORATE ACCOUNTING

CO1: Understand the significance of merging of two or more companies.
CO2: Acquaint with the legal formats and special items and adjustments pertaining to Banking companies and Insurance companies.
CO3: Develop the skills in preparation of consolidated Balance Sheet of Holding company and Subsidiary company.
CO4: Define the needs of the various users of accounting data effectively and demonstrate the ability to communicate such data, as well as provide knowledgeable recommendations.
CO5: Understand the importance of Accounting Standards.

COURSE CODE: 16CO502 COURSE NAME: MARKETING MANAGEMENT

CO1: Identify core concepts of marketing and the role of marketing in business and society.
CO2: Develop an ability to assess the impact of the environment on marketing function.
CO3: Know the functions performed by marketing in the economy.
CO4: Develop an ability to understand and develop the marketing mix for an organization.
CO5: Be familiar with the basic elements of the marketing mix and to provide a framework to evaluate marketing decisions and initiatives.
CO6: Develop marketing strategies based on product, price, place and promotion objectives.

COURSE CODE: 16CO503 COURSE NAME: TAXATION

CO1: Describe how the provisions in the corporate tax laws can be used for tax planning.
CO2: Determine the assessment of individuals under different heads.
CO3: State the use of various deductions to reduce the taxable income.
CO4: Assess tax for the total income of an individual.
CO5: Explain different types of incomes and their taxability and expenses and their deductibility.
CO6: Understand the concept of Goods and Service Tax and its impact on society.

COURSE CODE: 16COI02 COURSE NAME: PRINCIPLES OF INSURANCE

CO1: Understand the nature of insurance and the principles that govern general insurance.
CO2: Gain an insight on the nature of life insurance, fire insurance and marine insurance.
CO3: Understand the procedures for reinsurance and Double Insurance.
CO4: Examine the importance of miscellaneous insurance.
CO5: Identify the functions of insurance agents.

COURSE CODE: 16CO505 COURSE NAME: ENTREPRENEURIAL DEVELOPMENT

CO1: Understand the concept of entrepreneurship.
CO2: Identify the various business opportunities available for entrepreneurs in the society.
CO3: Apply the creative process of opportunity identification and screening.
CO4: Identify the institutions that support entrepreneurship.
CO5: Design strategies for successful implementation of ideas.
CO6: Identify the causes for industrial sickness

SEMESTER VI

COURSE CODE: 16CO601 COURSE NAME: MANAGEMENT ACCOUNTING

CO1: Determine the techniques of Management Accounting.
CO2: Apply ratio analysis in decision making process of the management.
CO3: Evaluate the cash position of the firm by applying fund flow and cash flow techniques.
CO4: Examine the marginal costing and budgetary control techniques.

COURSE CODE: 16CO602 COURSE NAME: PRACTICAL - III COMMERCIAL DOCUMENTATION

CO1: Acquire knowledge on online filing of forms.
CO2: Apply the knowledge on online filing of forms.
CO3: Understand how to file business registration forms.
CO4: Apply online for procuring personal loan and business loan.
CO5: Apply through online for LIC related forms

COURSE CODE: 16CO603 COURSE NAME: COMPANY LAW

CO1: Outline the basic concepts of company law and describe the procedure for formation of a company.
CO2: Acquire knowledge on basic documents in a company.
CO3: Acquire knowledge on the various methods of raising capital.
CO4: Apply the law governing various duties owed by officers of the company imposed by law.
CO5: Discuss the powers, duties and liabilities of the officer of the company in case of misstatement in the prospectus of the company.
CO6: Instantiate knowledge about the company meetings.
CO7: Examine about the procedures relating to winding-up of the company.

COURSE CODE: 16CO604 COURSE NAME: INSURANCE PRINCIPLES AND PRACTICES

CO1: Identify what insurance is, why insurance works and how to determine insurance needs.
CO2: Describe the various principles of insurance.
CO3: Classify the various life insurance policies and also identify the factors affecting risk.
CO4: Gain an insight on the nature of life insurance, fire insurance and marine insurance and to know the procedures for making claims against different kinds of insurance policies.
CO5: Understand the importance of burglary insurance and personal accident insurance.
CO6: Identify the functions and working of insurance agents.

COURSE CODE: 16COE04 COURSE NAME: FINANCIAL INSTITUTIONS AND MARKETS

CO1: Understand the role and functions of financial system.
CO2: Demonstrate an awareness of the current structure and regulation of the Indian financial system.
CO3: Familiarize with the Indian money market and Capital market, its operations, instruments regulations etc.
CO4: Evaluate and create strategies to promote financial markets of a country.
CO5: Possess adequate knowledge on merchant banking and mutual fund operations.
CO6: Outline the various modes of financing and its utilities.

COURSE CODE: 16COE05 COURSE NAME: STOCK MARKET INSTRUMENTS AND OPERATIONS

CO1: Understand the features of stock market.
CO2: Familiar with the procedure for listing of securities.
CO3: Analyze the concepts of future and forward trading.
CO4: Identify the credit rating agencies.
CO5: Understand the methods of investment analysis.

COURSE CODE: 16COE06 COURSE NAME: RETAIL BUSINESS MANAGEMENT

CO1: Understand the principles involved in managing the retail business.
CO2: Identify and select proper personnel for retail business.
CO3: Apply a good source of operational and financial dimensions in retail business.
CO4: Develop ethics in Retail Management.
CO5: Perform basic functions appropriate to each functional area of business.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary
(Dr. V. Nirmaladevi)		

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D02

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – Computer Applications**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Possess technical, accounting and business skills for developing Computer based solutions for business problems.
PEO2	Excel in contemporary knowledge of business and developing inclination towards lifelong learning.
PEO3	Inculcate Professional and Business Ethics with the commitment to the Society and Environment.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Excel in complex accounting problems in Finance, Cost and Management decision making areas and provide suitable solutions.
PO2	Train computerized accounting practices and application of computer skills to the efficient Management Information System, knowledge sharing.
PO3	Acquire knowledge in computer programming languages to solve important business problems.
PO4	Pursue professional courses like CA, CMA, and Company Secretary ship.
PO5	Communicate effectively at various levels
PO6	Apply management principles in various business decisions like Marketing, Finance, and HR.
PO7	Become a Certified Internal Auditor.
PO8	Design and develop Project Reports for various business ventures.
PO9	Propose viable ideas and business solutions in tune with Global, Economic, Environmental and Societal contexts.
PO10	Discharge responsibilities by practicing Professional and Ethical values.

PROGRAMME NAME - BCOM – CA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18COA101 COURSE NAME: FUNDAMENTAL OF ACCOUNTING

CO1: Understand the concepts and conventions of Accounting and Basic Accounting framework.
CO2: Understand and prepare the Financial Statements.
CO3: Apply the concepts of accounting to make effective financial decisions.
CO4: Gain working knowledge of principles and procedure of accounting and their application in different business situations.

COURSE CODE: 18COA102 COURSE NAME: INFORMATION TECHNOLOGY FOR BUSINESS PROCESS

CO1: Understand and evaluate the concepts and applications of Information Technology in the business environment.
CO2: Gain working knowledge of Excel, Access and their application in business.
CO3: Suggest the right information system for an organization based on its business process.

COURSE CODE: 18COA103 COURSE NAME: COMPUTER PRACTICAL I - MS OFFICE

CO1: Work with the required skills and independently operate the various options of MS Word for office administration.
CO2: Work in MS Power Point and MS Access.
CO3: Work with the required skill set in MS Excel spread sheet and use various formulas for calculation.

SEMESTER II

COURSE CODE: 18COA 201 COURSE NAME: FINANCIAL ACCOUNTING

CO1: Understand the procedures of partnership accounting.
CO2: Understand the modes of dissolution of partnership firm.
CO3: Apply the knowledge of accounting in the fields of Hire purchase.
CO4: Analyse the branch and departmental accounting areas in business.
CO5: Analyse the process of insurance claims and royalties.

COURSE CODE: 18COA202 COURSE NAME: BUSINESS MANAGEMENT

CO1: Understand the basic concepts in management.
CO2: Analyze the functions of management and conceptual skills
CO3: Evaluate the global context for organizing, directing and controlling.
CO4: Develop skills and ability to work in group to achieve organizational goals and ability to lead teams.
CO5: Evaluate and apply the managerial concept in real time problems.

COURSE CODE: 18COA203 COURSE NAME: COMPUTER PRACTICAL II - TALLY

CO1: Enter the accounting transactions in computerized format and find the financial result of a concern.
CO2: Acquire the skill of financial decision making in a systemized manner.
CO3: Interpret financial statements as well as evaluation of stock at the end.

SEMESTER III

COURSE CODE: 17COA301 COURSE NAME: COST ACCOUNTING

CO1: Express the place and role of cost accounting in the modern economic environment and select the costs according to their impact on business.
CO2: Differentiate methods of schedule costs per unit of production and differentiate methods of calculating stock consumption.
CO3: Calculate the different methods of wage payment according to their efficiency of the labourer.
CO4: Describe the various incentive scheme, overhead apportionment and reapportionment techniques that are applied to manufacturing and service business.
CO5: Determine the cost of each process where product passes from different stages of manufacturing to get its finished form.

COURSE CODE: 17COA302 COURSE NAME: FINANCIAL MANAGEMENT

CO1: Be familiar with various sources of finance, which a business house can mobilize effective management of finance.
CO2: Develop the ability to measure the capital structure and leverage analysis of a firm.
CO3: Describe the importance and various forms of cost of capital.
CO4: Analyse and implement investment decision, the process and methods of evaluation of various investment proposals.
CO5: Understand and analyse the concept of working capital and calculation of working capital requirements.

COURSE CODE: 17COA303 COURSE NAME: BUSINESS LAW

CO1: Create a valid contract and enforce their legal rights from others in an independent way.
CO2: Discharge their legal obligations duly as per the requirements of law.
CO3: Provide necessary technical skills to differentiate and apply the provisions of some special contracts.
CO4: Create legally valid sale of goods with others and ability to enforce their rights during the non-performance of sale contracts.
CO5: Acquire special skills on consumer rights and its enforcement mechanism to redress their Grievances.
CO6: Acquire basic knowledge on secure electronic records and its regulatory frame work.

COURSE CODE: 17COA304 COURSE NAME: COMPUTER PRACTICAL III – C++

CO1: Implement object oriented concepts to solve problems.
CO2: Develop applications using object oriented concepts.

COURSE CODE: 17COA305 COURSE NAME: PROGRAMMING IN C++

CO1: Understand, Design, Develop and Implement OOP concepts using C++ language.
CO2: Describe and implement the concepts of constructor, destructor, function overloading, operator overloading, virtual functions, inheritance and polymorphism.
CO3: Apply the concepts of files and stream classes.

COURSE CODE: 17COAI01A COURSE NAME: DIGITAL MARKETING

CO1: Understand digital marketing concepts, functions and its environment.
CO2: Acquire knowledge of Search Engine optimization and its positioning.
CO3: Gain knowledge of Email marketing and designing the content.
CO4: Design an advertisement and promote the product in effectively using Social media and Mobile.

COURSE CODE: 17COAI01B COURSE NAME: OE I - CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Understand the basic concepts of CRM.
CO2: Create methodology to apply customer support.
CO3: Understand ERP and apply it in Enterprise.
CO4: Implement CRM techniques in business field.

SEMESTER IV

COURSE CODE: 17COA401 COURSE NAME: CORPORATE ACCOUNTING

CO1: Understand the basic concepts of issues of shares, debentures and underwriting of shares.
CO2: Analyse and compute profit prior to incorporation and post in corporation period and to find out the mechanism for redemption of preference shares.
CO3: Evaluate the financial position of the company.
CO4: Analyze and Compute various methods of goodwill and shares of the company.
CO5: Apply the procedure for liquidation of companies.

COURSE CODE: 17COA402 COURSE NAME: BANKING LAW AND PRACTICE

CO1: Acquire the knowledge of banking.
CO2: Utilize the functions of various banks in India.
CO3: Create legal relationship with banker, as a general / special customer of the Bank.
CO4: Deal in different negotiable instruments by understanding its legal features.
CO5: Endorse the cheque and offer the cheque for collection.
CO6: Utilize the various E - based services of the banks.

COURSE CODE: 17COA403 COURSE NAME: MANAGEMENT CONCEPTS

CO1: Demonstrate conceptual skills, apply principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for Organizing, Directing and Controlling.
CO3: Develop skills and ability to work in groups to achieve organizational goals and ability to lead teams.
CO4: Demonstrate and apply the managerial concepts in real time problems.

COURSE CODE: 17COA404 **COURSE NAME: COMPUTER PRACTICAL IV – DATABASE MANAGEMENT SYSTEM**

CO1: Create a database application and generate reports.
CO2: Populate and query a database using SQL DML/DDL commands.
CO3: Program using PL/SQL.

COURSE CODE: 17COA406 **COURSE NAME: DATABASE MANAGEMENT SYSTEM**

CO1: Describe DBMS architecture, physical and logical database designs, relational database modeling.
CO2: Apply Structured Query Language (SQL) for database definition and database manipulation.
CO3: Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
CO4: Understand various transaction processing, concurrency control mechanisms and database protection mechanisms.

COURSE CODE: 17COAE01 **COURSE NAME: AUDITING AND ASSURANCE**

CO1: Determine the nature, purpose and scope of audit including the role of external audit and its regulatory and ethical framework.
CO2: Determine the nature of internal audit and describe its role as part of overall performance management and its relationship with the external audit.
CO3: Demonstrate how the auditor obtains an understanding of the entity and its environment, assesses the risk of material misstatement, whether arising from fraud or other irregularities, and plans an audit of financial statements.
CO4: Describe and evaluate information system and internal controls to identify and communicate control risks and their potential consequences, making appropriate recommendations.
CO5: Identify and evaluate the work and evidence required to meet the objectives of audit engagements and the application of computerized on Auditing.

SEMESTER V

COURSE CODE: 16COA501 **COURSE NAME: HIGHER CORPORATE ACCOUNTING**

CO1: Express the format of banking companies to prepare profit and loss account and balance sheet.
CO2: Describe the types of insurance and prepare revenue account, express schedules forming part of financial statements.
CO3: Describe the general instructions for preparing financial statements for general insurance
CO4: Determine the minority interest, unrealized profits, mutual Owings, revaluation of assets and liabilities and bonus issues for the Holding company.
C05: Differentiate between government accounting and commercial accounting.
CO6: Understand duties of comptroller and auditor general of India and describe the accounting standards.

COURSE CODE: 16COA502 **COURSE NAME: TAXATION**

CO1: Describe income act1961.
CO2: Describe the heads of income and express the computation of salaries.
CO3: Describe the profits and gains of business profession.
CO4: Determine the capital gains.
CO5: Understand indirect tax.

COURSE CODE: 16COA503 COURSE NAME: COMPANY LAW

CO1: Describe the characteristics, types and formation of company.
CO2: Describe the pre incorporation contracts, effects of registration and certificate of commencement.
CO3: Describe company documents.
CO4: Describe the shares and debentures.
CO5: Describe the company management.
CO6: Describe winding up law of the company.

COURSE CODE: 16COA504 COURSE NAME: STRATEGIC MANAGEMENT

CO1: Identify the forces influencing corporate and business strategies.
CO2: Assess the resources and constraints for strategy making in a business context.
CO3: Be critically aware of factors involved in strategy making.

COURSE CODE: 16COA505 COURSE NAME: COMPUTER PRACTICAL V - VISUAL BASIC

CO1: Design, create and debug employee salary calculation, Students Mark sheet.
CO2: Compute Electricity bill.
CO3: Calculate wages.
CO4: Apply arithmetic operations for displaying numeric output.

COURSE CODE: 16COA506 COURSE NAME: VISUAL BASIC IN BUSINESS APPLICATION

CO1: Understand about the benefits, presentation and architecture of client server.
CO2: Acquire the knowledge of visual basic.
CO3: Bring out the knowledge of functions and procedures of control structures
CO4: Use standard controls and data controls.

COURSE CODE: 16COI02A COURSE NAME: OPEN ELECTIVE II - DIGITAL MARKETING

CO1: Understand digital marketing concepts, functions and its environment.
CO2: Shall have the knowledge of Search Engine optimization and its positioning.
CO3: Bring out the knowledge of Email marketing and designing the content.
CO4: Design an advertisement and promote the product in effectively using Social media and Mobile.

COURSE CODE: 16COI02B COURSE NAME: OE II - CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Understand the basic concepts of CRM.
CO2: Create methodology to apply customer support.
CO3: Understand ERP and apply it in Enterprise.
CO4: Implement CRM techniques in business field.

SEMESTER VI

COURSE CODE: 16COA601 COURSE NAME: MANAGEMENT ACCOUNTING

CO1: Describe about the nature, scope, objectives and functions of management accounting.
CO2: Describe the relationship between management accounting, cost accounting and financial accounting.
CO3: Express analysis and interpretation of financial statements

CO4: Express fund flow analysis
CO5: Describe marginal costing
CO6: Describe the budget and budgetary control.

COURSE CODE: 16COA602 COURSE NAME: RESEARCH METHODOLOGY

CO1: Understand the methodology of research.
CO2: Identify the research problem.
CO3: Collect Research data.
CO4: Analyze the data.
CO5: Prepare the final report of research.

COURSE CODE: 16COA603 COURSE NAME: PROJECT VIVA - VOCE

CO1: Understand the value of the project.
CO2: Identify the problem.
CO3: Collect the data for Project design.
CO4: Analyze the data.
CO5: Prepare the final report of project.

COURSE CODE: 16COA604 COURSE NAME: COMPUTER PRACTICAL VI - HTML

CO1: Design simple website.
CO2: Create e-advertisement, customize product catalogue.
CO3: Manage a shopping cart.
CO4: Create shoppers registration form.
CO5: Prepare various types of return in income tax.

COURSE CODE: 16COA605 COURSE NAME: INTERNET AND WEB PAGE DESIGN

CO1: Understand Internet, Internet service providers and its needs.
CO2: Shall have the knowledge of Internet protocol address, file transfer protocols and its uses.
CO3: Develop simple web pages using HTML frames Tables and forms.
CO4: bring out the working knowledge of Cascading Style Sheets and its attributes.

COURSE CODE: 16COAE02 COURSE NAME: HUMAN RESOURCE MANAGEMENT

CO1: Understand the basic concepts of human resource management.
CO2: Analyze the needs for human resource planning and job analysis.
CO3: Facilitate the knowledge about performance appraisal and different method.
CO4: Provide an idea about different compensation policies.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D03

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – Professional Accounting**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Possess a deep and broad understanding of Accounting principles and practices as evidenced by professional employment, continued professional development and graduate study in professional fields.
PEO2	Be flexible, adoptable, independent and collaborative with leadership qualities, so as to sustain one-self, working in multidisciplinary team.
PEO3	Manage entrepreneurship outlook and engage in lifelong learning.
PEO4	Be responsive to professional and societal contexts, committed to ethical concerns, effective and contributing member of the community.

PROGRAMME OUTCOMES

Upon completion of the programme, the student will be able to

PO1	Project themselves individually as professionals in the field of Commerce.
PO2	Exhibit knowledge of project, financial and investment management useful to become an entrepreneur.
PO3	Create/ select, and apply appropriate Accounting Software and modern accounting standards with an understanding of the limitations.
PO4	Execute work effectively as an individual or as a part of a team, within a real business situation to accomplish a common goal.
PO5	Apply ethical principles and responsible practices during their profession.
PO6	Work effectively by adopting appropriate roles and processes.
PO7	Implement creativity and problem solving skills in various real life time problems.
PO8	Use appropriate technology for communicating within interpersonal team and group environment.

PROGRAMME NAME - BCom – PA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CPA101 COURSE NAME: PRINCIPLES AND PRACTICE OF ACCOUNTING I

CO1: Understand the concepts and convention of accounting and basic accounting frame work.
CO2: Understand and prepare the financial statement.
CO3: Apply the concept of accounting to make effective financial decisions.
CO4: Acquire knowledge of principals and procedures of accounting and their application in different business situations.
CO5: Understand income and expenditure statement.

COURSE CODE: 18CPA102 COURSE NAME: BUSINESS ETHICS AND COMMERCIAL KNOWLEDGE

CO1: Describe the impact of ethics in the business.
CO2: Communicate in the business environment.
CO3: Apply the skills of ethical decision making in business environment.

COURSE CODE: 18CPA103 COURSE NAME: QUANTITATIVE TECHNIQUES I

CO1: Apply set theory, functions and relations in real life problems.
CO2: Solve the linear equations.
CO3: Calculate the simple, compound interest and annuities.
CO4: Apply the basics of ratio, proportion, permutation and combinations in real life.
CO5: Evaluate the simple differential and integral calculus problems.

SEMESTER II

COURSE CODE: 18CPA201 COURSE NAME: PRINCIPLES AND PRACTICE OF ACCOUNTING II

CO1: Identify the concept of depreciation, reserves and provisions.
CO2: Schedule the conceptual frame work in preparing single entry and self-balancing system.
CO3: Compute the sub lease calculation and accounting for royalties.
CO4: Prepare branch accounts and apportionment of departmental expenses.
CO5: Distinguish the concepts of hire purchase and installment systems and construct accounting entries.

COURSE CODE: 18CPA202 COURSE NAME: BUSINESS LAW AND CORRESPONDENCE

CO1: Enumerate the basic principles of law of contract.
CO2: Estimate legal frame work and legal issues in business environment and how the sales of goods act affects the business world.
CO3: Develop creativity, analytical thinking and legal reasoning skills in Indian Partnership Act and the law in real life situations.
CO4: Differentiate between the various methods of communication.

COURSE CODE: 18CPA203 COURSE NAME: COMPUTER PRACTICALS I - MS OFFICE

CO1: Categorize and create a word document effortlessly.
CO2: Apply various excel features for data analysis and interpretation.
CO3: Determine the output generated by access.
CO4: Experiment the various themes in MS power point.

COURSE CODE: 18CPA204 COURSE NAME: QUANTITATIVE TECHNIQUES II

CO1: Gain knowledge about basis of statistics and sampling theory.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using correlation and regression.
CO5: Apply the concepts of probability and probability distribution.

SEMESTER III

COURSE CODE: 17CPA301 COURSE NAME: ADVANCED ACCOUNTANCY II

CO1: Understand the basic concepts of partnership accounts.
CO2: Compute goodwill towards admission, retirement and death of a partner.
CO3: Prepare partnership accounts relating to amalgamation, dissolution, conversion and sale.
CO4: Acquire knowledge about general aspects of accounting standards and its application.

COURSE CODE: 17CPA302 COURSE NAME: TAXATION

CO1: Understand the basic principles underlying the income tax act.
CO2: Assess tax for the total income of an individual.
CO3: Analyze the assessment procedure and representation before appropriate authorities under the law.

COURSE CODE: 17CPA303 COURSE NAME: BUSINESS ETHICS AND COMMUNICATION

CO1: Describe the impact of ethics in the business.
CO2: Communicate in the business environment.
CO3: Apply the skills of ethical decision making in business environment.

COURSE CODE: 17CPA304 COURSE NAME: COMPANY LAW

CO1: Understand the nature and formation of companies.
CO2: Understand the documents related to company.
CO3: Study about the appointment and qualification.
CO4: Analyse the law and procedure relating to company meetings.

COURSE CODE: 17CPA305 COURSE NAME: FINANCIAL MANAGEMENT

CO1: Understand the financial function and the role of financial manager in business environment.
CO2: Identify funding sources, instruments and markets.
CO3: Demonstrate knowledge of basic financial vocabulary and value of money overtime and its uses.

COURSE CODE: 17CPAI01 COURSE NAME: BUSINESS ORGANISATION AND OFFICE MANAGEMENT

CO1: Gain Knowledge of business organization in the society.

CO2: Understand the main working principles of organization.
CO3: Understand the basic concepts in management and recruiting process.

COURSE CODE: 17CPAI02 COURSE NAME: BUSINESS COMMUNICATION

CO1: Describe the impact of ethics in the business.
CO2: Communicate in the business environment.
CO3: Apply appropriate communication skills across setting, purpose and audience.

SEMESTER IV

COURSE CODE: 17CPA401 COURSE NAME: CORPORATE ACCOUNTING I

CO1: Specify the basic requirements for a corporate group.
CO2: Determine the procedure for issue and redemption of shares and debentures.
CO3: Prepare the financial statements relating to company and understanding the process of liquidation.

COURSE CODE: 17CPA402 COURSE NAME: APPLIED COST ACCOUNTING

CO1: Specify the basic concepts of cost accounting.
CO2: Apply the various costing techniques in material control, labour and overheads.
CO3: Synthesize the process costing in various stages and prepare the statement for operating and contract costing.

COURSE CODE: 17CPA403 COURSE NAME: RETAIL MANAGEMENT

CO1: Identify and demonstrate basic principles relating to retail management.
CO2: Perform basic functions appropriate to each functional area of retail business.
CO3: Identify the areas of human resource financial and operational dimensions in retail management.
CO4: Describe the impact of ethics in the retail management.

COURSE CODE: 17CPA404 COURSE NAME: BANKING AND INSURANCE LAW

CO1: Specify the basic functions of bank and recent development in banking.
CO2: Differentiate the various types of negotiable instruments.
CO3: Describe the principles in insurance and analyses the legal dimensions of IRDA.

COURSE CODE: 17CPA405 COURSE NAME: COMPUTER PRACTICALS II - TALLY

CO1: Describe the basic accounting concept and principals.
CO2: Generate accounting and inventory master, vouchers and basic reports in tally.
CO3: Prepare the cash flow and fund flow statements using tally.

COURSE CODE: 17CPAE01 COURSE NAME: MANAGEMENT CONCEPTS

CO1: Identify the various concepts in management.
CO2: Discuss the management evolution and how it will affect the future managers.
CO3: Practice the process of managements function.
CO4: Evaluate the influence of historical forces on the current practice of management.

COURSE CODE: 17CPAE02 COURSE NAME: CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Develop customer relationship management concepts and framework.
CO2: Develop skills to analyze and synthesis information and issues related to relationship management.
CO3: Enhance business communication skills required to work efficiently within marketing team.

COURSE CODE: 17CPAE03 COURSE NAME: BUSINESS FINANCE

CO1: Identify the basic concepts of finance and its role play in the organization.
CO2: Evaluate the types of the financial statements and their components.
CO3: Calculate different computations that provide valuable financial information.
CO4: Acquire and exhibit different types of risk.

SEMESTER V

COURSE CODE: 16CPA501 COURSE NAME: CORPORATE ACCOUNTING II

CO1: Understand about amalgamation, absorption, internal and external reconstruction.
CO2: Introduce and develop knowledge of holding company accounts.
CO3: Prepare Banking Company accounts and Insurance Company accounts.

COURSE CODE: 16CPA503 COURSE NAME: AUDITING AND ASSURANCE

CO1: Demonstrate an understanding of the environment and context of auditing, including theory, current issues and other factors that influence auditing.
CO2: Get expertise in planning and carry out audit procedures in accordance with auditing standards.

COURSE CODE: 16CPA502 COURSE NAME: MARKETING MANAGEMENT

CO1: Develop an idea about Marketing and its Functions.
CO2: Enhance the students on Consumer Behavior.
CO3: Familiar about product and its classifications.
CO4: Understand the concepts of Pricing Policies and Branding Decisions.

COURSE CODE: 16CPA506 COURSE NAME: RESEARCH METHODOLOGY

CO1: Understand the basic concepts of research.
CO2: Critically analyze the areas of research problem and research design.
CO3: Analyze the various methods of data collection.
CO4: Develop the skill of report writing.

COURSE CODE: 16CPA504 COURSE NAME: INDUSTRIAL LAW

CO1: Introduce some of the main principles of law arising in the industrial world.
CO2: Develop basic legal understanding and skills to enable you to be able to consider relevant legal Materials.
CO3: Include statutes and case law.
CO4: Identify points of law from the surrounding contextual facts.

COURSE CODE: 16CPA505 COURSE NAME: HUMAN RESOURCES MANAGEMENT

CO1: Understand the basic concepts of human resource management.
CO2: Analyze the needs for human resource planning and job analysis.

CO3: Facilitate the knowledge about performance appraisal and different methods.
CO4: Provide an idea about different compensation policies.

COURSE CODE: 16CPAI02 COURSE NAME: BANKING LAW AND PRACTICE

CO1: Understanding the basic concepts and practices of banking.
CO2: Acquire knowledge about negotiable instruments.
CO3: Understand the recent developments in banking.
CO4: Acquire thorough knowledge on Indian banking system.

COURSE CODE: 16CPAI03 COURSE NAME: BUSINESS FINANCE

CO1: Understand the nature and sources of business finance and financial planning.
CO2: Assess the various theoretical concepts of capitalization.
CO3: Evaluate the capital structure and analyze how financing decisions influence firms value.
CO4: Analyze the unique structure of sources and forms of finance.

SEMESTER VI

COURSE CODE: 16CPA601 COURSE NAME: STRATEGIC MANAGEMENT

CO1: Identify the forces influencing corporate and business strategies.
CO2: Assess the resources and constraints for strategy making in a business context.
CO3: Critically aware of factors involved in strategy making.

COURSE CODE: 16CPA605 COURSE NAME: COMPUTER PRACTICALS III – E FILING

CO1: Introduce the students about the filling of various forms.
CO2: Provide practical knowledge exposure on internet and web designing.

COURSE CODE: 16CPA603 COURSE NAME: MANAGEMENT ACCOUNTING

CO1: Examine the concepts of management accounting.
CO2: Analyze the financial statement from practical point of view.
CO3: Evaluate the working capital, marginal costing and budgetary control of the companies.

COURSE CODE: 16CPA602 COURSE NAME: INVESTMENT MANGAEMENT

CO1: Cite the various concept of security analysis.
CO2: Create awareness about risk and return of different investments.
CO3: Enlighten the evolution of securities and derivatives.
CO4: Analyze the investment decisions and portfolio performance.

COURSE CODE: 16CPA604 COURSE NAME: MANAGEMENT INFORMATION SYSTEM

CO1: Plan, analyze, design, and implement information systems projects.
CO2: Analyze business decisions by applying analytics and decision-making models.
CO3: Plan, design, develop applications, and maintain relational database management systems.
CO4: Identify ethical issues embedded in decisions and be able to apply appropriate ethical principles.

COURSE CODE: 16CPA606 COURSE NAME: PROJECT WORK AND VIVA VOCE

CO1: Evaluate the basics about project management and its various types.
CO2: Develop project formulation and preparation of project report.
CO3: Depict project evaluation methods.

COURSE CODE: 16CPAE04 COURSE NAME: FINANCIAL MARKETS AND INSTITUTIONS

CO1: Understand the concept of financial markets.
CO2: Gain knowledge about the market for Corporate Securities.
CO3: Enlighten the evolution of Secondary markets and financial intermediaries.
CO4: Understand the concepts of new modes of financing.

COURSE CODE: 16CPAE06 COURSE NAME: ENTREPRENEURSHIP DEVELOPEMENT

CO1: Understand the basic concepts in the area of Entrepreneurship.
CO2: Be familiar with EDP schemes.
CO3: Adopt key steps in the elaboration of business idea.
CO4: Understand the stages of the entrepreneurial process and the resources needed for thesuccessful development of entrepreneurial ventures.

COURSE CODE: 16CPAE05 COURSE NAME: ORGANIZATIONAL BEHAVIOR

CO1: Understand the development in the field of organizational behavior.
CO2: Analyze the implementation of organizational change.
CO3: Identify the various leadership styles and role of leaders in a decision making process.
CO4: Analyze the organizational culture and its dimensions.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D04

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – Business Process Services**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Equip with the relevant practices on Accounting, Management, Insurance and Capital Market Services as required on various Business Organizations.
PEO2	Emerge as Leaders to empower business organizations through innovative strategies and policies with due regard to the ethics, environment and sustainability.
PEO3	Recognize one's own limitations, admit errors and improve behavior with constructive feedback.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply knowledge of Accountancy, Management and Business process services.
PO2	Design a system, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety.
PO3	Function effectively within teams.
PO4	Apply the knowledge gained in real life problem solving.
PO5	Understand professional ethical responsibilities and act accordingly.
PO6	Communicate effectively, both in written and oral forms.
PO7	Recognize the need for engaging in Lifelong learning.
PO8	Gain knowledge of the contemporary issues.
PO9	Acquire entrepreneurial attributes to start and manage their own innovative business successfully.

PROGRAMME NAME - BCOM – BPS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18BPS101 — COURSE NAME: BUSINESS MANAGEMENT

CO1: Understand the basic knowledge of business systems and outsources of business.
CO2: Make a plan for business and its execution through proper motivation under the effective leadership qualities.
CO3: Understand the importance of controlling and coordinating functions of a management.

COURSE CODE: 18BPS102 — COURSE NAME: BUSINESS APPLICATION SOFTWARE I – MS OFFICE AND INTERNET

CO1: Create a Word document effortlessly.
CO2: Apply various excels features for data analysis and interpretation.
CO3: Analyze the output generated by access and able to perform internet oriented actions.

COURSE CODE: 18BPSC01 — COURSE NAME: FUNDAMENTALS OF ACCOUNTING

CO1: Understand the concepts and conventions of accounting and basic accounting framework.
CO2: Prepare the financial statements and the way to reconcile the bank reconciliation statement.
CO3: Describe the importance of bills of exchange and apply it to prepare the accounts.
CO4: Gain working knowledge in single entry system of book keeping and accounting for non-profit organizations.
CO5: Prepare the accounts related to depreciation, self and sectional balancing in an effective manner.

COURSE CODE: 18MATC01 — COURSE NAME: BUSINESS MATHEMATICS

CO1: Construct the set theory problems.
CO2: Solve the matrix problems.
CO3: Solve AP & GP problems.
CO4: Evaluate the simple differentiation and integration problems.
CO5: Apply Concepts of calculus in Business problems.
CO6: Calculate interest and annuities.
CO7: Gain knowledge about the Straight lines, slope and circles.

SEMESTER II

COURSE CODE: 18BPS201 — COURSE NAME: BUSINESS LAW

CO1: Explain basic principles of law that apply to business and business transactions and Capable of handling the legal issues faced by the organizations.
CO2: Describe what a contract is and how it differs from an agreement and Identify classifications of individuals who may not have the capacity to contract.
CO3: Describe the contract by performance recognize the circumstances that discharge a contract by operation of law and explain what breach of contract is and the potential remedies for breach
CO4: Describe the law, rules, and regulations related to the contract of Sale of goods.
CO5: Ability to explain the act of negotiable instruments and the liability of parties on negotiable instrument.

COURSE CODE: 18CAF201 COURSE NAME: ADVANCED ACCOUNTING I

CO1: Acquire knowledge about general aspects of accounting standards and its application.
CO2: Understand the conceptual framework in preparation of Investment, consignment and Joint Venture accounts.
CO3: Prepare Branch accounts and apportionment of departmental expenses.
CO4: Compute the Fire Insurance Claims and account treatment of royalties.

COURSE CODE: 18MATC02 COURSE NAME: BUSINESS STATISTICS

CO1: Gain knowledge about basis of statistics.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using correlation and regression.
CO5: Apply the concepts of time series and probability.

SEMESTER III

COURSE CODE: 17BPS301 COURSE NAME: FINANCE AND ACCOUNTING FOR BUSINESS PROCESS SERVICES

CO1: Understand the applications of basic accounting in Business Process Services Industries.
CO2: Understand the supply chain management consisting material requirements planning and vendor management process.
CO3: Cognize the receivable management, intercompany accounting and reconciliation and Statutory reports of corporate.
CO4: Understand the emerging trends in finance and accounting technology applications in corporate world.
CO5: Understand the internal control system and transaction flows in Business Process Service Sector.

COURSE CODE: 17BPS302 COURSE NAME: INSURANCE FOR BUSNIESS PROCESS SERVICES

CO1: Understand the fundamentals of Risk and Insurance.
CO2: Identify the life insurance policy and various plans associated with it and how it is being effectively managed by corporate sector.
CO3: Describe the insurance market, insurance providers undertaking and reinsurance processes.
CO4: Explain the purpose, structure and functions of healthcare insurance industries.
CO5: Evaluate the methods utilized by insurance carriers to manage their underwriting risk and retirement services offered.

COURSE CODE: 17BPS303 COURSE NAME: BUSINESS APPLICATION SOFTWARE II TALLY

CO1: Understand the applications of accounting with Tally.
CO2: Prepare accounting vouchers, ledger and various reports.
CO3: Get exposed in maintenance of inventory features.

COURSE CODE: 17BPSI01 COURSE NAME: ACCOUNTING FOR CORPORATE MANAGEMENT

CO1: Understand the basic accounting concepts and conventions and its application in today's corporate environment.
CO2: Cognize the corporate trading activities through subsidiary books and final accounts.

CO3: Acquaint the fundamentals of cost accounting, preparation of cost sheet and material requirements planning.
CO4: Comprehend the basics of management accounting and Debit note, Credit note processing, credit management and reconciliations.
CO5: Understand the traditional, modern accounting with Enterprise Resource Planning System.

COURSE CODE: 17COMC03 COURSE NAME: COST ACCOUNTING

CO1: Express the place and role of cost accounting in the modern economic environment and select the costs according to their impact on business.
CO2: Differentiate methods of schedule costs per unit of production and differentiate methods of calculating stock consumption.
CO3: Describe the various incentive scheme, overhead apportionment and reapportionment techniques that are applied to manufacturing and service business.
CO4: Determine the cost of each process where product passes from different stages of manufacturing to get its finished form
CO5: Understand the tools and techniques used in transport and contract costing.

COURSE CODE: 17ECO03 COURSE NAME: GENERAL ECONOMICS

CO1: Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve.
CO2: Understand the links between production costs and the economic models of supply.
CO3: Represent supply, in graphical form, including the upward slope of the supply curve and what shifts the supply curve.
CO4: Graphically and algebraically determine output and pricing decisions under different market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly.
CO5: Understand the basics of national income accounting
CO6: Explain the components of the balance of payments, the factors that determine currency exchange rates, and ways to cope with exchange rate risk.
CO7: Understand the importance of the financial sector in directing the use of scarce capital.
CO8: Understand the likely path of interest rates in the aftermath of a change in monetary policy

SEMESTER IV

COURSE CODE: 17BPS401 COURSE NAME: RETAIL CONSUMER PRODUCT AND MARKET RESEARCH

CO1: Understand the ways that retailers use marketing tools and techniques to interact with their customers.
CO2: Identify and understand basic theories, principles, practices and terminology related to each functional area of business.
CO3: Understand the purpose of retailing and the retail environment and the responsibilities of the retail operations.
CO4: Plan and conduct an investigation into an organization's marketing strategy, and communicate findings in an appropriate format.

COURSE CODE: 17BPS402 COURSE NAME: BANKING FOR BUSINESS PROCESS SERVICES

CO1: Understand the different types of risks that bank's face and how to rectify them.
CO2: Understand card management operations in banking sector.
CO3: Describe the concept of lead generation
CO4: Understand the cash management and workflow management.
CO5: Understand the letter of credit and its operations.

COURSE CODE: 17BPS403 COURSE NAME: CAMPUS TO CORPORATE TRANSITION

CO1: Understand the overview of Business Process Outsourcing industries in and around the world.
CO2: Develop the individual behavior and attitude will give them a right track in the work culture.
CO3: Describe the work culture, learning the minds of people and adopting themselves in the corporates.
CO4: Mend the communication skills and apply in to the real time working environment.
CO5: Improve the interpersonal skills such as Group discussion, Role play and interview skills.

COURSE CODE: 17BPSCE01 COURSE NAME: FINANCIAL MANAGEMENT

CO1: Be familiar with various sources of finance, which a business house can mobilize effective management of finance.
CO2: Develop the ability to measure the capital structure and leverage analysis of a firm.
CO3: Describe the importance and various forms of cost of capital.
CO4: Analyze and implement investment decision, the process and methods of evaluation of various investment proposals.
CO5: Understand and analyze the concept of working capital and calculation of working capital requirements.

COURSE CODE: 17COC02 COURSE NAME: CORPORATE ACCOUNTING

CO1: Understand the basic concepts of issues of shares, debentures and underwriting of shares
CO2: Analyze and compute profit prior to in corporation and post in corporation period and to find out the mechanism for redemption of preference shares
CO3: Evaluate the financial position of the company
CO4: Analyze and Computate of various methods of goodwill and shares of the company
CO5: Apply the procedure for liquidation of companies.

COURSE CODE: 17MATC06 COURSE NAME: OPERATIONS RESEARCH FOR COMMERCE

CO1: Solve linear programming problems.
CO2: Formulate and solve Transportation and Assignment problems.
CO3: Solve Game and Queuing theory problems
CO4: Construct the network, estimate the floats by CPM and the probability of completion by PERT.
CO5: Acquire knowledge about decision theory in real life.

SEMESTER V

COURSE CODE: 16BPS501 COURSE NAME: ADVANCED CORPORATE ACCOUNTING

CO1: Describe the different types of relationships amongst business entities and able to know the procedure to amalgamate or merging the business concerns.
CO2: Select the appropriate accounting techniques, as prescribed by the relevant accounting standards, and perform the accounting treatment for each type of inter-entity relationship (including preparing consolidated financial statements).
CO3: Prepare the banking and insurance company accounts in new format, which is needed for them to face the corporates.
CO4: Analyze the importance of various accounting terminologies and its applications in real time business environment.

COURSE CODE: 16BPS502 COURSE NAME: CAPITAL MARKET FOR BUSINESS PROCESS SERVICES

CO1: Understand the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.
CO2: Recognize the benefit of diversification of holding a portfolio of assets, and the importance played by the market portfolio.
CO3: Know how to use different derivative securities to manage their investment risks.
CO4: Apply and critically evaluate finance and investment theory with particular reference to the operation of financial markets;
CO5: Apply and evaluate corporate finance techniques such as credit and market risk management

COURSE CODE: 16BPS503 COURSE NAME: MANAGING BUSINESS PROCESS I

CO1: Understand the process management components to identify the customer and their core processes.
CO2: Describe the overview of Business Process Outsourcing and the life cycle of BPO industry.
CO3: Understand and analyze the importance of metrics management in corporate sector.
CO4: Apply the techniques of process mapping models to meet the customer expectations in BPO Sector.
CO5: Identify the risk components in business process services and the justification plans to reduce it.

COURSE CODE: 16BPS504 COURSE NAME: INCOME TAX LAW AND PRACTICE

CO1: Understand fundamental concepts of income tax law.
CO2: Develop experience in identifying tax issues and applying the income tax law to arrive at reasoned solutions to problems.
CO3: Provide knowledge on computation of income under house property, business and profession income.
CO4: Apply critical thinking and problem solving skills related to capital gain.
CO5: Analyze and apply the provision regarding set off and carry forward houses.

COURSE CODE: 16BPS505 COURSE NAME: CAMPUS TO CORPORATE TRANSITION

CO1: Understand the overview of Business Process Outsourcing industries in and around the world.
CO2: Develop the individual behavior and attitude will give them a right track in the work culture.
CO3: Describe the work culture, learning the minds of people and adopting themselves in the corporates.
CO4: Mend the communication skills and apply in to the real time working environment
CO5: Improve the interpersonal skills such as Group discussion, Role play and interview skills.

COURSE CODE: 16BPSI02 COURSE NAME: ACCCOUNTING FOR CORPORATE MANAGEMENT

CO1: Understand the basic accounting concepts and conventions and its application in today's corporate environment.
CO2: Cognize the corporate trading activities through subsidiary books and final accounts.
CO3: Acquaint with the fundamentals of cost accounting, preparation of cost sheet and material requirements planning.
CO4: Comprehend the basics of management accounting and Debit note, Credit note processing, credit management and reconciliations.
CO5: Understand the traditional, modern accounting with Enterprise Resource Planning System.

COURSE CODE: 16BPSIP01 COURSE NAME: INDUSTRY TRAINING REPORT & VIVA

CO1: Understand the real time environment of the industries or institutions.
CO2: Develop the skills required to meet the industrial needs.
CO3: Know the innovations and changes happening in the industrial sector.

SEMESTER VI

COURSE CODE: 16BPS601 — COURSE NAME: MANAGEMENT ACCOUNTING

CO1: Explain the nature and the processes of businesses and how management accounting plays important roles in their decision-making scenarios
CO2: Apply managerial accounting principles to analyse the effectiveness of financial statements.
CO3: Apply and analyze different types of activity-based management tools through the preparation of estimates.
CO4: Use the ideas and practices of budgeting in a business decision-making context, with an emphasis on cost volume profit analysis, standard costing, variance analysis, and performance management, and their inherent problems.
CO5: Prepare a master budget and demonstrate an understanding of the relationship between the components

COURSE CODE: 16BPS602 — COURSE NAME: HUMAN RESOURCE MANAGMENT

CO1: Explain the importance of human resources and their effective management in organizations
CO2: Explain fundamental concepts, principles, techniques and judgment in supply-demand forecasting and supply programs in determining HR planning.
CO3: Contribute to the development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes.
CO4: Develop, implement, and evaluate employee orientation, training, and development programs
CO5: Use strategic decision making to resolve human resource challenges and make effective business decisions.

COURSE CODE: 16BPS603 — COURSE NAME: MANAGING BUSINESS PROCESSES II

CO1: Understand the fundamentals of quality management system and standards.
CO2: Describe the transaction monitoring process and inspect the system of the corporate environment.
CO3: Analyze the system of defects management and standard operating process.
CO4: Apply the knowledge to solve the problem using brainstorming techniques.
CO5: Evaluate the implementation of lean and six sigma in corporate sector.

COURSE CODE: 16BPS604 — COURSE NAME: BUSINESS APPLICATION SOFTWARE III SPSS

CO1: Understand the basics of SPSS and its applications in research activities.
CO2: Describe the procedures to be followed to upload the excel file into SPSS.
CO3: Apply the tools for the preparation of analytical report.

COURSE CODE: 16BPSE02 — COURSE NAME: GOODS & SERVICE TAX (GST) & CUSTOMS LAW

CO1: Understand the conceptual framework of indirect tax before and after implementation of GST.
CO2: Explain the levy and collection of GST in terms of supply of Goods and Services.
CO3: Describe the credit eligibility, availability of tax credit and credit related transfers.
CO4: Evaluate the procedure to be followed for tax invoice and GST audit.
CO5: Analyse the outlook of customs law and custom duties.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D05

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – Accounting & Finance**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Gain practical knowledge in accounting and other concepts that underlay it.
PEO2	Develop a broad and detailed understanding of the requirements of financial reporting, auditing, taxation and finance including the broader regulatory, social and legal framework and an understanding of current issues.
PEO3	Develop conceptual understanding and also be able to promote an appropriate awareness of information technology and an understanding of current issues.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Understand the concepts and conventions of accounting, finance and management in line with current standards and norms.
PO2	Demonstrate the business, social, economic, legal and natural environment with ethical values within which business and economy operate.
PO3	Apply principles and techniques to formulate solutions to the problems concerned, with planning, resourcing, allocation, appraisal and control.
PO4	Present information and communicate effectively in written or oral form, at an appropriate level, including the acknowledgement and referencing of sources.
PO5	Apply a range of IT related skills in the use of word-processing, spreadsheets, software package applications, and in accessing online databases.
PO6	Apply financial, corporate, cost and management accounting concepts and taxation and auditing techniques to facilitate decision making, planning and control.
PO7	Employ the financial, banking and investment management concepts in decision making and significance of financial markets and institutions.
PO8	Practice the importance of capital markets in risk assessment, risk management, value determination and as a source of finance.
PO9	Identify the current developments, issues and Lifelong learning skills in the module area at both theoretically and practically.

PROGRAMME NAME - BCom – A & F

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18BPSC01 — COURSE NAME: FUNDAMENTALS OF ACCOUNTING

CO1: Understand the concepts and conventions of Accounting and Basic Accounting framework.
CO2: Understand and prepare the Financial Statements.
CO3: Apply the concepts of accounting to make effective financial decisions.
CO4: Gain working knowledge of principles and procedure of accounting and their application in different business situations.

COURSE CODE: 18CAF101 — COURSE NAME: PRINCIPLES OF FINANCE

CO1: Understand the basic knowledge of finance and financial institutions.
CO2: Understand and evaluate the basic financial concepts such as the time value of money, cost of Capital.
CO3: Analyse and interpret the financial statements and study the roles of financial markets and Institutions.

COURSE CODE: 18CAF102 — COURSE NAME: COMPUTER PRACTICALS I – MS OFFICE & INTERNET

CO1: Create a Word document effortlessly.
CO2: Apply various excels features for data analysis and interpretation.
CO3: Analyse the output generated by Access and able to perform internet oriented actions.

COURSE CODE: 18MATC01 — COURSE NAME: BUSINESS MATHEMATICS

CO1: Construct set theory problems.
CO2: Solve the matrix problems
CO3: Solve AP & GP problems
CO4: Evaluate the simple differentiation and integration problems
CO5: Apply Concepts of calculus in Business problems.
CO6: Calculate interest and annuities
CO7: Gain knowledge about the Straight lines, slope and circles.

SEMESTER II

COURSE CODE: 18CAFC01 — COURSE NAME: ADVANCED ACCOUNTING I

CO1: Acquire knowledge about general aspects of accounting standards and its application.
CO2: Understand the conceptual framework in preparation of Investment, consignment and Joint Venture accounts.
CO3: Prepare Branch accounts and apportionment of departmental expenses.
CO4: Compute Fire Insurance Claims and accounting treatment of royalties.

COURSE CODE: 18CAF201 COURSE NAME: MANAGEMENT CONCEPTS

CO1: Discuss and communicate the management evolution and how it will affect future managers.
CO2: Observe and evaluate the influence of historical forces on the current practice of management.
CO3: Explain how organizations adapt to an uncertain environment and identify techniques managers
CO4: Influence and control the internal environment.
CO5: Practice the process of management's four functions: planning, organizing, leading, and controlling.
CO6: Evaluate leadership styles to anticipate the consequences of each leadership style.

COURSE CODE: 18MATC02 COURSE NAME: BUSINESS STATISTICS

CO1: Gain knowledge about basis of statistics.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using correlation and regression.
CO5: Apply the concepts of time series and probability.

SEMESTER III

COURSE CODE: 17CAF301 COURSE NAME: ADVANCED ACCOUNTING II

CO1: Understand the fundamentals of partnership and the importance of types of capital.
CO2: Apply the accounting techniques for the admission, retirement and death of partners.
CO3: Analyze the reasons for suspending partnership and identify modes of dissolution.
CO4: Synthesis the benefits of amalgamation and Identify the reasons for conversion of Partnership into companies.
CO5: Demonstrate the knowledge of basic accounting software and its application.

COURSE CODE: 17CAF302 COURSE NAME: ADVANCED FINANCIAL MANAGEMENT

CO1: Understand the financial planning techniques in decision making process.
CO2: Develop the ability to measure the capital structure and leverage analysis of a firm.
CO3: Describe the importance and various forms of cost of capital.
CO4: Analyze the capital budgeting techniques in investment decision and in evaluating the various investment proposals.
CO5: Apply financial management concepts and tools to the financing decisions and dividend decisions faced by the firm.
CO6: Be familiar with various sources of finance, which a business house can mobilize and effective management of finance.

COURSE CODE: 17CAF303 COURSE NAME: CORPORATE LAW I

CO1: Handle the legal issues while entering into a contract.
CO2: Deal with various government bodies on legal issues.
CO3: Recognize legal and ethical issues when making business decisions.
CO4: Understand the Intellectual Property and apply ethics in decision making.
CO5: Identify the contracts relating to Indemnity and guarantee and apply IT in Business law.

COURSE CODE: 17CAF304 COURSE NAME: MARKETING FUNDAMENTALS

CO1: Describe the market, philosophies of marketing and the marketing environment.
CO2: Explain the segmentation of market, strategies and Buyer behaviour.

CO3: Contribute suggestions in promoting a product and branding the same.
CO4: Suggest an appropriate pricing strategy and price adjustments considering competition and related other factors.
CO5: Understand the role of Government to protect consumers against exploitation and apply research techniques to promote sales.

COURSE CODE: 18CAF305 COURSE NAME: COMPUTER APPLICATION PRACTICAL II

CO1: Create company accounts vouchers including advance voucher entries.
CO2: Prepare and reconcile bank statement, do accrual adjustments, and also print financial statements.
CO3: Apply various accounts with interpretation.
CO4: Analyze the Inventories reports and prepare GST bills.

SEMESTER IV

COURSE CODE: 18CAF401 COURSE NAME: COMPANY ACCOUNTS I

CO1: Understand the basic concepts of issues of shares, debentures and underwriting of shares.
CO2: Analyse and compute profit prior to in corporation and post in corporation period and to find out the mechanism for redemption of preference shares.
CO3: Evaluate the financial position of the company.
CO4: Analyze and Compute various methods of goodwill and shares of the company.
CO5: Apply the procedure for liquidation of companies.

COURSE CODE: 18CAF402 COURSE NAME: INVESTMENT MANAGEMENT

CO1: Understand the fundamentals of Investment & Investor.
CO2: Knowledge to analyse sources for Investment Purpose.
CO3: Analyze and understand Risk & Return Factors.
CO4: Apply and critically evaluate finance and investment theory with particular reference to the operation of financial markets.
CO5: Operate ethically as financial intermediaries.

COURSE CODE: 18CAF403 COURSE NAME: WORKING CAPITAL MANAGEMENT

CO1: Understand the nature, concept and scope of working capital and to access the requirements working management.
CO2: Determine the optimum stock levels by using various tools and techniques.
CO3: Analyze the factors influencing the receivable management and enable the firms to adopt the innovative techniques in Receivable management.
CO4: Examine the basic principles in bank credit and appraise the financial requirement.
CO5: Integrate the payables management in investment process.

COURSE CODE: 18CAF404 COURSE NAME: AUDITING FUNDAMENTALS

CO1: Determine the nature, purpose and scope of audit including the role of external audit and its regulatory and ethical framework.
CO2: Determine the nature of internal audit and describe its role as part of overall performance management and its relationship with the external audit.
CO3: Demonstrate how the auditor obtains an understanding of the entity and its environment, assesses the risk of material misstatement, whether arising from fraud or other irregularities, and plans an audit of financial statements.

CO4: Describe and evaluate information system and internal controls to identify and communicate control risks and their potential consequences, making appropriate recommendations.
CO5: Identify and evaluate the work and evidence required to meet the objectives of audit engagements and the application of computerized on Auditing.

COURSE CODE: 18CAF405 COURSE NAME: CORPORATE LAW II

CO1: Comprehend the nature, functions of companies and apply the relevant knowledge.
CO2: Analyze the relationship between the two major organs in the company, namely the general meeting and the board of directors.
CO3: Explain the law and procedure relating to meetings and the rights of shareholders during meetings.
CO4: Establish the effect and consequences when companies undergo the reconstruction, receivership or winding-up process.
CO5: Understand the process of E-Governance and use of XBRL in companies.

COURSE CODE: 17CAFI01 COURSE NAME: INVESTMENT LITERACY

CO1: Understand the basic knowledge of investment and various avenues.
CO2: Understand the role of financial markets.
CO3: Apply the concepts of Time value of money in investment decision.
CO4: Develop conceptual understanding of primary and secondary markets.
CO5: Analyse and interpret the financial statements.

COURSE CODE: 17EC03 COURSE NAME: GENERAL ECONOMICS

CO1: Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve.
CO2: Understand the links between production costs and the economic models of supply.
CO3: Represent supply, in graphical form, including the upward slope of the supply curve and what shifts the supply curve.
CO4: Graphically and algebraically determine output and pricing decisions under different market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly.
CO5: Understand the basics of national income accounting.
CO6: Explain the components of the balance of payments, the factors that determine currency exchange rates, and ways to cope with exchange rate risk.
CO7: Understand the importance of the financial sector in directing the use of scarce capital.
CO8: Understand the likely path of interest rates in the aftermath of a change in monetary policy.

COURSE CODE: 17MATC06 COURSE NAME: OPERATIONS RESEARCH FOR COMMERCE

CO1: Solve linear programming problems.
CO2: Formulate and solve Transportation and Assignment problems.
CO3: Solve Game and Queuing theory problems.
CO4: Construct the network, estimate the floats by CPM and the probability of completion by PERT.
CO5: Acquire knowledge about decision theory in real life.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary
G. Agila (DR G.AGILA)		

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D06

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – Information Technology**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Acquire high level of Technological proficiency to recognize problems and to create Innovative solutions which would be conventional to the needs of commerce and IT industry.
PEO2	Become customized effectively to the changes in the roles and responsibilities through lifelong learning for enhancing the relationship with the stakeholders.
PEO3	Ethically implement their commerce and technical skill and knowledge in the social and environmental context.

PROGRAMME OUTCOMES

Upon completion of the programme, the student will be able to

PO1	Acquire knowledge of Commerce, Accounting, Management, Information Technology and Industry.
PO2	Solve the problems in various functional areas of business like Finance, Marketing, Human Resources and technology.
PO3	Excel in designing business projects and ventures by applying the knowledge of Commerce, Mathematics and Technology.
PO4	Imbibe the knowledge of information Technology for effective management of large scale business operations.
PO5	Bridge the gap between theory and practice by interaction with industry and other organization.
PO6	Possess communication and interpersonal skills to function effectively at various levels.
PO7	Develop managerial and leadership qualities to discharge the changing roles and responsibilities.
PO8	Recognize the need for lifelong learning to sustain in changing global technological context.
PO9	Act as professional associate at intermediate level and develop knowledge to complete professional courses.
PO10	Gain moral, social, human, environmental, professional and ethical values to become successful and responsible citizens.

PROGRAMME NAME - BCOM – IT

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CIT101 COURSE NAME: PRINCIPLES OF ACCOUNTANCY

CO1: Understand the concepts and conventions of Accounting and Basic Accounting framework.
CO2: Understand and prepare the financial statements
CO3: Apply the concepts of accounting to make effective financial decisions
CO4: Gain working knowledge of principles and procedure of accounting and their application in different business situations

COURSE CODE: 18CIT102 COURSE NAME: BUSINESS MANAGEMENT

CO1: Demonstrate their conceptual skills, understanding and application of principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for organizing, directing and controlling.
CO3: Develop skills to work in groups to achieve organizational goals and to lead teams.
CO4: Demonstrate the managerial concepts in real time problems.

COURSE CODE: 18CIT103 COURSE NAME: COMPUTER PRACTICAL I – MS OFFICE AND TALLY

CO1: Possess the required skill to independently operate the various options of MS Word for office administration.
CO2: Possess the required skill set of working in MS Excel spreadsheet and use various formulas for calculation.
CO3: Enter the accounting transactions in computerized format and find the financial result of a concern.
CO4: Acquire the skill of financial decision making in a systemized manner.

COURSE CODE: 18MATC01 COURSE NAME: BUSINESS MATHEMATICS

CO1: Construct the set theory problems.
CO2: Solve the matrix problems.
CO3: Solve AP and GP problems.
CO4: Evaluate the simple differentiation and Integration problems.
CO5: Apply concepts of Calculus in Business problems.
CO6: Calculate Interest and annuities.
CO7: Gain knowledge about the straight line, slope and circles.

SEMESTER II

COURSE CODE: 18CIT201 COURSE NAME: FINANCIAL ACCOUNTING

CO1: Understand the procedures of partnership accounting.
CO2: Capable of applying the knowledge in the field of hire purchase, branch and departmental accounting areas in business.
CO3: Analyze the process of insurance claims and royalties.

COURSE CODE: 18CIT202 COURSE NAME: OBJECT ORIENTED PROGRAMMING USING C++

CO1: Develop and implement OOPs concept using C++ language.
CO2: Implement the concept of constructor, destructor, function overloading, operator over loading, virtual functions, inheritance and polymorphism.
CO3: Apply the concept of file and stream classes.

COURSE CODE: 18CIT203 COURSE NAME: COMPUTER PRACTICAL II - C++

CO1: Implement object oriented concepts to solve problems.
CO2: Develop applications using object oriented concepts.

COURSE CODE: 18MATC02 COURSE NAME: BUSINESS STATISTICS

CO1: Gain knowledge about basis of statistics.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using Correlation and regression.
CO5: Apply the concepts of time series and probability.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D07

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**BCom – International Business**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Provides students' exposure to different settings and develops their global mindset through a comprehensive and Internationally-oriented curriculum.
PEO2	Equip students with critical skills and knowledge to work in international level.
PEO3	Promote an understanding of different cultures and to refine skills needed for successful International Communication.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Gain exposure to different aspects of International Business and procedures involved in International trade.
PO2	Have comprehensive knowledge of Finance, Accounting, Laws and International Business.
PO3	Impart knowledge of contemporary issues about society and environment.
PO4	Acquire Multi- faceted career opportunities in EXIM, Customs, Customs Agency, Forex, Accounting, Trading, Banking, Logistics, Marketing, Insurance and Warehouse Distribution.
PO5	Gear up with updated knowledge in implementing business practices and successful ventures into self-employment.
PO6	Equip with professional, inter personal and entrepreneurial skills.
PO7	Communicate effectively in Foreign Languages.
PO8	Demonstrate analytical skills and understand the International Business and Management through a guided project in their area.
PO9	Recognize the need for professional advancement by engaging in lifelong learning.

PROGRAMME NAME - BCom - IB

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CIB101 — COURSE NAME: PRINCIPLES OF ACCOUNTANCY

CO1: Prepare financial statements in accordance with appropriate standards.
CO2: Prepare ledger accounts using double entry book keeping and record journal entries accordingly.
CO3: Interpret the business implications of financial statement information,
CO4: Prepare accounting information for planning and control and for the evaluation of finance.
CO5: Prepare Bank reconciliation statement from incomplete statement.
CO6: Explain the purpose of double entry system and understand the accounting system properly.

COURSE CODE: 18CIB102 — COURSE NAME: INTRODUCTION TO INTERNATIONAL BUSINESS MANAGEMENT

CO1: Apply theory in a variety of ways at different international business situations and formulate frameworks for complex cross-border decision making.
CO2: Understand how international factors affect domestic concerns.
CO3: Explain regional economic integration and economic and political integration.
CO4: Plan for businesses expansion abroad.
CO5: Understand the key legal issues related to businesses operating in other countries.

COURSE CODE: 18MATCO1 — COURSE NAME: BUSINESS MATHEMATICS

CO1: Construct the set theory problems.
CO2: Solve the matrix problems.
CO3: Solve AP & GP problems.
CO4: Evaluate the simple differentiation and integration problems.
CO5: Apply Concepts of calculus in Business problems.
CO5: Calculate interest and annuities.
CO6: Gain knowledge about the Straight lines, slope and circles.

SEMESTER II

COURSE CODE: 18CIB201 — COURSE NAME: FINANCIAL ACCOUNTING

CO1: Become familiar with the concept of Branch Accounting and its system.
CO2: Analyse departmental accounting areas in business.
CO3: Apply the knowledge of accounting in the fields of Hire purchase.
CO4: Understand the procedures of partnership accounting and admission transactions.
CO5: Understand the modes of dissolution of partnership firm.

COURSE CODE: 18CIB202 — COURSE NAME: PRINCIPLES OF GLOBAL MARKETING

CO1: Understand the basic context of global marketing.
CO2: Explain marketing strategies and perspectives of a buyer.
CO3: Understand product and product mix, product development strategies.
CO4: Demonstrate the buying and selling behavior of a customer and physical distribution.
CO5: Develop the brand image and brand positioning in the market.

COURSE CODE: 18MATC02 **COURSE NAME: BUSINESS STATISTICS**

CO1: Gain knowledge about basis of statistics.
CO2: Solve problems on averages and dispersion.
CO3: Gain knowledge about the index numbers.
CO4: Analyze using correlation and regression.
CO5: Apply the concepts of time series and probability.

COURSE CODE: 18CIB203 **COURSE NAME: COMPUTER PRACTICAL I – MS OFFICE**

CO1: Understand various concepts in MS Word.
CO2: Understand various techniques in MS Excel to administer the EXIM Industry.
CO3: Make presentations using MS Power point to advertise in the field Export and Import.

COURSE CODE: 18CIBI01 **COURSE NAME: OE I - LOGISTICS MANAGEMENT**

CO1: Know basic characteristics of warehousing and materials handling activities.
CO2: Analyse logistical decisions, (e.g., facilities. inventory and transportation) impact the performance of the firm as well as the entire supply chain.
CO3: Analyse the strengths and weaknesses of various transportation modes.
CO4: Develop strategies, find the best paths to route vehicles, to deliver and collect goods.
CO5: Develop strategies to manage inventories, decide the time and quantity for replenishments without affecting the level of productivity.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D08

SCHOOL NAME	**SCHOOL OF COMMERCE**
PROGRAMME NAME	**MCom – Finance & Computer Applications**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 years of completion of the programme, the Graduates will

PEO1	Be specialized in the area of finance and caters to the manpower needs of companies in accounting, taxation, auditing, financial analysis and management.
PEO2	Recognize, analyze and execute the problem with the software knowledge.
PEO3	Facilitate to pursue research work in the latest and emerging trends of commerce and accounting.
PEO4	Gain professional and leadership skills with corporate social responsibilities and ethical values.

PROGRAMME OUTCOMES

After completing of the Master's programme, the post graduates will be able to

PO1	Become a subject expert in various fields of commerce at a higher level.
PO2	Procure Employment in the financial industry, Management consulting companies, Industrial corporations and public institutions.
PO3	Communicate financial advice and ideas in complex collaborative contexts involving with both peers and clients.
PO4	Expertise in the area of international finance, financial planning services, investment and securities portfolio management and investment avenues.
PO5	Acquire entrepreneurial qualities to start and succeed in their own innovative business positively.
PO6	Identify, formulate, design and develop Computer application software and apply in the various areas of business.
PO7	Gain experience to do research at the highest level.
PO8	Imbibe with social responsibility issues including business ethics, cultural diversity and environmental concerns.

PROGRAMME NAME - MCOM - FCA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MFC101 — COURSE NAME: FINANCIAL ACCOUNTING

CO1: Understand the accounting concepts, ascertain the operating results and assess the financial position of the firm.
CO2: Gain knowledge of accounting and their application in Non – profit organization and prepare Bank Reconciliation Statement.
CO3: Apply the knowledge in the field of branch and departmental accounting in business.
CO4**:** Prepare partnership accounts as per the accounting framework.

COURSE CODE: 18MFC102 — COURSE NAME: RESEARCH METHODOLOGY

CO1: Undertake research in a systematic manner.
CO2: Draft research design with sample framework.
CO3: Apply different methods of data collection and data analysis.
CO4: Prepare reports as per the reporting format.

COURSE CODE: 18MFC103 — COURSE NAME: FINANCIAL MANAGEMENT

CO1: Understand the objectives and functions of financial management.
CO2: Ascertain the cost of capital and take financial decisions based on it.
CO3: Compute various leverages and evaluate capital structure.
CO4: Apply capital budgeting techniques to select profitable project.
CO5: Compute working capital requirements of a concern and dividend payable by the concern.

COURSE CODE: 18MFC104 — COURSE NAME: BANK MANAGEMENT

CO1: Understand the Indian banking system.
CO2: Effectively manage the various sources and application of bank funds.
CO3: Gain knowledge about mergers, diversification of funds and evaluate the performance of banks by using various models.
CO4: Familiar with e-Banking system, methods and its applications.

COURSE CODE: 18MFC105 — COURSE NAME: INSURANCE AND RISK MANAGEMENT

CO1: Expertise various concepts of Insurance and Indian Insurance Industry.
CO2: Familiar with Insurance contract and various schemes available to the investors.
CO3: Manage various types of risk through insurance.
CO4: Excel in the field of Life and Non - Life Insurance.

SEMESTER II

COURSE CODE: 18MFC201 — COURSE NAME: ACCOUNTING FOR MANAGER

CO1: Acquire knowledge about accounting techniques for managerial decisions.

CO2: Analyze the financial statements by using ratios, fund flow, cash flow tools.
CO3: Apply marginal costing and standard costing techniques to evaluate the performance.
CO4: Prepare various budgets in order to plan future course of action.

COURSE CODE: 18MFC202 COURSE NAME: STATISTICS FOR RESEARCH

CO1: Understand the importance of statistics for research findings.
CO2: Apply the concept of Probability Distribution in business decision making.
CO3: Analyse date of large sample and small sample with appropriate tests for testing hypothesis.
CO4: Analyse data by using F and x^2 tests.
CO5: Expertise in using Multiple Correlation & Regression.

COURSE CODE: 18MFC203 COURSE NAME: INTERNATIONAL FINANCIAL MANAGEMENT

CO1: Practice in international financial institutions with different foreign exchange markets.
CO2: Expertise in foreign exchange risk and exposure, international capital budgeting and evaluation of foreign projects.
CO3: Effectively manage the funds of Multinational companies, Foreign Direct Investment and Foreign Portfolio Management.

COURSE CODE: 18MFC204 COURSE NAME: RDBMS AND ORACLE

CO1: Understand the concept of database system.
CO2: Master the basic concepts and appreciate the applications of database systems.
CO3: Explain the data types and its uses.
CO4: Create tables and queries in databases.
CO5: Understand the fundamentals of PL/SQL.
CO6: Master the basics of SQL and construct queries using SQL.
CO7: Describe the functions of Cursors.

COURSE CODE: 18MFC205 COURSE NAME: COMPUTER PRACTICALS I - RDBMS AND ORACLE

CO1: Create a database application and generate reports.
CO2: Populate and query a database using SQL DML/DDL/TCL/DCL commands.
CO3: Program using PL/SQL.

COURSE CODE: 18MFCE01 COURSE NAME: FINANCIAL MARKETS AND INSTITUTIONS

CO1: Understand the structure of financial markets and financial system.
CO2: Compare the role and functions of Banking and Non-Banking Institutions.
CO3: Evaluate the role of SEBI in securities markets.
CO4: Analyse the dimensions of financial market and role of RBI in controlling credit.

COURSE CODE: 18MFCE02 COURSE NAME: INDIAN STOCK EXCHANGE

CO1: Understand the origin and growth of stock market.
CO2: Familiar with the regulatory framework of stock exchange.
CO3: Expertise in the legal provisions in listing of securities.
CO4: Explain the functions and working of SEBI.
CO5: Evaluate the current trends in stock market operations.

COURSE CODE: 18MFCE03 COURSE NAME: SOFTWARE ENGINEERING

CO1: Understand the concepts of software testing.

CO2: Apply the concepts in developing software.
CO3: Describe about SCM process.
CO4: Analyse the concepts and principles in software engineering.
CO5: Apply software testing techniques in software development process.

SEMESTER III

COURSE CODE: 17MFC301 COURSE NAME: TAXATION

CO1: Understand the basic concepts of income tax law and familiar with residential status.
CO2: Compute income from salary, house property, Business/profession, Capital gain & Income from other sources.
CO3: Expertise in the procedure for Assessment of income tax return.
CO4: Masters in GST compliance procedures.

COURSE CODE: 17MFC302 COURSE NAME: FINANCIAL DERIVATIVES MANAGEMENT

CO1: Use the techniques of Forward Contract, Futures Contract, Options and Swap to hedge the unsystematic Risk.
CO2: Analyze the Future and Forward Prices.
CO3: Calculate the intrinsic value and time value of options.

COURSE CODE: 17MFC303 COURSE NAME: CORPORATE ACCOUNTING

CO1: Understand the legal requirements for preparing the final accounts of companies.
CO2: Expertise in consolidation of company accounts.
CO3: Prepare final accounts of banking company and insurance company.
CO4: Execute inflation accounting and human resource accounting.

COURSE CODE: 17MFC304 COURSE NAME: VISUAL BASIC

CO1: Demonstrate fundamental skills in utilizing the tools of a visual environment in terms of the set of controls.
CO2: Explain and use of events for producing event-driven application.
CO3: Implement SDI and MDI applications while using forms, dialogs, and other types of GUI Components.
CO4: Implement syntax rules in Visual Basic programs.
CO5: Explain variables and data types used in program development.
CO6: Write and apply loop structures to perform repetitive tasks.
CO7: Write Windows applications using forms, controls and events.

COURSE CODE: 17MFC305 COURSE NAME: COMPUTER PRACTICAL III - VISUAL BASIC

CO1: Design, create, build, and debug Visual Basic applications.
CO2: Apply arithmetic operations for displaying numeric output.
CO3: Write and apply decision structures for determining different operations.
CO4: Write and apply loop structures to perform repetitive tasks.
CO5: Create, compile, and execute simple Windows Forms.

COURSE CODE: 17MFCE04 **COURSE NAME: FINANCIAL SERVICES**

CO1: Understand the financial markets and its services.
CO2: Execute the merchant banking functions.
CO3: Evaluate Mutual funds and lease financing.
CO4: Gain knowledge about factoring and housing finance.
CO5: Evaluate credit rating of corporate bodies.

COURSE CODE: 17MFCE05 **COURSE NAME: MANAGEMENT INFORMATION SYSTEMS**

CO1: Plan, analyze, design and implement information systems projects.
CO2: Analyze business decisions by applying analytics and decision.
CO3: Plan, design, develop applications, and maintain relational data base management systems.
CO4: Identify ethical issues embedded in decisions and be able to apply appropriate ethical principles.

COURSE CODE: 17MFCE06 **COURSE NAME: STRATEGIC MANAGEMENT**

CO1: Apply the technique of strategic management while implementing business functions.
CO2: Understand the management concepts and apply skills in the field of finance, marketing and organizational perspectives.
CO3: Develop and apply various managerial and technical strategies in the organization.
CO4: Analyze the strategic issues of Non-profit organization.

COURSE CODE: 17MFCI01S **COURSE NAME: IDC - E COMMERCE**

CO1: Understand the concepts of e-commerce.
CO2: Apply the concepts in real time business.
CO3: Understand the various concepts in EDI.
CO4: Gain knowledge on marketing through internet, multimedia and digital video.

SEMESTER IV

COURSE CODE: 17 MFC401 **COURSE NAME: APPLIED COST ACCOUNTING**

CO1: Understand the concepts of cost accounting, preparation of cost sheet and fix the inventory requirement.
CO2: Ascertain the labor cost, allocate, apportion and reapportionment of expenses.
CO3: Compute and analyze the cost of each process and know the various aspects of contract costing & operating costing.
CO4: Compare the profits from cost and financial accounts and ascertain the reasons for difference in Profits.

COURSE CODE: 17MFC402 **COURSE NAME: INVESTMENT MANAGEMENT**

CO1: Understand the concept of investment and its various processes.
CO2: Gain knowledge about risk and securities market.
CO3: Acquire knowledge about the fundamental and technical analysis of Investment management.
CO4: Evaluate the steps in portfolio management.

COURSE CODE: 17MFC403 **COURSE NAME: ENTREPRISE RESOURCE PLANNING**

CO1: Execute the transactions in Enterprise resource Planning.
CO2: Aware of core and extended modules of ERP.
CO3: Obtain knowledge of ERP implementation cycle.
CO4: Acquire knowledge about post implementation phase in ERP and emerging trends on ERP.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D09

SCHOOL NAME	**SCHOOL OF COMPUTING**
PROGRAMME NAME	**BSc – Computer Science**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Develop foundational knowledge in the computer science field and acquire communication and aptitude skill.
PEO2	Function effectively as a team member and/or a leader in multidisciplinary and multicultural environments.
PEO3	Recognize the societal and global context of their work and understand professional and ethical responsibilities.
PEO4	Pursue lifelong learning to update the recent developments.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply basic knowledge of Computing and Mathematics in their appropriate domains.
PO2	Identify a problem and decide on the computing requirements to find a solution.
PO3	Design, implement and evaluate computer-based systems, process, component or program to meet desired needs and in the construction of new software systems.
PO4	Function and communicate effectively in teams to accomplish a common goal.
PO5	Realize the professional, ethical, security, social issues and responsibilities.
PO6	Analyze the local and global impact of computing on individuals, organizations and society.
PO7	Recognize the current need and engage in continuous professional development.
PO8	Use current techniques, skills, and tools necessary for computing practice.

PROGRAMME NAME - BSc – CS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18ITC01 COURSE NAME: PROGRAMMING IN C

CO1: Understand the basics of programs and programming.
CO2: Select appropriate data types and control structures for solving a given problem.
CO3: Illustrate the representation of arrays, strings and usage of string operations.
CO4: Create functions and use structures in programming.
CO5: Knowledge of pointers and dynamic memory allocation.
CO6: Understand the basics of file handling mechanism.

COURSE CODE: 18ITC02 COURSE NAME: PROGRAMMING IN C LAB

CO1: Understand the basic programming concepts.
CO2: Write simple C programs using control structures, arrays and functions.
CO3: Implement simple programs using pointers and file concepts.

COURSE CODE: 18CSC02 COURSE NAME: OFFICE AUTOMATION AND MULTIMEDIA USING PHOTOSHOP

CO1: Identify various applications in MS Word, Excel & Access.
CO2: Make presentations using MS Power point and presenting in software industries.
CO3: Analyze various ways of handling table, forms and reports using MS Access.
CO4: Design posters and invitations.

COURSE CODE: 18CSC01 COURSE NAME: DIGITAL FUNDAMENTALS

CO1: Differentiate Digital and Analog Signals.
CO2: Convert one number system to the other number system.
CO3: Define logic gates and also they can describe about various codes.
CO4: Represent Boolean expression in Karnaugh map and simplify the expressions.
CO5: Describe the fundamental concepts of sequential circuits.
CO6: Convert analog signal to digital value and vice versa.

SEMESTER II

COURSE CODE: 18CACP01 COURSE NAME: OBJECT ORIENTED PROGRAMMING WITH C++ AND LAB

CO1: Distinguish between Structured and Object Oriented problem solving approaches and apply them based on the problem given.
CO2: Identify classes and objects from the given problem description and able to create classes and objects using C++.
CO3: Improve secured data processing by applying Abstraction, Encapsulation and Information hiding.
CO4: Achieve code reusability and extensibility by means of Inheritance and Polymorphism.
CO5: Apply the concepts of files and stream classes.

COURSE CODE: 18CAC01 COURSE NAME: DATA STRUCTURES

CO1: Articulate the knowledge of basic data structures, its classifications and its importance in computer programs.
CO2: Analyze and Implement various operations of different data structures in real world problems.
CO3: Design and implement abstract data types such as linked list, stack, queues and trees to solve the problems.
CO4: Understand and implement fundamental algorithms like searching and sorting in various real time applications.

COURSE CODE: 18CSC07 COURSE NAME: COMPUTER ORGANIZATION AND ARCHITECTURE

CO1: Think critically and independently about computer system design.
CO2: Compare the strengths and weaknesses of the conventional computational organizations.
CO3: Analyze the functions of ALU for various operations.
CO4: Develop the ability and confidence to handle I/O and memory organization.

COURSE CODE: 18CAC02 COURSE NAME: DATA STRUCTURES LAB USING C

CO1: Acquire the practical knowledge on the application of data structures.
CO2: Determine appropriate linear/non-linear data structure operations for solving a given problem.
CO3: Analyze and develop the program for the real world problems by using appropriate data structure.
CO4: Develop functions to implement data structure operations.

SEMESTER III

COURSE CODE: 17CS301 COURSE NAME: VISUAL BASIC PROGRAMMING LAB

CO1: Understand the Form designing in Visual Basic.
CO2: Evaluate the various Visual basic string operations and various controls and its usages.
CO3: Implement the data base connectivity's.

COURSE CODE: 17CS302 COURSE NAME: CLOUD COMPUTING

CO1: Understand cloud computing.
CO2: Understand the cloud computing technology.
CO4: Write comprehensive case studies analyzing and contrasting different cloud computing solutions.
CO4: Make recommendations on cloud computing solutions for an enterprise.

COURSE CODE: 17CSC03 COURSE NAME: JAVA PROGRAMMING

CO1: Understand the basic features of Java Programming.
CO2: Understand the classes and objects of Java programming.
CO3: Know the concept of packages, interfaces and threading in Java.
CO4: Understand the socket concept and its types.
CO5: Understand the applet concept.

COURSE CODE: 17CSC04 COURSE NAME: JAVA PROGRAMMING LAB

CO1: Understand the object-oriented approach in programming.
CO2: Analyze and design a computer program to solve real world problems based on object-oriented principles.
CO3: Design and implement simple GUI applications.

COURSE CODE: 17CSI01 **COURSE NAME: FUNDAMENTALS AND CURRENT TRENDS IN INFORMATION TECHNOLOGY**

CO1: Understand the computer basics, data representation and computer memory.
CO2: Understand the computer generations and classifications.
CO3: Understand the operating system and computer languages.
CO4: Understand the design of Microcomputer, computer generations and classifications.
CO5: Implement the computer networks, voice and data communications.

COURSE CODE: 17ITC05 **COURSE NAME: COMPUTER NETWORKS**

CO1: Identify the services of the layers of the reference model.
CO2: Deal with the issues when data transferred through channels.
CO3: Choose the right routing technique.
CO4: Identify the Protocols that are used from the time of data transferred till it reaches the destination.
CO5: Implement various cryptographic algorithms to secure data.

SEMESTER IV

COURSE CODE: 17ITC03 **COURSE NAME: RDBMS**

CO1: Understand the basic concepts of the database and data models.
CO2: Design a database using ER diagrams and map ER into Relations and normalize the relations.
CO3: Competent in the use of SQL, design and build database system for a given real world problem.
CO4: Develop applications using functions, procedures and triggers.
CO5: Describe the fundamentals of web and its applications.

COURSE CODE: 17ITC06 **COURSE NAME: SOFTWARE ENGINEERING**

CO1: Identify the basic concepts of software engineering models.
CO2: Perform the requirement analysis to build software components.
CO3: Design a model for software components using agile method.
CO4: Test the software models using various testing techniques.
CO5: Analyze software quality standards and assurance.

COURSE CODE: 17CS404 **COURSE NAME: WEB TECHNOLOGY**

CO1: Demonstrate competency in the use of common web page code.
CO2: Create web pages that meet accessibility needs of users.
CO3: Implement the various mouse events.
CO4: Design the application of HTML document structure and content.
CO5: Design the style sheet for document presentation.

COURSE CODE: 17ITC03 **COURSE NAME: RDBMS LAB**

CO1: Design and implement a database schema for a given problem domain.
CO2: Understand the use of Structured Query Language (SQL) and its syntax.
CO3: Populate and query a database using SQL DML/DDL commands.
CO4: Perform programming in PL/SQL including stored procedures, functions and Triggers.

COURSE CODE: 17CS401 **COURSE NAME: WEB TECHNOLOGY LAB**

CO1: Create web pages using HTML, DHTML and Cascading Style Sheets.
CO2: Create dynamic web pages using JavaScript, XML.

CO3: Understand, analyze and apply the role of languages like HTML, DHTML, CSS, JavaScript and PHP.
CO4: Analyze a web page and identify its elements and attributes.

SEMESTER V

COURSE CODE: 16CSC06 COURSE NAME: PHP PROGRAMMING

CO1: Analyze the looping statements and arrays.
CO2: Implement functions and browser handling power of PHP.
CO3: Impart Database applications file handling, Cookies in the webpage.
CO4: Design and Implement Interactive Web Site using Forms and Files.
CO5: Evaluate website organizational structure and design elements.

COURSE CODE: 16CSC03 COURSE NAME: JAVA PROGRAMMMING

CO1: Understand the basic features of Java Programming.
CO2: Understand the classes and objects of Java programming.
CO3: Know the concept of packages, interfaces and threading in Java.
CO4: Understand the socket concept and its types.
CO5: Understand the applet concept.

COURSE CODE: 16CSC04 COURSE NAME: JAVA PROGRAMMING LAB

CO1: Understand the object-oriented approach in programming.
CO2: Analyze and design a computer program to solve real world problems based on object-oriented principles.
CO3: Design and implement simple GUI applications.

COURSE CODE: 16CSC05 COURSE NAME: PHP PROGRAMMING LAB

CO1: Analyze the various types of array and exception handling methods.
CO2: Implement OOPs concepts in an application.
CO3: Create a database in MYSQL and to manipulate data into it.
CO4: Interpret client's session using Cookies.
CO5: Design an interactive webpage with graphical techniques.

COURSE CODE: 16CSI02 COURSE NAME: OE II - INTERNET OF THINGS

CO1: Understand the basis of IoT and its characteristics.
CO2: Understand the functionality of various architectures of IoT.
CO3: Analysis of various Protocols Standards and providers.
CO4: Recognize the importance of Web of Things.
CO5: Interpret various Applications of IoT.

SEMESTER VI

COURSE CODE: 16CS602 COURSE NAME: ANDROID PROGRAMMING

CO1: Apply foundational mobile application concepts.
CO2: Solve real world hardware and software problems based on Android resources.
CO3: Examine different User Interface to validate different Ethical and Social responsibilities.
CO4: Analyze the local and global impact of Persistence database mechanism in Android.

CO5: Execute operations on GUI objects based Applications android techniques, skills and Tools.

COURSE CODE:16CAC05 COURSE NAME: OPERATING SYSTEM

CO1: Understand the role of Operating System as system software.
CO2: Compare and contrast various algorithms used for management of memory, CPU scheduling, file handling and I/O operations.
CO3: Illustrate the various Operating System concepts.
CO4: Demonstrate the role of process synchronization.
CO5: Analyze Linux system architecture.

COURSE CODE: 16CSE04 COURSE NAME: SYSTEM SOFTWARE

CO1: Analyze and synthesize the system software architecture.
CO2: Implement Assembler functions based on global environment of System software.
CO3: Design logical and physical system of loaders and linkers.
CO4: Analyze the component of system software such as Macro processor.
CO5: Find an optimal solution applying various methods of text editors and user interface criteria.

COURSE CODE: 16CS601 COURSE NAME: ANDROID PROGRAMMING LAB

CO1: Apply the logic of Multithreading to solve an Android application.
CO2: Identify real world hardware and software issues and solve the problem based on Layout managers.
CO3: Examine android application and Content provider for various mobile devices
CO4: Predict the Native content provider for the computing practice.

COURSE CODE: 16CAC06 COURSE NAME: OPERATING SYSTEM LAB

CO1: Run various LINUX commands using Ubuntu-Linux Operating System.
CO2: Code shell script in LINUX Operating System.
CO3: Implement CPU scheduling, memory allocation and page replacement algorithms.

Prepared by (HoD)	Approved by (Dean)	
		Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D10

SCHOOL NAME	**SCHOOL OF COMPUTING**
PROGRAMME NAME	**BSc – Information Technology**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Be quality professionals who adopt themselves to the ever-changing IT industry and work in a multicultural and multidisciplinary environment.
PEO2	Acquire sound knowledge in information and communication technology and be professionals with managerial ability and social responsibility.
PEO3	Be effective communicators with excellent interpersonal skills by engaging in lifelong learning.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply the basis of Mathematics and domain knowledge in their core area of information technology.
PO2	Develop applications in current trends for solving real time problems.
PO3	Communicate effectively to the computing community and to the society at large.
PO4	Engage in continuous learning as an IT professional that meets the needs of industry.
PO5	Apply professional and ethical values in the global environment.
PO6	Apply the knowledge of software management principles to manage projects effectively.
PO7	Function effectively as an individual or as a leader in a team environment.

PROGRAMME NAME - BSc – IT

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CSC01 — COURSE NAME: DIGITAL FUNDAMENTALS

CO1: Differentiate Digital and Analog Signals.
CO2: Convert one number system to the other number system.
CO3: Define logic gates and also they can describe about various codes.
CO4: Represent Boolean expression in Karnaugh map and simplify the expressions.
CO5: Describe the fundamental concepts of sequential circuits.
CO6: Convert analog signal to digital value and vice versa.

COURSE CODE: 18CSC02 — COURSE NAME: OFFICE AUTOMATION AND MULTIMEDIA USING PHOTOSHOP

CO1: Identify various applications in MS Word, Excel & Access.
CO2: Make presentations using MS Power point and presenting in software industries.
CO3: Analyze various ways of handling table, forms and reports using MS Access.
CO4: Design posters and invitations.

COURSE CODE: 18ITC01 — COURSE NAME: PROGRAMMING IN C

CO1: Explain the basics of programs and programming.
CO2: Select appropriate data types and control structures for solving a given problem.
CO3: Illustrate the representation of arrays, strings and usage of string operations.
CO4: Create functions and use structures in programming.
CO5: Knowledge of pointers and dynamic memory allocation.
CO6: Explain the basics of file handling mechanism.

COURSE CODE: 18ITC02 — COURSE NAME: PROGRAMMING IN C LAB

CO1: Understand the basic programming concepts.
CO2: Write simple C programs using control structures, arrays and functions.
CO3: Implement simple programs using pointers and file concepts.

COURSE CODE: 18MATC07 — COURSE NAME: DISCRETE MATHEMATICS

CO1: Solve Mathematical logic problems.
CO2: Visualize the fundamental ideas of relations and functions.
CO3: Describe the different types of formal languages.
CO4: Apply automata theory and Boolean algebra.
CO5: Acquire knowledge about graph theory.

SEMESTER II

COURSE CODE: 18CAC01 — COURSE NAME: DATA STRUCTURES

CO1: Articulate the knowledge of basic data structures, its classifications and its importance in computer programs.

CO2: Analyze and Implement various operations of different data structures in real world problems.
CO3: Design and implement abstract data types such as linked list, stack, queues and trees to solve the problems.
CO4: Understand and implement fundamental algorithms like searching and sorting in various real time applications.

COURSE CODE: 18CACP01 COURSE NAME: OBJECT ORIENTED PROGRAMMING WITH C++ AND LAB

CO1: Distinguish between Structured and Object Oriented problem solving approaches and apply them based on the problem given.
CO2: Identify classes and objects from the given problem description and able to create classes and objects using C++.
CO3: Improve secured data processing by applying Abstraction, Encapsulation and Information hiding.
CO4: Achieve code reusability and extensibility by means of Inheritance and Polymorphism.
CO5: Apply the concepts of files and stream classes.

COURSE CODE: 18CAC02 COURSE NAME: DATA STRUCTURES LAB USING C

CO1: Implement elementary data structures such as stacks, queues, linked lists, trees and graphs.
CO2: Determine the appropriate data structure to represent real world applications.
CO3: Acquired practical knowledge on the application of data structures.
CO4: Analyze and develop the program for the real world problems by using appropriate data structure.

COURSE CODE: 18CSC07 COURSE NAME: COMPUTER ORGANIZATION AND ARCHITECTURE

CO1: Think critically and independently about computer system design.
CO2: Understand the strengths and weaknesses of the conventional computational organizations.
CO3: Learn the concepts of computer organization for several engineering applications.
CO4: Develop the ability and confidence to use the fundamentals of computer organization as a tool in the engineering of digital systems.

COURSE CODE: 18IT201 COURSE NAME: COMPUTATIONAL MATHEMATICS AND STATISTICS

CO1: Formulate problems on matrix concepts.
CO2: Solve algebraic and transcendental equation problems.
CO3: Determine the solution for linear algebraic equation.
CO4: Derive the numerical and integration problems.
CO5: Gain knowledge about mean, SD and correlation.

SEMESTER III

COURSE CODE: 17CSC03 COURSE NAME: JAVA PROGRAMMING

CO1: Understand the basic features of java Programming.
CO2: Understand the classes and objects of java programming.
CO3: Know the concept of packages, interfaces and threading in java.
CO4: Understand the socket concept and its types.
CO5: Understand the applet concept.

COURSE CODE: 17CSC04 COURSE NAME: JAVA PROGRAMMING LAB

CO1: Understand the object-oriented approach in programming.

CO2: Students should be able to analyze and design a computer program to solve real world problems. based on object-oriented principles.
CO3: Design and implement simple GUI applications.

COURSE CODE: 17ITC03 COURSE NAME: RDBMS

CO1: Understand the basic concepts of the database and data models.
CO2: Design a database using ER diagrams and map ER into Relations and normalize the relations.
CO3: Competent in the use of SQL, to Design and build database system for a given real world problem.
CO4: Develop applications using functions, procedures and triggers.
CO5: Describe the fundamentals of web and its applications.

COURSE CODE: 17ITC04 COURSE NAME: RDBMS LAB

CO1: Design and implement a database schema for a given problem domain.
CO2: Understand the use of Structured Query Language (SQL) and its syntax.
CO3: Populate and query a database using SQL DML/DDL commands.
CO4: Perform programming in PL/SQL including stored procedures, functions and Triggers.

COURSE CODE: 17ITI01 COURSE NAME: MULTIMEDIA TECHNIQUES

CO1: Describe the basic concept of multimedia and its designing.
CO2: Understand the application of images in digital world & Compare and contrast between various audio formats.
CO3: Develop, edit and improve the content that incorporates a variety of digital media such as animation and video.
CO4: Explore the various stages and the components needed for multimedia.
CO5: Critically evaluate the implications of costing and planning in making multimedia.

COURSE CODE: 17MATC05 COURSE NAME: OPERATIONS RESEARCH

CO1: Apply and solve linear programming.
CO2: Apply and solve transportation and assignment problems.
CO3: Acquire knowledge about game theory and to solve inventory models.
CO4: Acquire knowledge about replacement in real life and to solve waiting line problems.
CO5: Solve network models.

SEMESTER IV

COURSE CODE: 17ITC05 COURSE NAME: COMPUTER NETWORKS

CO1: Identify the services of the layers of the reference model.
CO2: Deal with the issues when data transferred through channel.
CO3: Select the right routing technique.
CO4: Identify the protocols that are used from the time of data transferred till destination.
CO5: Implement various cryptographic algorithms to secure data.

COURSE CODE: 17IT401 COURSE NAME: NETWORK LAB

CO1: Use right protocol for the right application.
CO2: Validate the IP address of the system.
CO3: Implement routing algorithm to route data.
CO4: Implement file sharing concept.
CO5: Encrypt data with the right Encryption algorithm.

COURSE CODE: 17IT402 COURSE NAME: WEB TECHNOLOGY LAB

CO1: Design web page with all HTML features like tables, frames, images, links etc.
CO2: Implement Style Sheets and Link it with the HTML program
CO3: Design an Interactive Web page using Java Script by implementing Functions, Arrays, Objects and Events.
CO4: Implement Bootstrap concepts in web design.

COURSE CODE: 17IT403 COURSE NAME: WEB TECHNOLOGY

CO1: Analyze and design a web page and identify its elements and attributes.
CO2: Create web pages using XHTML and linking with external Cascading Style Sheets.
CO3: Build and deploy dynamic web pages using JavaScript.
CO4: Manipulate data using java script objects.
CO5: Create interactive website with object collections, event handling to respond the user data.
CO6: Design web pages using Bootstrap.

COURSE CODE: 17ITC06 COURSE NAME: SOFTWARE ENGINEERING

CO1: Apply the knowledge of science and engineering models.
CO2: Perform the requirement analysis to build software components.
CO3: Design a model for software components using agile method.
CO4: Test the software modules using various testing techniques.
CO5: Analyze software quality standards and assurance.

COURSE CODE: 17COC01 COURSE NAME: BUSINESS ACCOUNTING

CO1: Understand the Principles of Accounting, branches of Accounting and its Application.
CO2: Ascertain Profit / Loss earned by the business and its financial position.
CO3: Prepare cost sheet and maintaining stores ledger.
CO4: Assess the financial Performance of the business by applying Management Accounting Concepts.
CO5: Prepare various budgets for managerial decision making and policy framing.

SEMESTER V

COURSE CODE: 16CAC05 COURSE NAME: OPERATING SYSTEM

CO1: Appreciate the role of Operating System as system software.
CO2: Compare and contrast various algorithms used for management of memory, CPU scheduling, file handling and I/O operations.
CO3: Appreciate various Operating System concepts for resource allocation and deadlock management.
CO4: Appreciate the role of process synchronization

COURSE CODE: 16CAC06 COURSE NAME: OPERATING SYSTEM LAB

CO1: Run various LINUX commands using Ubuntu -Linux Operating System
CO2: Code shell script in LINUX Operating System.
CO3: Implement CPU scheduling, memory allocation, page replacement and disk scheduling algorithms.

COURSE CODE: 16IT502 COURSE NAME: MOBILE APPLICATION DEVELOPMENT

CO1: Apply foundational mobile application concepts.
CO2: Understand, identify, formulate and solve real world hardware and software problems.

CO3: Examine mobile application market and web services for various mobile devices.
CO4: Demonstrate Android activities and debugging.
CO5: Execute operations on GUI objects.

COURSE CODE: 16IT501 COURSE NAME: MOBILE APPLICATION DEVELOPMENT LAB

CO1: Apply fundamental mobile application concepts.
CO2: Understand, identify, formulate and solve real world hardware and software problems.
CO3: Examine mobile application and web services for various mobile devices.

COURSE CODE: 16ITI01 COURSE NAME: OPEN ELECTIVE I - MULTIMEDIA TECHNIQUES

CO1: Describe the basic concept of multimedia and its designing.
CO2: Understand the application of images in digital world & Compare and contrast between various audio formats.
CO3: Develop, edit and improve the content that incorporates a variety of digital media such as animation and video.
CO4: Explore the various stages and the components needed for multimedia.
CO5: Critically evaluate the implications of costing and planning in making multimedia.

SEMESTER VI

COURSE CODE: 16IT601 COURSE NAME: .NET PROGRAMMING

CO1: Analyze the basic structure of C# application.
CO2: Develop object oriented programs using C# on .NET.
CO3: Build and debug well-formed Web Forms with ASP. NET Controls.
CO4: Perform form validation with validation controls.
CO5: Use ADO.NET in a web application to read, insert, and update data in a database.

COURSE CODE: 16IT602 COURSE NAME: .NET LAB

CO1: Create simple application using various controls in VB. NET.
CO2: Design an application in VB. Net with the array object.
CO3: Implement the web controls in an application.
CO4: Manipulate data in a database in ADO.Net Environment.

COURSE CODE: 16IT603 COURSE NAME: PROJECT AND VIVA VOCE

CO1: Develop a software application for real time problems.
CO2: Perform analysis, design, testing and validation for a software requirement.

COURSE CODE: 16IT604 COURSE NAME: SOFTWARE TESTING

CO1: Compare various test processes and quality improvement methods.
CO2: Identify types of errors and fault models.
CO3: Develop test plan and process.
CO4: Apply various testing methods.
CO5: Implement software testing techniques in applications.

COURSE CODE: 16ITE03 COURSE NAME: THREATS AND RIGHTS OF CYBER LAWS

CO1: Discuss the specialties of intellectual property law and its related roles.
CO2: Identify information technology related IPR computer software.
CO3: Determine the legal issues in patent and computer software.
CO4: Evaluate the basic theories of Cyber Laws.

COURSE CODE: 16ITE04 COURSE NAME: OBJECT ORIENTED ANALYSIS AND DESIGN

CO1: Explain the basic modeling language UML used in object oriented technique.
CO2: Identify objects, their behavior, their relationships, their classification and their organization.
CO3: Identify system design activities and address design goals.
CO4: Perform validation of system behavior against system model.
CO5: Perform project management activities.

COURSE CODE: 16ITE05 COURSE NAME: DATA MINING AND BUSINESS INTELLIGENCE

CO1: Appreciate the techniques of knowledge discovery for business applications.
CO2: Apply various steps of data mining to reduce dimensionality without sacrificing accuracy.
CO3: Design and deploy appropriate classification techniques.
CO4: Analyze Big Data Management with neural nets.
CO5: Apply the association rules for mining the data.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D11

SCHOOL NAME	**SCHOOL OF COMPUTING**
PROGRAMME NAME	**BCA**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Become successful Computer Professionals in Academic, Industry, Research, Public Sectors and Entrepreneurial pursuits.
PEO2	Have the ability to design and develop all kinds of applications with strong technical knowledge to meet the current trends of IT field.
PEO3	Acquire effective communication skills, multidisciplinary approach and lifelong learning to fulfill their goals.
PEO4	Imbibe moral values through Value Education to contribute to the society at large.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Communicate effectively as far as the enterprise/industry/community is concerned.
PO2	Work as an individual/ in a team.
PO3	Identify the problems and provide solutions.
PO4	Develop experimental analysis skills.
PO5	Apply the latest tools and technologies in computing practices.
PO6	Create harmony between social and environmental aspects.
PO7	Design, implement and evaluate a computer-based system on par with the global standards of industry.
PO8	Understand professional, ethical, legal and social issues and responsibilities.
PO9	Work in multidisciplinary environments.
PO10	Apply the knowledge of Mathematics and Computing in the field of project development and research.
PO11	Apply knowledge in real time situations.
PO12	Excel in the field of Information Technology and go about learning towards fulfilling their goals.

PROGRAMME NAME - BCA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CSC01 — COURSE NAME: DIGITAL FUNDAMENTALS

CO1: Differentiate Digital and Analog Signals.
CO2: Convert one number system to the other number system.
CO3: Define logic gates and also they can describe about various codes.
CO4: Represent Boolean expression in Karnaugh map and simplify the expressions.
CO5: Describe the fundamental concepts of sequential circuits.
CO6: Convert analog signal to digital value and vice versa.

COURSE CODE: 18ITC01 — COURSE NAME: PROGRAMMING IN C

CO1: Explain the basics of programs and programming.
CO2: Select appropriate data types and control structures for solving a given problem.
CO3: Illustrate the representation of arrays, strings and usage of string operations.
CO4: Create functions and use structures in programming.
CO5: Knowledge of pointers and dynamic memory allocation.
CO6: Explain the basics of file handling mechanism.

COURSE CODE: 18COCO1 — COURSE NAME: BUSINESS ACCOUNTING

CO1: Understand the Principles of Accounting, branches of Accounting and its application.
CO2: Ascertain Profit / Loss earned by the business and its financial position.
CO3: Prepare Cost Sheet and maintaining Stores Ledger.
CO4: Assess the financial performance of the business by applying Management Accounting Concepts.
CO5: Prepare various budgets for managerial decision making and policy framing.

COURSE CODE: 18CSC02 — COURSE NAME: OFFICE AUTOMATION AND MULTIMEDIA USING PHOTOSHOP

CO1: Identify various applications in MS Word, MS Excel and MS Access.
CO2: Make presentations using MS Power point and presenting in software industries.
CO3: Analyze various ways of handling table, forms and reports using MS Access.
CO4: Design posters and invitations.

COURSE CODE: 18ITC02 — COURSE NAME: PROGRAMMING IN C LAB

CO1: Understand the basic programming concepts.
CO2: Write simple C programs using control structures, arrays and functions.
CO3: Implement simple programs using pointers and file concepts.

SEMESTER II

COURSE CODE: 18CAC01 — COURSE NAME: DATA STRUCTURES

CO1: Articulate the knowledge of basic data structures, its classifications and its importance in Computer programs.

CO2: Analyze and implement various operations of different data structures in real world problems.
CO3: Design and implement abstract data types such as linked list, stack, queues and trees to solve the Problems.
CO4: Demonstrate searching and sorting algorithms in various real time applications.

COURSE CODE: 18CACP01 COURSE NAME: OBJECT ORIENTED PROGRAMMING WITH C++ AND LAB

CO1: Distinguish between Structured and Object Oriented problem solving approaches and apply them based on the problem given.
CO2: Identify classes and objects from the given problem description and able to create classes and objects using C++.
CO3: Improve secured data processing by applying Abstraction, Encapsulation and Information hiding.
CO4: Achieve code reusability and extensibility by means of Inheritance and Polymorphism.
CO5: Apply the concepts of files and stream classes.

COURSE CODE: 18CSC07 COURSE NAME: COMPUTER ORGANIZATION AND ARCHITECTURE

CO1: Identify the various components of computer system design.
CO2: Compare the strengths and weaknesses of the conventional computational organizations.
CO3: Analyze the functions of ALU for various operations.
CO4: Develop the ability and confidence to handle I/O and memory organization.

COURSE CODE: 18CA201 COURSE NAME: NUMERICAL METHODS AND STATISTICS

CO1: Solve the problems using numerical methods.
CO2: Solve problems in linear algebraic equations.
CO3: Solve numerical differentiation and integration problems.
CO4: Solve problems on central tendency and dispersion.
CO5: Analyze using correlation and regression.

COURSE CODE: 18CAC02 COURSE NAME: DATA STRUCTURES LAB USING C

CO1: Acquire the practical knowledge on the application of data structures.
CO2: Determine appropriate linear/non-linear data structure operations for solving a given problem.
CO3: Analyze and develop the program for the real world problems by using appropriate data structure.
CO4: Develop functions to implement data structure operations.

SEMESTER III

COURSE CODE: 17CSC03 COURSE NAME: JAVA PROGRAMMING

CO1: Understand the basic features of java Programming.
CO2: Understand the classes and objects of java programming.
CO3: Know the concept of packages, interfaces and threading in java.
CO4: Understand the applet concept.

COURSE CODE: 17CSC04 COURSE NAME: JAVA PROGRAMMING LAB

CO1: Understand the object-oriented approach in programming.
CO2: Analyze and design a computer program to solve real world problems based on object oriented Principles.
CO3: Design and implement simple GUI applications.

COURSE CODE: 17ITC04 COURSE NAME: RDBMS LAB

CO1: Design and implement a database schema for a given problem domain.
CO2: Understand the use of Structured Query Language (SQL) and its syntax.
CO3: Populate and query a database using SQL DML/DDL commands.
CO4: Perform programming in PL/SQL including stored procedures, functions and Triggers.

COURSE CODE: 17CAI01 COURSE NAME: BASICS OF INTERNET

CO1: Define the World Wide Web.
CO2: Understand E-Mail.
CO3: Outline the concepts of HTML.
CO4: Understand the PHP Programming.
CO5: Implement the E Payment Systems.

COURSE CODE: 17MATC05 COURSE NAME: OPERATIONS RESEARCH

CO1: Apply and solve linear programming, transportation and assignment problems.
CO2: Solve network, waiting line and inventory models.
CO3: Acquire knowledge about game theory and replacement in real life.

COURSE CODE: 17ITC03 COURSE NAME: RDBMS

CO1: Understand the basic concepts of the database and data models.
CO2: Design a database using ER diagrams and map ER into Relations and normalize the relations.
CO3: Competent in the use of SQL, Design and build database system for a given real world problem.
CO4: Develop applications using functions, procedures and triggers.
CO5: Describe the fundamentals of web and its applications.

SEMESTER IV

COURSE CODE: 17ITC06 COURSE NAME: SOFTWARE ENGINEERING

CO1: Identify the Basic concepts of software engineering models.
CO2: Perform the requirement analysis to build software components.
CO3: Design a model for software components using agile method.
CO4: Test the software modules using various testing techniques.
CO5: Analyse software quality, standards and assurance.

COURSE CODE: 17CA402 COURSE NAME: VB.NET LAB

CO1: Analyze and apply the VB.NET IDE Framework.
CO2: Develop, design and implement VB.Net program using various controls.
CO3: Implement ADO.Net connectivity.
CO4: Create their own applications with reports.

COURSE CODE: 17CA403 COURSE NAME: SOFTWARE TESTING LAB

CO1: Understand the importance of software testing and apply software testing techniques for Information Systems development.
CO2: Apply software testing techniques in commercial environments and assess the adequacy of test suites using control flow, data flow and program mutation.
CO3: Create test strategies and plans, design test cases, prioritize and execute them.

COURSE CODE: 17CAE01 **COURSE NAME: MOBILE COMPUTING**

CO1: Articulate the concept of wireless communication.
CO2: Have knowledge on the Wireless Network architecture.
CO3: Choose the appropriate access scheme for a given scenario.
CO4: Deploy various Mobile Handheld devices.
CO5: Understand various security issues in Mobile Computing.

COURSE CODE: 17CAE02 **COURSE NAME: BIG DATA ANALYTICS**

CO1: Understand the fundamental concepts, approaches to Analytics and key roles of Data Scientists.
CO2: Acquire the Phases of Data Analytics Lifecycle and apply the data analytics projects in CASE STUDY.
CO3: Participate and contribute as a Data Science Team Member on big data and other analytics projects by using R-Programming Language.
CO4: Understand and Deploying the advanced analytical theory and Methods of Clustering to address big data analytics projects.
CO5: Apply the association rules, validate and testing by the appropriate analytic techniques and tools to analyze big data.

COURSE CODE: 17CAE03 **COURSE NAME: CLOUD COMPUTING**

CO1: Understand the basic concepts of cloud computing and services.
CO2: Apply Virtualization concept.
CO3: Assess cloud Storage systems and Cloud security, the risks involved, and its impact.

COURSE CODE: 17CA404 **COURSE NAME: MARKETING MANAGEMENT**

CO1: Recognize the importance of marketing in an organization, how marketing relates to other Business functions, and the role of marketing in society at large.
CO2: Do basic secondary research relative to marketing in an organization (e.g., by using Internet search engines, Such as Yahoo, Google, etc.).
CO3: Select, analyse and define a target market for a selected product or service.
CO4: Develop a marketing plan or strategy for a product or service (e.g., company objectives, marketing objectives, target market(s), advertising, pricing, distribution, product/ service development, evaluation of competitors, contingency plans, budget, etc.).
CO5: Evaluate/analyse the marketing strategy for an existing product and/or services. Know the basic marketing concept and theories.

COURSE CODE: 17CA401 **COURSE NAME: VB. NET**

CO1: Describe the basic structure of a Visual Basic.NET and use main features of the Integrated development environment (IDE).
CO2: Determine logical alternatives and error handling with VB. NET decision structures.
CO3: Demonstrate and integrate variables, constants, lists and loops with VB. NET controls by using procedures and functions.
CO4: Create reports by using ADO.NET connectivity.

SEMESTER V

COURSE CODE: 16CA501 **COURSE NAME: MOBILE APPLICATION DEVELOPMENT**

CO1: Understand the fundamental concepts, approaches to Analytics and key roles of App. developers
CO2: Understand the architecture of Android Operating System for Mobile Devices.

CO3: Understand the skills for creating and deploying Android applications, with particular emphasis on software engineering topics including software architecture, software process, usability, and deployment.

COURSE CODE: 16CA502 COURSE NAME: MOBILE APPLICATION DEVELOPMENT LAB

CO1: Run various packages in Java and Android environment.
CO2: Code Android programs for mobile applications.
CO3: Implement scripting, designing, and developing of the mobile application programs.

COURSE CODE: 16CA503 COURSE NAME: PROJECT AND VIVA VOCE

CO1: Develop a useful software product of their own.
CO2: Perform analysis, design, testing and validation for a software requirement.

COURSE CODE: 16CAI02 COURSE NAME: INTRODUCTION TO OPEN SOURCE TOOLS

CO1: Know the concept of open source tool.
CO2: Understand the basic concept of PHP.
CO3: To develop application using HTML.

COURSE CODE: 16ITC05 COURSE NAME: COMPUTER NETWORKS

CO1: To identify the services of the layers of the reference model.
CO2: To deal with the issues when data transferred through channels.
CO3: To be able to choose the right routing technique.
CO4: To identify the Protocols that are used from the time of Data transferred till it reaches the Destination.
CO5: To implement various cryptographic algorithms to secure data.

SEMESTER VI

COURSE CODE: 16CAC05 COURSE NAME: OPERATING SYSTEM

CO1: Understand the role of Operating System as system software.
CO2: Compare and contrast various algorithms used for management of memory, CPU scheduling, file handling and I/O operations.
CO3: Illustrate the various Operating System concepts.
CO4: Demonstrate the role of process synchronization.
CO5: Analyze Linux system architecture.

COURSE CODE: 16CAC06 COURSE NAME: OPERATING SYSTEM LAB

CO1: Run various LINUX commands using Ubuntu -Linux Operating System.
CO2: Code shell script in LINUX Operating System.
CO3: Implement CPU scheduling, memory allocation, page replacement and disk scheduling algorithms.

COURSE CODE: 16CAE02 (A) COURSE NAME: MOBILE COMPUTING

CO1: Articulate the concept of wireless communication.
CO2: Have knowledge on the Wireless Network architecture.
CO3: Choose the appropriate access scheme for a given scenario.
CO4: Deploy various Mobile Handheld devices.
CO5: Understand various security issues in Mobile Computing.

COURSE CODE: 16CAE02 (B) **COURSE NAME: BIG DATA ANALYTICS**

CO1: Understand the fundamental concepts, approaches to Analytics and key roles of Data Scientists.
CO2: Acquire the Phases of Data Analytics Lifecycle and apply the data analytics projects in CASE STUDY.
CO3: Participate and contribute as a Data Science Team Member on big data and other analytics projects by using R-Programming Language.
CO4: Understand and Deploying the advanced analytical theory and Methods of Clustering to address big data analytics projects.
CO5: Apply the association rules, validate and testing by the appropriate analytic techniques and tools to analyze big data.

COURSE CODE: 16CAE02 (C) **COURSE NAME: CLOUD COMPUTING**

CO1: Understand the basic concepts of cloud computing and services.
CO2: Apply Virtualization concept.
CO3: Assess cloud Storage systems and Cloud security, the risks involved, and its impact.

COURSE CODE: 16CSC05 **COURSE NAME: PHP PROGRAMMING LAB**

CO1: Handle array and string handling methods.
CO2: Implement OOPs Concepts in an application.
CO3: Create a database in MySQL and to manipulate data into it.
CO4: Store information about client's session using Cookies.
CO5: Design an interactive webpage with graphical techniques.

COURSE CODE: 16CSC06 **COURSE NAME: PHP PROGRAMMING**

CO1: Utilizing the basic concept of statements and arrays.
CO2: Implement functions and browser handling power of PHP.
CO3: Imparting Database applications, file handling, Cookies in the webpage.
CO4: Design and Implement Interactive Web Site using Forms and Files.
CO5: Evaluate website organizational structure and design elements.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D12

SCHOOL NAME	**SCHOOL OF COMPUTING**
PROGRAMME NAME	**MSc – Computer Science**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Apply necessary algorithms and techniques to solve real time problems.
PEO2	Contribute effectively as a leader and work in a team.
PEO3	Learn and upgrade the recent happenings by lifelong learning.
PEO4	Learn to apply modern skills and techniques in computing.
PEO5	Be capable of pursuing professional careers or taking up research programmes.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply their knowledge in solving the real time problems.
PO2	Review the literature and involve in research to design innovations, analyze and give solutions in an innovative way.
PO3	Apply ethical principles and function effectively in the team.
PO4	Communicate effectively in a multicultural environment.
PO5	Involve in lifelong learning for the continual improvement

PROGRAMME NAME - MSc - COMPUTER SCIENCE

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MCSC101 COURSE NAME: INFORMATION SECURITY

CO1: Understand the fundamentals of cryptography and how cryptography serves as the central language of information security.
CO2: Understand Security Baselines and the Roles of Computer Forensics and the Law in Information Security.
CO3: Analyze design and implementation of Security Techniques.
CO4: Demonstrate how to detect and reduce threats in Web security.
CO5: Analyze the authentication and encryption needs of an information system and Monitor security conditions and environment.

COURSE CODE: 18MCS101 COURSE NAME: .NET PROGRAMMING

CO1: Design window and web based applications using the .NET Framework.
CO2: Create console and window based application using C# and VB.Net.
CO3: Evaluate web-based applications by using various web controls in ASP.NET.
CO4: Implement and deploy database connection management using ADO.NET.
CO5: Develop security based web application for various business operations.

COURSE CODE: 18MCS102 COURSE NAME: J2EE TECHNOLOGY

CO1: Evaluate ODBC and DAO database connectivity and extend three tier applications using servlets.
CO2: Understand Java programming concepts and utilize Java Graphical User Interface in program writing.
CO3: Build Java Application for distributed environment and Design and Develop multi-tier applications.
CO4: Identify and Analyze Enterprise applications to derive Business logic.

COURSE CODE: 18MCS103 COURSE NAME: DESIGN AND ANALYSIS OF ALGORITHMS

CO1: Design algorithms for various computing problems.
CO2: Analyze the time and space complexity of algorithms.
CO3: Critically analyze the different algorithm design techniques for a given problem.
CO4: Modify existing algorithms to improve efficiency.

COURSE CODE: 18MCS104 COURSE NAME: .NET PROGRAMMING LAB

CO1: Identify and apply .NET class library for developing applications.
CO2: Create console and window based application using C# and VB.Net.
CO3: Evaluate web-based applications by using various web controls in ASP.NET.
CO4: Develop database using ADO.NET.
CO5: Implement security based web application for various businesses operations.

COURSE CODE: 18MCS105 **COURSE NAME: J2EE LAB**

CO1: Understand Java programming concepts and utilize Java Graphical User Interface in program writing.
CO2: Design and Develop distributed and enterprise applications and multi-tier applications using JDBC connectivity.
CO3: Develop graphical user interface application.
CO4: Implement program using servlets, JSP, RMI.

SEMESTER II

COURSE CODE: 18MCS201 **COURSE NAME: PHP PROGRAMMING**

CO1: Utilizing the basic concept of statements and arrays.
CO2: Implement functions and browser handling power of PHP.
CO3: Imparting Database applications, file handling, Cookies in the webpage.
CO4: Design and Implement Interactive Web Site using Forms, OOPS and AJAX.
CO5: Create easy communication with servers using AJAX, drawing images on server.

COURSE CODE: 18MCS202 **COURSE NAME: MOBILE APPLICATION DEVELOPMENT**

CO1: Apply foundational mobile application concepts.
CO2: Understand, identify, formulate and solve real world hardware and software problems.
CO3: Work with database technologies, iOS apps.
CO4: Examine mobile application market and web services for various mobile devices.
CO5: Build and develop tools for android, IoS.

COURSE CODE: 18MCS203 **COURSE NAME: NETWORK MANAGEMENT**

CO1: Understand Network types and technology services.
CO2: Understand Network Management Architecture.
CO3: Analyze SNMP protocol and Use SNMP management software to monitor any network device in which SNMP agent software has been installed.
CO4: Analyze RMON tools for Network Management, and use RMON mechanism to collect and process data at the point of collection.
CO5: Construct Network management plan for large enterprise.
CO6: Create or structure network management policies for small enterprises.

COURSE CODE: 18MCS204 **COURSE NAME: PHP PROGRAMMING LAB**

CO1: Handle array and string handling methods.
CO2: Implement OOPs Concepts in an application.
CO3: Create a database in MYSQL and to manipulate data into it.
CO4: Store information about client's session using Cookies
CO5: Design an interactive webpage with graphical techniques.

COURSE CODE: 18MCS205 **COURSE NAME: MOBILE APPLICATION DEVELOPMENT LAB**

CO1: Apply foundational mobile application concepts
CO2: Understand, identify, formulate and solve real world hardware and software problems.

CO3: Work with database and IoS applications.
CO4: Examine mobile application and web services for various mobile devices.

COURSE CODE: 18MCS206 COURSE NAME: MINI PROJECT

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate for problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop the ability to explain and defend their work in front of an evaluation panel.

COURSE CODE: 18MCSE01 COURSE NAME: DATAMINING AND WAREHOUSING

CO1: Understand OLAP Technology for data discovery that includes capability for limitless report viewing, complex analytical calculations and predictive planning.
CO2: Store voluminous data for online processing.
CO3: Create data cubes that are used to represent data that is too complex to be described by a table of columns and rows.
CO4: Preprocess the data for mining applications.
CO5: Apply the association rules for mining the data.
CO6: Analyze various classification techniques.
CO7: Cluster the high dimensional data for better organization of the data.
CO8: Discover the knowledge imbibed in the high dimensional system.

COURSE CODE: 18CSE02 COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

CO1: Understand and apply the concept of entrepreneurship and its close relationship with enterprise and owner management.
CO2: Understand how to exhibit innovation and creativity in entrepreneurship and business development.
CO3: Organize and utilize the components of the planning process in the development of an new project.
CO4: Apply fuzzy logic and reasoning to handle uncertain problems.
CO4: Construct resource mobilization policies and activities involved in Securing new and additional resources for organization.
CO5: Better use and maximize existing resources.
CO6: Evaluate the effective management of business units

COURSE CODE: 18MCSE03 COURSE NAME: GRID COMPUTING

CO1: Understand the concepts related to Current Grid Activity.
CO2: Select proper technology and tool kit for using Grid computing.
CO3: Differentiate Grid services and Web services.

SEMESTER III

COURSE CODE:17MCS301 COURSE NAME: DATA SCIENCE AND ANALYTICS

CO1: Deploy the data analytics lifecycle to address big data analytics projects.
CO2: Apply various functions and methods of R programming to large data sets.
CO3: Understand how to implement graphical data analysis in R programming.
CO4: Analyze data by utilizing various statistical and data mining approaches.
CO5: Apply regression and classification models for data analysis.

COURSE CODE: 17MCS302 COURSE NAME: PYTHON PROGRAMMING

CO1: Solve the given problem using the syntactical structures of Python.
CO2: Develop, execute and document computerized solution for various problems using the features of Python.
CO3: Read and write Python program that uses file Handling.

COURSE CODE:17MCS303 COURSE NAME: CLOUD COMPUTING

CO1: Understand cloud computing.
CO2: Understand the cloud computing technology.
CO3: Write comprehensive case studies analyzing and contrasting different cloud computing solutions.
CO4: Make recommendations on cloud computing solutions for an enterprise.

COURSE CODE: 17MCS304 COURSE NAME: DATA SCIENCE AND ANALYTICS LAB

CO1: Process big data using R Tool.
CO2: Build and apply linear and logistic regression models.
CO3: Perform data analysis with machine learning methods.
CO4: Perform graphical data analysis.

COURSE CODE: 17MCS305 COURSE NAME: PYTHON PROGRAMMING LAB

CO1: Know concepts in problem solving.
CO2: Do programming in Python.
CO3: Write diversified solutions using Python.

COURSE CODE: 17MCS306 COURSE NAME: MINI PROJECT

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate to the problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop the ability to explain and defend their work in front of an evaluation panel.

COURSE CODE: 17MCSE04 COURSE NAME: INFORMATION STORAGE MANAGEMENT

CO1: Identify key challenges in managing information and analyze different storage networking technologies and virtualization.
CO2: Understand components and the implementation of NAS.
CO3: Understand CAS architecture and types of archives and forms of virtualization.
CO4: Monitor the storage infrastructure and management activities.

COURSE CODE: 17MCSE05 COURSE NAME: SOFTWARE TESTING

CO1: Design and conduct a software test process for a software testing project.
CO2: Learn the needs of software test automation, and define and develop a test tool to support test automation.
CO3: Understand and identify various software testing problems, and solve these problems by designing and selecting software test models, criteria, strategies, and methods.
CO4: Analyze various communication methods and skills to communicate with their Team mates to conduct their practice-oriented software testing projects.
CO5: Understand the knowledge of contemporary issues in software testing such as Component based software testing problems.
CO6: Analyze software testing methods and modern tools for their testing projects.

COURSE CODE: 17MCSE06 COURSE NAME: SERVICE ORIENTED ARCHITECTURE

CO1: Build applications based on XML.
CO2: Develop web services using technology elements.
CO3: Build SOA-based applications for intra-enterprise and inter-enterprise applications.

COURSE CODE: 17MCSOEI01 COURSE NAME: INTERNET OF THINGS - OE - IDC PAPER

CO1: Understand the concepts of Internet of Things
CO2: Analyze basic protocols in wireless sensor network.
CO3: Design IoT applications in different domain and be able to analyze their performance
CO4: Implement basic IoT applications on embedded platform.

SEMESTER IV

COURSE CODE: 17MCS401 COURSE NAME: PROJECT WORK AND VIVA VOCE

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate to the problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop the ability to explain and defend their work in front of an evaluation panel.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D13

SCHOOL NAME	**SCHOOL OF COMPUTING**
PROGRAMME NAME	**MSc – Information Technology**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Analyze, Solve and Implement Solutions for real world problems.
PEO2	Apply research in interdisciplinary areas related to new innovations.
PEO3	Work effectively and ethically individually and in teams.
PEO4	Develop interpersonal skills to lead and communicate with varied knowledge in their respective domain.
PEO5	Possess a habit of lifelong learning to update and enhance their career.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply their Knowledge in solving the real world problems.
PO2	Review the literature and involve in research to design innovations, analyze and give solutions.
PO3	Apply ethical principles and function effectively in a team/lead to achieve the goal.
PO4	Involve in lifelong learning for the continual improvement.

PROGRAMME NAME - MSc – IT

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MCSC101 — COURSE NAME: INFORMATION SECURITY

CO1: Understand the fundamentals of cryptography and how cryptography serves as the central language of information security.
CO2: Understand Security Baselines and the Roles of Computer Forensics and the Law in Information Security.
CO3: Analyze design and implementation of Security Techniques.
CO4: Demonstrate how to detect and reduce threats in Web security.
CO5: Analyze the authentication and encryption needs of an information system and Monitor security conditions and environment.

COURSE CODE: 18MIT101 — COURSE NAME: .NET PROGRAMMING

CO1: Design window and web based applications using the .NET Framework.
CO2: Create console and window based application using C# and VB.Net
CO3: Evaluate web-based applications by using various web controls in ASP.NET.
CO4: Implement and deploy database connection management using ADO.NET.
CO5: Develop security based web application for various business operations.

COURSE CODE: 18MIT102 — COURSE NAME: J2EE TECHNOLOGY

CO1: Evaluate ODBC and DAO database connectivity and extend three tier applications using servlets.
CO2: Understand Java programming concepts and utilize Java Graphical User Interface in program writing.
CO3: Build Java Application for distributed environment and Design and Develop multi-tier applications.
CO4: Identify and Analyze Enterprise applications.

COURSE CODE: 18MIT103 — COURSE NAME: DESIGN AND ANALYSIS OF ALGORITHMS

CO1: Design algorithms for various computing problems.
CO2: Analyze the time and space complexity of algorithms.
CO3: Critically analyze the different algorithm design techniques for a given problem.
CO4: Modify existing algorithms to improve efficiency.

COURSE CODE: 18MIT104 — COURSE NAME: .NET PROGRAMMING LAB

CO1: Identify and apply .NET class library for developing applications.
CO2: Create console and window based application using C# and VB.Net.
CO3: Evaluate web-based applications by using various web controls in ASP.NET.
CO4: Develop database using ADO.NET.
CO5: Implement security based web application for various business operations.

COURSE CODE: 18MIT105 **COURSE NAME: J2EE LAB**

CO1: Understand Java programming concepts and utilize Java Graphical User Interface in program writing.
CO2: Design and Develop distributed and enterprise applications and multi-tier applications using JDBC connectivity.
CO3: Develop graphical user interface application.
CO4: Implement program using servlets, JSP, RMI.

SEMESTER II

COURSE CODE: 18MIT201 **COURSE NAME: PHP PROGRAMMING**

CO1: Utilize the basic concept of statements and arrays.
CO2: Implement functions and browser handling power of PHP.
CO3: Impart Database applications, file handling, Cookies in the webpage.
CO4: Design and Implement Interactive web site using Forms, OOPS and AJAX.

COURSE CODE: 18MIT202 **COURSE NAME: MOBILE APPLICATION DEVELOPMENT**

CO1: Apply foundational mobile application concepts.
CO2: Understand, identify, formulate and solve real world hardware and software problems.
CO3: Work with database technologies, iOS apps.
CO4: Examine mobile application market and web services for various mobile devices.

COURSE CODE: 18MIT203 **COURSE NAME: DATA MINING AND WAREHOUSING**

CO1: Store voluminous data for online processing.
CO2: Pre-process the data for mining applications.
CO3: Apply the association rules for mining the data.
CO4: Analyze various classification techniques.
CO5: Cluster the high dimensional data for better organization of the data.
CO6: Discover the knowledge imbibed in the high dimensional system.

COURSE CODE: 18MIT204 **COURSE NAME: PHP PROGRAMMING LAB**

CO1: Handle array and string handling methods.
CO2: Implement OOPs Concepts in an application.
CO3: Create a database in MYSQL and to manipulate data into it.
CO4: Store information about client's session using Cookies.
CO5: Design an interactive webpage with graphical techniques.

COURSE CODE: 18MIT205 **COURSE NAME: MOBILE APPLICATION DEVELOPMENT LAB**

CO1: Apply foundational mobile application concepts.
CO2: Understand, identify, formulate and solve real world hardware and software problems.
CO3: Work with database and iOS apps.
CO4: Examine mobile application and web services for various mobile devices.

COURSE CODE: 18MIT206 **COURSE NAME: MINI PROJECT**

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate for problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop to explain and defend their work in front of an evaluation panel.

COURSE CODE: 18MITE01 **COURSE NAME: SOFTWARE PROJECT MANAGEMENT**

CO1: Analyze Organizational needs and select most effective Software Development Model.
CO2: Demonstrate Strong Organizational Leadership, team and Stake Holders.
CO3: Train employee and Controlling Project Deliverables.
CO4: Proactive behavior in Project Development and Completion.
CO5: Analyze a project that Addresses Real World Management Challenges.

COURSE CODE: 18MITE02 **COURSE NAME: SOFT COMPUTING**

CO1: Understand various neural network architectures.
CO2: Understand perceptron and propagation networks.
CO3: Understand fuzzy logic components.
CO4: Apply fuzzy logic and reasoning to handle uncertain problems
CO5: Analyze genetic algorithm and their applications.

COURSE CODE: 18MITE03 **COURSE NAME: DISTRIBUTED COMPUTING**

CO1: Understand the concept of Distributed Computing.
CO2: Remember network protocols and operating systems.
CO3: Apply cryptographic algorithms, clocks and events for problem solving.
CO4: Identify and explain about the transaction models and deadlocks.
CO5: Identify the replications in data communications.

SEMESTER III

COURSE CODE: 17MIT301 **COURSE NAME: DATA SCIENCE AND ANALYTICS**

CO1: Deploy the data analytics lifecycle to address big data analytics projects.
CO2: Apply various functions and methods of R programming to large data sets.
CO3: Understand how to implement graphical data analysis in R programming.
CO4: Analyze data by utilizing various statistical and data mining approaches.
CO5: Apply regression and classification models for data analysis.

COURSE CODE: 17MIT302 **COURSE NAME: PYTHON PROGRAMMING**

CO1: Solve the given problem using the syntactical structures of Python.
CO2: Develop, execute and document computerized solution for various problems using the features of Python.
CO3: Write Python programs using file Handling techniques.

COURSE CODE: 17MIT303 COURSE NAME: CLOUD COMPUTING

CO1: Understand cloud computing.
CO2: Understand the cloud computing technology.
CO3: Write comprehensive case studies analyzing and contrasting different cloud computing solutions.
CO4: Make recommendations on cloud computing solutions for an enterprise.

COURSE CODE: 17MIT304 COURSE NAME: DATA SCIENCE ANALYTICS LAB

CO1: Process big data using R Tool.
CO2: Build and apply linear and logistic regression models.
CO3: Perform data analysis with machine learning methods.
CO4: Perform graphical data analysis

COURSE CODE: 17MIT305 COURSE NAME: PYTHON PROGRAMMING LAB

CO1: Know concepts in problem solving.
CO2: Do programming in Python.
CO3: Write diversified solutions using Python.

COURSE CODE: 17MIT306 COURSE NAME: MINI PROJECT

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate to the problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop the ability to explain and defend their work in front of an evaluation panel.

COURSE CODE: 17MITE04 COURSE NAME: DIGITAL IMAGE PROCESSING

CO1: Understand the basic concepts of two dimensional signal acquisition, sampling and quantization.
CO2: Demonstrate the image enhancement techniques and compare between various filters.
CO3: Identify the various filters and its applications.
CO4: Implement image compression algorithms in real world applications.
CO5: Explore the knowledge in image segmentation.

COURSE CODE: 17MITE05 COURSE NAME: NETWORK MANAGEMENT

CO1: Identify the components required to build different types of networks.
CO2: Choose the required functionality at each layer for given application.
CO3: Identify solution for each functionality at each layer.
CO4: Trace the flow of information from one node to another node in the network.

COURSE CODE: 17MITE06 COURSE NAME: INFORMATION CODING TECHNIQUES

CO1: Analyze various channels coding theorem for digital data streams.
CO2: Evaluate the methods of code generation for coding and decoding techniques.
CO3: Design an application with error control.
CO4: Use compression and decompression techniques.
CO5: Apply the concepts of multimedia communication.

COURSE CODE: 17MITI01 **COURSE NAME: NETWORK SECURITY - OE - IDC PAPER**

CO1: Understand and apply the concepts of secret and public cryptography to master protocols for security services.
CO2: Be familiar with information security awareness and have a clear Understanding of its importance.
CO3: Know how threats of an organization are discovered and analyzed.
CO4: Be familiar with network security threats and counter measures.
CO5: Get exposed to the importance of integrating people, processes and technology.

SEMESTER IV

COURSE CODE: 17MIT401 **COURSE NAME: PROJECT WORK AND VIVA VOCE**

CO1: Develop skill to create practical solutions to identified problem.
CO2: Use software lifecycle model and other artifacts appropriate to the problem.
CO3: Identify and master tools required for the project.
CO4: Plan and work systematically towards completion of a project work.
CO5: Develop the ability to explain and defend their work in front of an evaluation panel.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D14

SCHOOL NAME	**SCHOOL OF MANAGEMENT**
PROGRAMME NAME	**BBA**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Excel in Management education and professional skills that prepare them for Business and Employment, and engage in life-long learning in higher areas of management, globally.
PEO2	Establish themselves as effective professionals based on their knowledge in Management and Business with regard to team work, effective communication, critical thinking and problem solving skills.
PEO3	Be exposed to the recent developments and technology acquiring necessary managerial skills for conducting business, entrepreneurship, research and higher education to provide services to the community.
PEO4	Understand, design, analyze, develop and implement the integrated system of resource management considering the economic, technical, political, social, legal, moral and ethical issues in the emerging environment.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply management fundamentals and practice in their work places.
PO2	Evaluate the multicultural, political, environmental and legal aspects of the business.
PO3	Cope up with given business (Domestic, Global) assignments to become effective leaders and management practitioners in the functional areas.
PO4	Identify and solve managerial problems through managerial competencies.
PO5	Demonstrate the abilities such as reactiveness and innovative thinking in their acts.
PO6	Identify the business research area, design and conduct survey to analyze and interpret data to make oral / written presentations as required for decision making.
PO7	Design conceptual models and develop competitive and relevant strategies for organizations to deliver positive outcomes.
PO8	Sensitize the influence of technology and IT into business field and respond to the recent trends in business and profession.
PO9	Fulfill the ethical requirements of the Business & profession.
PO10	Become successful entrepreneurs and manage their own startups to contribute towards the society and economic development,

PROGRAMME NAME - BBA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CBM201 — COURSE NAME: MANAGEMENT PROCESS

CO1: Demonstrate their conceptual skills, understanding and application of principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for Organizing, directing and controlling.
CO3: Demonstrate organizing skills in a given business situations.
CO4: Develop skills and work in groups to achieve organizational goals and able to lead teams.
CO5: Demonstrate their ability in applying the managerial concepts in real time problems.

COURSE CODE: 18CBM02 — COURSE NAME: ORGANISATIONAL BEHAVIOUR

CO1: Demonstrate through knowledge and understanding of organizational behavior.
CO2: Collaboratively and autonomously research, analyse and evaluate information from a wide variety of sources.
CO3: Apply relevant contemporary theories, concepts and models in order to analyse organizational environments, cases and issues.
CO4: Communicate their findings clearly and effectively using a variety of media.

COURSE CODE: 18ECO1 — COURSE NAME: ECONOMIC CONCEPTS IN BUSINESS

CO1: Evaluate the legal, social and economic environments of business.
CO2: Describe the global economic environment of business.
CO3: Describe and explain the ethical obligations and responsibilities of business.
CO4: Demonstrate working knowledge of the graphical and algebraic supply and demand models, determinants, elasticity's, and associated optimization techniques.
CO5: Determine outputs graphically and algebraically and take pricing decisions under different market structures.
CO6: Acquire an integrated view of the body of microeconomics and its relevance for economic policy.

SEMESTER II

COURSE CODE: 18BM201 — COURSE NAME: MS OFFICE LABORATORY

CO1: Obtain knowledge of MS office in Business.

COURSE CODE: 18CBM04 — COURSE NAME: BUSINESS COMMUNICATION

CO1: Obtain knowledge and skills in effective business communication.
CO2: Develop knowledge and skills in business writing.
CO3: Acquire skills in developing and delivering effective presentations on their own.
CO4: Develop Effective Interpersonal communications.

COURSE CODE:18CBM03 — COURSE NAME: FINANCIAL ACCOUNTING

CO1: Apply accounting concepts and principles.

CO2: Understand basics of accounting, posting of ledger, correction of error etc.
CO3: Gain knowledge in fundamental accounting standards, usage and analysis of balance sheet for a startup business.
CO4: Prepare final accounts to know the profit position of the company and assess the balance sheet.
CO5: Understand the need and effect of calculating depreciation on various assets.

SEMESTER III

COURSE CODE: 17CBM06 COURSE NAME: PRODUCTION & MATERIALS MANAGEMENT

CO1: Apply the systems concept for the design of production and service systems.
CO2: Make forecasts in the manufacturing and service sectors using selected quantitative and qualitative techniques.
CO3: Apply the principles and techniques for planning and control of the production and service systems to optimize/make best use of resources.
CO4: Understand the importance and function of inventory and to be able to apply selected techniques for its control and management under dependent and independent demand circumstances.

COURSE CODE: 17CBM07 COURSE NAME: HUMAN RESOURCE MANAGEMENT

CO1: Synthesize information regarding the effectiveness of recruiting methods and the validity of selection procedures, and make appropriate staffing decisions.
CO2: Design a training program by evaluating training needs and assess the training results.
CO3: Interpret salary survey data and design a pay structure with appropriate pay grades and pay ranges.
CO4: Evaluate a company's implementation of a performance based pay system.
CO5: Demonstrate knowledge of employee benefit concepts, plan design, administrative considerations and regulations governing employee benefit practices.
CO6: Align HR systems with the strategic business objectives of a firm.

COURSE CODE: 17CBM08 COURSE NAME: BUSINESS ETHICS AND CORPORATE GOVERNANCE

CO1**:** Apply oneself with the theory and practice of managing ethics in organizations.
CO2: Make a critique of organizational problems on Business Ethics.
CO3: Develop expository and argumentative skills, both orally and in writing.
CO4: Manage and bring solutions for the environmental issues of the business units.
CO5: Develop knowledge on corporate social responsibility.

COURSE CODE: 17BME101 COURSE NAME: OE I - ADVERTISING & EVENT MANAGEMENT

CO1: Identify and respond to clients advertising needs and marketing objectives.
CO2: Apply digital marketing trends and strategies in advertising.
CO3: Understand how to create an event that achieves specific objectives for the host/client.
CO4: Have an understanding of the various event elements (food and beverage, design, entertainment, site selection, etc.) and how to cost-effectively employ them.
CO5: Understand the role of the planner on site at the event, and the mindset necessary to oversee successful event coordination.

COURSE CODE: 17CBM09 COURSE NAME: MANAGEMENT INFORMATION SYSTEM

CO1: Explain the role and significance of effective management information systems, and describe how they contribute to optimizing organizational performance.

CO2: Demonstrate technical knowledge of computer networks, information security and information assurance.
CO3: Demonstrate effective analytical and critical thinking skills to make an appropriate business related decisions.
CO4: Illustrate how current technologies and decision-support tools can be utilized to the advantage of business operations.
CO5: Distinguish and analyze ethical problems that occur in business and society
CO6: Demonstrate programming skills to solve common business problems and Web development techniques.
CO7: Explain fundamental concepts of data communications, computer networking, and the related hardware.

COURSE CODE: 17BM301 COURSE NAME: CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Understand fully concepts relevant to customer relationship management and their application in a variety of business settings.
CO2: Evaluate strategic and tactical issues involved in customer relationship management
CO3: Investigate and evaluate different forms of relationship, such as those that can exist within B2B and B2C CRM frameworks.
CO4: Evaluate the role, value and application of information and communication technologies (ICT) in CRM.
CO5: Determine the legal issues relevant to the application of ICT within CRM.

SEMESTER IV

COURSE CODE: 17BM401 COURSE NAME: BUSINESS LAW

CO1: Understand the basic legal environment of business.
CO2: Manage to prepare and deal with any contractual dealings.
CO3: Analyze, interpret and apply legal principles and rules in business transactions and resolve specific issues.
CO4: Communicate effectively using standard business and legal terminologies.

COURSE CODE: 17BM402 COURSE NAME: SALES MANAGEMENT

CO1: Develop a sales organization and exhibit the functions of sales organization.
CO2: Demonstrate selling skills.
CO3: Manage a sales force and team.
CO4: Demonstrate the use of current technology trends and methods of selling.
CO5: Use the knowledge on fixing sales quota, prepare budgets and forecast sales.
CO6: Prepare sales reports, compare and bring niche marketing strategies.

COURSE CODE: 17CBM10 COURSE NAME: MARKETING MANAGEMENT

CO1: Identify core concepts of marketing and the role of marketing in business and society.
CO2: Develop marketing strategies based on product, price, place and promotion objectives.
CO3: Communicate the unique marketing mixes and selling propositions for specific product offerings.
CO4: Appreciate for the global nature of marketing and appropriate measures to operate effectively in international settings.
CO5: Formulate marketing strategies that incorporate psychological and sociological factors which influence consumers.

COURSE CODE: 17BM403 COURSE NAME: BANKING THEORY, LAW & PRACTICE

CO1: Gain knowledge about banking system in India.
CO2: Highlight different financial products in a bank.
CO3: Apply knowledge on various banking instruments & services.
CO4: Enumerate recent trends and technological support services to customers.

COURSE CODE: 17BM 404 COURSE NAME: ADVANCED EXCEL & TALLY PRACTICAL

CO1: Work with well-known accounting software i.e. Tally ERP 9.
CO2: Enter accounting voucher entries including advance voucher entries, etc. in Tally ERP 9 software.
CO3: Possess required skill and can also be employed as Tally data entry operator.
CO4: Demonstrate about Microsoft excel and google forms.

COURSE CODE: 17CBM11 COURSE NAME: RESEARCH METHODS FOR MANAGEMENT

CO1: Assess critically about the research in various fields and learn research ethics.
CO2: Select samples and explore research techniques.
CO3: Collect primary data through various techniques viz., observation, interviews and questionnaires.
CO4: Interpret data by the use of basic descriptive statistics as well as relationships within data sets and tests of significance.
CO5: Apply Data presentation techniques and know the research report writing methods.

SEMESTER V

COURSE CODE: 16CBM12 COURSE NAME: COST AND MANAGEMENT ACCOUNTING

CO1: Understand the basic concepts and processes used to determine product costs and will be able to interpret cost accounting statements.
CO2: Analyze and evaluate information for cost ascertainment, planning, control and decision making, to ascertain the material and labour cost.
CO3: Identify, use and interpret the results of costing techniques appropriate to different activities and decision.
CO4: Formulate and use standards and budgets for planning and control purposes.
CO5: Appreciate the need to relate management accounting systems to contemporary thinking about organizational planning and control.

COURSE CODE: 16CBM13 COURSE NAME: GLOBAL BUSINESS MANAGEMENT

CO1: Manage the preparation of documents and the application of procedures to support the movement of products and services in the organization's global supply chain.
CO2: Develop and present an international business plan.
CO3: Identify and interpret relevant international financial documents, and evaluate financial strategies that support an organization's integrative trade initiatives.
CO4: Start an export business with the knowledge gained.

COURSE CODE: 16CBM14 COURSE NAME: ENTREPRENEURSHIP & PROJECT MANAGEMENT

CO1: Critically account for scientific literature within the fields of project management, strategy and Entrepreneurship.
CO2: Use models and concepts within project organization and the implementation of projects.
CO3: Analyse the influence of external parties and stakeholders on the project.

CO4: Use projects in both planning perspectives and learning and collaboration perspectives
CO5: Analyse the conditions for entrepreneurship and how a business plan is drawn up.
CO6: Work in a goal-oriented manner and deal with uncertainty and changes in a development process.
CO7: Reflect on the importance of cooperation and leadership within a project group.

COURSE CODE: 16BM501 COURSE NAME: INSURANCE PRINCIPLES & PRACTICES

CO1: Gain knowledge on insurance and understand its need and importance.
CO2: Understand the provisions of fire and Marine Insurance and their increasing importance.
CO3: Acquire skill and knowledge to become an insurance Agent.
CO4: Gain knowledge on insurance to run business and meet losses.
CO5: Understand about the various rules and regulations required for insurance business.

COURSE CODE: 16BMI03 COURSE NAME: OE - HUMAN RESOURCE MANAGEMENT

CO1: Understand the recruitment and selection process.
CO2: Plan for training, job evaluation and performance appraisal.
CO3: Understand compensation and fringe benefits.
CO4: Represent grievances, maintain discipline and manage job stress.

COURSE CODE: 16CBM15 COURSE NAME: BRAND MANAGEMENT

CO1: Apply the key principles of Branding and implement in work environment.
CO2: Analyse the measurement of brand equity and brand performance.
CO3: Practically develop a brand including positioning and communication.
CO4: Create branding concepts and ideas in their own.
CO5: Apply the brand extension policies and liaison with Government authorities.

SEMESTER VI

COURSE CODE: 16BM601 COURSE NAME: LOGISTICS AND SUPPLY CHAIN MANAGEMENT

CO1: Have knowledge about different elements of logistics in business.
CO2: Gain knowledge about material handling strategies & inventory management in business.
CO3: Possess knowledge to forecast demand.
CO4: Identify recent trends in Logistics for business.
CO5: Acquire knowledge about international & E logistics.

COURSE CODE: 16CBM18 COURSE NAME: E – COMMERCE & APPLICATIONS

CO1: Communicate effectively and ethically using electronic media.
CO2: Analyze the impact of E-commerce on business models and strategy.
CO3: Describe the infrastructure of E-commerce.
CO4: Gain knowledge about the key features of Internet, Intranets and Extranets and explain how they relate to each other.
CO5: Understand legal issues and privacy in E-Commerce.
CO6: Assess electronic payment systems, make ethical decisions related to e-commerce considering laws, privacy and security.
CO7: Recognize and respond to global E-commerce & Mobile Commerce issues.

COURSE CODE: 16CBM20 **COURSE NAME: INTERPERSONAL RELATIONSHIP**

CO1: Manage the dynamics of divorce inter personal relationships to stimulate creativity, build effective work teams & positively impact organizational effectiveness.
CO2: Apply productive management strategies while meeting different monetary, social, emotional cultural needs.
CO3: Use management philosophy to understand power and social influence.
CO4: Obtain knowledge in counseling and its training aspects.
CO5: Effectively demonstrate interpersonal communication in work places.

COURSE CODE: 16CBM17 **COURSE NAME: STRATEGIC MANAGEMENT**

CO1: Gain knowledge on the practical and integrative model of strategic management process.
CO2: demonstrate the knowledge and abilities in formulating strategies and strategic plans.
CO3: Analyze the competitive situation and strategic dilemma in dealing with dynamic global business environment in terms of rapidly changing market trends and technological advancement.
CO4: Evaluate challenges faced by managers in implementing and evaluating strategies based on the nature of business, industry, and cultural differences.

COURSE CODE: 16CBM16 **COURSE NAME: FINANCIAL MANAGEMENT**

CO1: Understand the concepts and theories underlying financial management.
CO2: Evaluate the financial decisions and its implications for the shareholders and the company.
CO3: Competent to analyze and evaluate information for financial planning, control and decision making.
CO4: Possess knowledge on effective cash handling and receivables practices in a business entity.
CO5: Apply capital Budgeting techniques in work environment for evaluation and decision making.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D15

SCHOOL NAME	**SCHOOL OF MANAGEMENT**
PROGRAMME NAME	**BBA - Computer Applications**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Excel in Management education, Computer and Professional skills that prepare them for Business and Employment, and engage in life-long learning in higher areas of management globally.
PEO2	Establish themselves as effective professionals based on their knowledge in Management and computer skills for Business with regard to team work, effective communication, critical thinking and problem solving skills.
PEO3	Be exposed to the recent developments and technology acquiring necessary managerial and analytical skills for conducting business, entrepreneurship, research and higher education to provide services to the community.
PEO4	Understand, design, analyze, develop and implement the integrated system of resource management considering the economic, technical, political, social, legal, moral and ethical issues in the emerging environment.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply Management fundamentals, Computer skills and practice in their work places.
PO2	Evaluate the multicultural, political, environmental and legal aspects of the business.
PO3	Develop coping strategies for given business assignments (Domestic or global) to become effective leaders and management practitioners in the functional areas.
PO4	Identify and solve managerial problems through managerial competencies.
PO5	Demonstrate team work with the ability of leadership, analytical reasoning, solving business problems and exhibit strong human values for responsible professionals.
PO6	Identify the business research area, design and conduct survey to analyze and interpret data to make oral / written presentations as required for decision making.
PO7	Design conceptual models and develop competitive and relevant strategies for organizations to deliver positive outcomes.
PO8	Develop the ability to use current technologies of IT in business, use of modern technology to respond to the recent trends in business and profession.
PO9	Fulfill the ethical requirements of the business and profession.
PO10	Become successful entrepreneurs and manage their own startups to contribute towards the society and economic development.

PROGRAMME NAME - BBA CA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CBM201 COURSE NAME: MANAGEMENT PROCESS

CO1: Demonstrate their conceptual skills, understanding and application of principles and functions of management, managerial actions of planning.
CO2: Evaluate the global context for Organizing, directing and controlling.
CO3: Demonstrate organizing skills in a given business situations.
CO4: Develop skills and work in groups to achieve organizational goals and lead teams.
CO5: Demonstrate their ability in applying the managerial concepts in real time problems.

COURSE CODE: 18CBM02 COURSE NAME: ORGANISATIONAL BEHAVIOUR

CO1: Demonstrate through knowledge and understanding of organizational behavior.
CO2: Collaboratively and autonomously research, analyse and evaluate information from a wide variety of sources.
CO3: Apply relevant contemporary theories, concepts and models in order to analyse organizational environment, cases and issues.
CO4: Communicate their findings clearly and effectively using a variety of media.

COURSE CODE: 18BMC101 COURSE NAME: INFORMATION TECHNOLOGY FOR MANAGEMENT

CO1: Understand the need for information systems in business.
CO2: Acquire knowledge on IT infrastructure and Internet concepts.
CO3: Understand the infrastructure for E commerce and determine the need of IT facts.

COURSE CODE: 18BMC102 COURSE NAME: IT FOR BUSINESS APPLICATIONS LAB

CO1: Apply the common features and software in Microsoft Office to solve business application problems.
CO2: Apply the common features in MS Excel as a spreadsheet program for business applications.
CO3: Apply the common features in MS Access for a database application.
CO4: Design and create relational database, forms, queries and reports.

SEMESTER II

COURSE CODE: 18CBM04 COURSE NAME: BUSINESS COMMUNICATION

CO1: Obtain knowledge and skills in effective business communication.
CO2: Develop knowledge and skills in business writing.
CO3: Acquire skills in developing and delivering effective presentations on their own.
CO4: Develop Effective Interpersonal communications.

COURSE CODE: 18CBM03 COURSE NAME: FINANCIAL ACCOUNTING

CO1: Apply accounting concepts and principles.
CO2: Understand basics of accounting, posting of ledger, correction of error etc.

CO3: Gain knowledge in fundamental accounting standards, usage and analysis of balance sheet for a startup business.
CO4: Prepare final accounts to know the profit position of the company and assess the balance sheet.
CO5: Understand the need and effect of calculating depreciation on various assets.

COURSE CODE: 18BMC201 COURSE NAME: VISUAL BASIC IN BUSINESS

CO1: Apply visual basics in business.
CO2: Understand basics of Programming and writing simple programs.
CO3: Gain knowledge on fundamentals of Data base and usage of basic programming languages.
CO4: Develop a front end tool for customer interaction in business.

COURSE CODE: 18BMC202 COURSE NAME: VISUAL BASIC IN BUSINESS – LAB

CO1: Understand the basic concepts of visual Basic in Business.
CO2: Demonstrate the basic programmes using visual basic.
CO3: Develop some basic functions using visual basic.

SEMESTER III

COURSE CODE: 17CBM06 COURSE NAME: PRODUCTION & MATERIALS MANAGEMENT

CO1: Apply the systems concept for the design of production and service systems.
CO2: Make forecasts in the manufacturing and service sectors using selected quantitative and qualitative techniques.
CO3: Apply the principles and techniques for planning and control of the production and service systems to optimize/make best use of resources.
CO4: Understand the importance and function of inventory and to be able to apply selected techniques. for its control and management under dependent and independent demand circumstances.

COURSE CODE: 17CBM07 COURSE NAME: HUMAN RESOURCE MANAGEMENT

CO1: Synthesize information regarding the effectiveness of recruiting methods and the validity of selection procedures and make appropriate staffing decisions.
CO2: Design a training program by evaluating training needs and assess the training results.
CO3: Interpret salary survey data and design a pay structure with appropriate pay grades and pay ranges.
CO4: Evaluate a company's implementation of a performance based pay system.
CO5: Demonstrate knowledge of employee benefit concepts, plan design, administrative considerations and regulations governing employee benefit practices.
CO6: Align HR systems with the strategic business objectives of a firm.

COURSE CODE: 17CBM08 COURSE NAME: BUSINESS ETHICS AND CORPORATE GOVERNANCE

CO1: Apply oneself with the theory and practice of managing ethics in organizations.
CO2: Make a critique of organizational problems on Business Ethics.
CO3: Develop expository and argumentative skills, both orally and in writing.
CO4: Manage and bring solutions for the environmental issues of the business units.
CO5: Develop knowledge on corporate social responsibility.

COURSE CODE: 17CBM09 COURSE NAME: MANAGEMENT INFORMATION SYSTEM

CO1: Explain the role and significance of effective management information systems and contribute to optimizing organizational performance.
CO2: Demonstrate technical knowledge of computer networks, information security and information assurance.
CO3: Demonstrate effective analytical and critical thinking skills to make an appropriate business related decisions
CO4: Illustrate how current technologies and decision-support tools can be utilized to the advantage of business operations.
CO5: Distinguish and analyze ethical problems that occur in business and society
CO6: Demonstrate programming skills to solve common business problems and Web development techniques
CO7: Explain fundamental concepts of data communications, computer networking, and the related hardware.

COURSE CODE: 17BMC101 COURSE NAME: OE - ENTREPRENEUR DEVELOPMENT

CO1: Apply effective written and oral communication skills to business situations.
CO2: Analyze the global/ local business environment.
CO3: Demonstrate the ability to provide a self-analysis in the context of an entrepreneurial career
CO4: Use critical thinking skills in business situations.
CO5: Apply an ethical understanding and perspective to business situations

COURSE CODE: 17BMC301 COURSE NAME: INTERNET AND WEB PAGE DESIGNING THEORY

CO1: Understand the needs and use of internet.
CO2: Gain knowledge about web technology and planning website.
CO3: Publish web concepts for developing webpage on their own.
CO4: Apply concepts of HTML and DHTML and create a web page with innovative ideas on their own. business.

COURSE CODE: 17BMC303 COURSE NAME: INTERNET AND WEB PAGE DESIGNING PRACTICAL

CO1: Gain knowledge about web technology and planning website.
CO2: Publish web concepts for developing webpage on their own.
CO3: Apply concepts of HTML and DHTML to create a web page with innovative ideas in their own business.

SEMESTER IV

COURSE CODE: 17 BMC401 COURSE NAME: RDBMS & ORACLE THEORY

CO1: Understand basic concepts about database system.
CO2: Gain Knowledge about database normalization with authentication in business.
CO3: Apply concepts of SQL and PL / SQL to store and retrieve data.
CO4: Gain knowledge about exception handling and deadlock handling.

COURSE CODE: 17BMC402 COURSE NAME: RDBMS & ORACLE PRACTICAL

CO1: Understand basic concepts about database system.
CO2: Acquire knowledge about database usage in business
CO3: Differentiate database systems can analyze the terminology in database handle queries in broad Range.

CO4: Demonstrate an understanding of the relational data model.

COURSE CODE: 17BMC403 COURSE NAME: RETAIL MANAGEMENT

CO1: Demonstrate the ability to identify and understand the basic theories, principles and practices, terminologies related to each area / formats of retailing.
CO2: Understand the importance of selection of layout for setting up a retail store.
CO3: Demonstrate the competencies of selling by effective communication and presentation of information.
CO4: Formulate ideas for starting a retail business by the usage of modern tools and use e marketing strategies.

COURSE CODE: 17CBM11 COURSE NAME: RESEARCH METHODS FOR MANAGEMENT

CO1: Assess critically about the research in various fields and learn research ethics.
CO2: Select samples and explore research techniques
CO3: Collect primary data through various techniques viz., observation, interviews and questionnaires
CO4: Interpret data by the use of basic descriptive statistics as well as relationships within data sets and tests of significance.
CO5: Apply Data presentation techniques and know the research report writing methods.

COURSE CODE: 17CBM10 COURSE NAME: MARKETING MANAGEMENT

CO1: Identify core concepts of marketing and the role of marketing in business and society.
CO2: Develop marketing strategies based on product, price, place and promotion objectives.
CO3: Communicate the unique marketing mixes and selling propositions for specific product offerings.
CO4: Appreciate the global nature of marketing and appropriate measures to operate effectively in international settings.
CO5: Formulate marketing strategies that incorporate psychological and sociological factors which influence consumers.

COURSE CODE: 17ECO02 COURSE NAME: MANAGERIAL ECONOMICS

CO1: Utilize optimization techniques to determine appropriate courses of action for decision-makers in a managerial setting.
CO2: Apply demand theory to pricing problems and develop methods of analysis to estimate demand empirically.
CO3: Examine with a theoretical and applied context, the process by which the costs of production are determined.
CO4: Develop a method to analyze the impact of market structure on the behaviour of firms.

SEMESTER V

COURSE CODE: 16CBM12 COURSE NAME: COST AND MANAGEMENT ACCOUNTING

CO1: Understand the basic concepts and processes used to determine product costs and interpret cost accounting statements.
CO2: Analyze and evaluate information for cost ascertainment, planning, control and decision making, to ascertain the material and labour cost.
CO3: Identify, use and interpret the results of costing techniques appropriate to different activities and decision.
CO4: Formulate and use standards and budgets for planning and control purposes.

CO5: Appreciate the need to relate management accounting systems to contemporary thinking about organizational planning and control.

COURSE CODE: 16CBM 13 COURSE NAME: GLOBAL BUSINESS MANAGEMENT

CO1: Manage the preparation of documents and the application of procedures to support the movement of products and services in the organization's global supply chain.
CO2: Develop and present an international business plan
CO3: Identify and interpret relevant international financial documents, and evaluate financial strategies that support an organization's integrative trade initiatives.
CO4: Start an export business on their own.

COURSE CODE: 16CBM 14 COURSE NAME: ENTREPRENEURSHIP & PROJECT MANAGEMENT

CO1: Critically account for scientific literature within the fields of project management, strategy, entrepreneurship.
CO2: Use models and concepts within project organization and the implementation of projects
CO3: Analyse the influence of external parties and stakeholders on the project
CO4: Use projects in both planning perspectives and learning and collaboration perspectives
CO5: Analyse the conditions for entrepreneurship and draw business plan.
CO6: Work in a goal oriented manner and deal with uncertainty and changes in a development process.
CO7: Reflect on the importance of cooperation and leadership within a project group.

COURSE CODE: 16BMC501 COURSE NAME: ADVANCED EXCEL & TALLY LAB

CO1: Work with well-known accounting software i.e. Tally ERP 9
CO2: Enter accounting voucher entries including advance voucher entries, etc. in Tally ERP9 software.
CO3: Possess required skill and can also be employed as Tally data entry operator.

COURSE CODE: 16BMCI02 COURSE NAME: OE - BUSINESS ETIQUETTES & CORPORATE CULTURE

CO1: Develop knowledge about different etiquettes.
CO2: Implement the principles of exceptional work behavior.
CO3: Tackle the Multi-cultural challenges in corporate.
CO4: Groom effectively and efficiently in self and team.

COURSE CODE: 16CBM15 COURSE NAME: BRAND MANAGEMENT

CO1: Apply the key principles of Branding and implement in work environment.
CO2: Analyse the measurement of brand equity and brand performance.
CO3: Practically develop a brand including positioning and communication.
CO4: Create branding concepts and ideas in their own.
CO5: Apply the brand extension policies and liaison with Government authorities.

SEMESTER VI

COURSE CODE: 16BMC601 COURSE NAME: BUSINESS DATA ANALYSIS - PRACTICAL

CO1: Understand methods for collecting business information and reporting results.
CO2: Acquire knowledge in spreadsheets and data analysis for business applications.
CO3: Analyze quantitative business data using statistical methods.

COURSE CODE: 16CBM16 **COURSE NAME: FINANCIAL MANAGEMENT**

CO1: Understand the concepts and theories underlying to financial management.
CO2: Evaluate the financial decisions and its implications for the shareholders and the company.
CO3: Competent to analyze and evaluate information for financial planning, control and decision making.
CO4: Possess knowledge on effective cash handling and receivables practices in a business entity.
CO5: Apply capital Budgeting techniques in work environment for evaluation and decision making.

COURSE CODE: 16CBM17 **COURSE NAME: STRATEGIC MANAGEMENT**

CO1: Gain knowledge on the practical and integrative model of strategic management process.
CO2: Demonstrate the knowledge and abilities in formulating strategies and strategic plans.
CO3: Analyze the competitive situation and strategic dilemma in dealing with dynamic global business environment in terms of rapidly changing market trends and technological advancement.
CO4: Evaluate challenges faced by managers in implementing and evaluating strategies based on the nature of business, industry, and cultural differences.

COURSE CODE: 16CBM20 **COURSE NAME: INTERPERSONAL RELATIONSHIP**

CO1: Manage the dynamics of divorce inter personal relationships to stimulate creativity, build effective work teams & amp; positively impact organizational effectiveness.
CO2: Apply productive management strategies while meeting different monetary, social, emotional cultural needs.
CO3: Use management philosophy to understand power and social influence.
CO4: Obtain knowledge in counseling and its training aspects.
CO5: Effectively demonstrate interpersonal communication in work places.

COURSE CODE: 16CBM18 **COURSE NAME: E COMMERCE& APPLICATIONS**

CO1: Communicate effectively and ethically using electronic media.
CO2: Analyze the impact of E-commerce on business models and strategy.
CO3: Describe the infrastructure of E-commerce.
CO4: Gain knowledge about the key features of Internet, Intranets and Extranets and explain how they relate to each other.
CO5: Understand legal issues and privacy in E-Commerce.
CO6: Assess electronic payment systems, Make ethical decisions related to e-commerce considering laws, privacy and security.
CO7: Recognize and respond to global E-commerce & Mobile Commerce issues.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D16

SCHOOL NAME	**SCHOOL OF MANAGEMENT**
PROGRAMME NAME	**MBA**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Acquire knowledge, skills and competence in Management and develop a holistic personality to lead successful personal and professional lives.
PEO2	Emerge as Competent professionals with a capacity to analyze, apply, design, develop and adapt to the National and International Business Environment.
PEO3	Imbibe the spirit of Leadership, Entrepreneurship and Ethics in the minds for the successful conduct of any business venture of their choice.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply knowledge and skills on the structure and practices of organizations, macro and micro perspectives of business, Mathematical and Statistical skills and communicative skills for effective documentation and presentation in Business and society.
PO2	Develop and prepare organizational strategies and devise strategic approaches for turbulent business environment in the global context.
PO3	Relate Management principles, norms, excellent value system and ethics to effectively manage and lead diverse teams and projects in multidisciplinary and multicultural environment.
PO4	Recognize the potential as creators and innovators with latest technologies, resources and business processes to create successful entrepreneurial / business venture.
PO5	Realize the inner strength, apprise themselves for latest happenings right through their career.

PROGRAMME NAME - MBA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MBA101 COURSE NAME: FOUNDATIONS OF MANAGEMENT

CO1: Identify the management evolution and how it will affect future managers.
CO2: Practice the process of management's four functions.
CO3: Discuss how organizations adapt to an uncertain environment.
CO4: Identify techniques managers use to influence and control the internal environment.
CO5: Evaluate leadership styles to anticipate the consequences of each leadership style.

COURSE CODE: 18MBA102 COURSE NAME: ORGANISATIONAL BEHAVIOUR

CO1: Explore factors influence in organizational behaviors.
CO2: Analyze and apply theories of learning at individual and organisational levels.
CO3: Reflect on personal learning and development strategies for organizational levels.
CO4: Evaluate knowledge management strategies in work organisations.
CO5: Develop strategies and management practice for building learning organisations.

COURSE CODE: 18MBA103 COURSE NAME: MANAGERIAL ECONOMICS

CO1: Apply economic principles to management decisions.
CO2: Describe the techniques and methods of demand forecasting.
CO3: Examine to ensure successful organisations.
CO4: Design competition strategies to match the market competition.
CO5: Analyze macroeconomic concepts in the light of the business climate.

COURSE CODE: 18MBA104 COURSE NAME: ACCOUNTING FOR MANAGERS

CO1: Describe the role of accounting in organisations and develop responsiveness towards emerging trends in financial accounting
CO2: Analyse, evaluate business transactions and communicate financial information to a range of Stake holders.
CO3: Interpret, analyse key financial principles needed to produce and analyse cash flow statements.
CO4: Measure and identify relevant costing and make managerial decisions.
CO5: Describe and apply budgeting techniques to make financial decisions.

COURSE CODE: 18MBA105 COURSE NAME: STATISTICS FOR MANAGEMENT

CO1: Solve problems on central tendency, dispersion and analyze the correlation, regression.
CO2: Apply the concepts of probability and probability distribution.
CO3: Gain knowledge about the time series and index numbers.
CO4: Analyse by using large sample & small sample test.
CO5: Analyse by using multiple correlation & regression.

COURSE CODE: 18MBA106 COURSE NAME: ACCOUNTING LAB – TALLY

CO1: Acquire reasonable hands on knowledge of accounting software.
CO2: Provide hands on exposure in book keeping and financial statements preparation.

SEMESTER II

COURSE CODE: 18MBA201 COURSE NAME: OPERATIONS MANAGEMENT

CO1: Understand the core features of the operations and production management function at the operational and strategic levels.
CO2: Develop the ability to identify the organizational locate selection and technology procedure.
CO3: Assess the operation functions, planning, performance and capabilities in various forms.
CO4: Realize the materials importance and procedure of purchasing.
CO5: Recognize the quality effectiveness with the combination of certification and Indian work ethos position.

COURSE CODE: 18MBA202 COURSE NAME: FINANCIAL MANAGEMENT

CO1: Understand various financial concepts, principles, techniques and important theories of financial management.
CO2: Acquire knowledge on fundamental concepts and tools of finance and make investment decisions.
CO3: Undertake Financing decisions for formulation of Capital structure and the policy of dividends.
CO4: Apply knowledge on Financing and investment in international perspective.
CO5: Provide an optimal working capital structure for his own business.

COURSE CODE: 18MBA203 COURSE NAME: HUMAN RESOURCES MANAGEMENT

CO1: Appreciate the concept of human resource management and their effective management in today's organization.
CO2: Apply the various job analysis tools and techniques to cater to the organizations HR needs.
CO3: Develop, implement and evaluate employee orientation, training, development and evaluation programs.
CO4: Implement benefits package that supports the organization's strategy in line with HRM cost-containment policies and practices.
CO5: Facilitate and support governmental regulations affecting employees and employers.

COURSE CODE: 18MBA204 COURSE NAME: MARKETING MANAGEMENT

CO1: Demonstrate strong conceptual knowledge in functional areas of marketing management.
CO2: Demonstrate effective understanding of relevant functional areas of marketing management and its application.
CO3: Demonstrate analytical skills in identification and resolution of problems pertaining to marketing management.
CO4: Develop an insight into basic marketing mix issues, effectively segment a market, target and position a product.
CO5: Decide on marketing channels and logistics.

COURSE CODE: 18MBA205 COURSE NAME: OPERATIONS RESEARCH FOR BUSINESS

CO1: Solve linear programming problems.
CO2: Formulate and solve transportation and assignment problems.
CO3: Construct the network and identify the critical activities and find the probability of completion.
CO4: Solve the waiting line and inventory models.
CO5: Acquire knowledge about Simulation and decision theory in real life.

COURSE CODE: 18MBA206 COURSE NAME: BUSINESS RESEARCH METHODS

CO1: Apply a range of quantitative and or qualitative research techniques.
CO2: Understand and apply research approaches, techniques & strategies.
CO3: Demonstrate understanding of data collection and apply appropriate sampling techniques.

CO4: Apply the appropriate test methods in various research studies.
CO5: Present the interpretations in a report format for business decision making.

SEMESTER III

COURSE CODE: 17MBA301 COURSE NAME: STRATEGIC MANAGEMENT

CO1: Critically analyze the internal and external environments in which businesses operate and assess the implications of forecast changes.
CO2: Demonstrate understanding of the concept of competitive advantage and its sources and the ability to recognize it in real-world scenarios.
CO3: Develop and prepare organizational strategies that will be effective for the current business environment by working in teams.
CO4: Apply appropriate tools, theories and concepts to analyze strategic issues in organizations and to develop options for implementation.
CO5: Devise strategic approaches to manage Technology and Innovation.

COURSE CODE: 17MBA302 COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

CO1: Write a business plan describing a new business venture.
CO2: Analyze marketing strategies for small businesses.
CO3: Implement systems for collecting and analyzing information to monitor the performance of a new firm.
CO4: Demonstrate entrepreneurial abilities and capacity in an entrepreneurship portfolio.

COURSE CODE: 17MBA304 COURSE NAME: ANALYTICAL LAB

CO1: Perform data analysis with SPSS.
CO2: Define variables and analyze the output.
CO3: Interpret the data and report.

COURSE CODE: 17MBA305 COURSE NAME: COMMUNITY SERVICES

CO1: Involve in the service-learning opportunities that give students a chance to experience meaningful lesson that teach them.
CO2: Enjoy the experiential learning through meaningful community service experience and engaging in personal reflection.
CO3: Build character and attitude and to teach problem solving skill and civic responsibilities.

COURSE CODE: 17MBA306 COURSE NAME: ONLINE COURSE

CO1: Acquire skills in the chosen specialization.
CO2: Enhance the application knowledge on contemporary issues.
CO3: Evaluate the current market trends.

MARKETING ELECTIVES

COURSE CODE: 17MBAM01 COURSE NAME: CONSUMER BEHAVIOUR

CO1: Develop, evaluate, and implement effective marketing strategies
CO2: Identify various aspects influencing consumer behaviour.
CO3: Develop appropriate marketing strategies for different segments of consumers.
CO4: Correlate the marketing strategies as per behavior patterns.

COURSE CODE: 17MBAM02 COURSE NAME: MARKETING COMMUNICATION

CO1: Build brand identity & brand relationship and create brand equity.
CO2: Develop an integrated cross-media strategy & creative message.
CO3: Measure & critically evaluate the communication effects and results of an IMC campaign.

COURSE CODE: 17MBAM03 COURSE NAME: SALES AND DISTRIBUTION MANAGEMENT

CO1: Analyze the importance of promotion and distribution function.
CO2: Apply the concepts of public relations, sales management & physical distribution.
CO3: Appreciate on the concepts of retail management, SCM and virtual marketing.

COURSE CODE: 17MBAM04 COURSE NAME: CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Create insight and new learning in the area of customer relationship management.
CO2: Equip students with both a conceptual analyzing and practical applications of CRM.
CO3: Acquire the conceptual foundations of CRM its implications.

COURSE CODE: 17MBAM05 COURSE NAME: SERVICES MARKETING

CO1: Analyze the service sector and apply the 7 P's of service marketing.
CO2: Analyze the consumer behavior in service sector.
CO3: Evaluate the standard and measure service quality and productivity.

HUMAN RESOURCE MANAGEMENT- ELECTIVES

COURSE CODE: 17MBAH01 COURSE NAME: PERFORMANCE MANAGEMENT

CO1: Design an organization performance management process to support mission and strategy.
CO2: Compare and contrast various organizational performance management programs.
CO3: Identify career paths and to support individual and organizational development.

COURSE CODE: 17MBAH02 COURSE NAME: TRAINING AND DEVELOPMENT

CO1: Identify the role of training and development in human resource management.
CO2: Analyze the psychology of the learning process on which training is based.
CO3: Determine the training needs of organization.
CO4: Assess, design and implement various methods, techniques and source of training.
CO5: Evaluate employee training and test post training performance.

COURSE CODE: 17MBAH03 COURSE NAME: ORGANIZATIONAL CHANGE AND DEVELOPMENT

CO1: Define the concepts organizational development & change.
CO2: Implement organizational change models to achieve maximum efficiency.
CO3: Identify and Implement effective OD Interventions.
CO4: Appreciate future trends impacting organizational initiatives.

COURSE CODE: 17MBAH04 COURSE NAME: ORGANIZATIONAL DESIGN FOR EXCELLENCE

CO1: Explore organization design, change and defines basic activities in different types of function.
CO2: Differentiate organization change, redesign an organizational effectiveness.
CO3: Realize the impact of technology on an organizational structure and make it effective.
CO4: Analyze the change process and the techniques to a desired future state.

COURSE CODE: 17MBAH05 COURSE NAME: INDUSTRIAL RELATIONS AND LABOR LAW

CO1: Probe the nature and scope of labor laws.
CO2: Absorb the rationale of labor laws in organizations.
CO3: Analyze the international labor organization vis-a-vis the labor.

FINANCE - ELECTIVES

COURSE CODE: 17MBAF01 COURSE NAME: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

CO1: Apply the knowledge about capital market and various investment avenues.
CO2: Analyze the risk return associated with different investments.
CO3: Analyze different techniques of evaluating the investments.
CO4: Make investment decisions to have less risk and maximum returns.

COURSE CODE: 17MBAF02 COURSE NAME: FINANCIAL SERVICES

CO1: Appreciate existing and emerging areas of merchant banking financial services.
CO2: Analyze credit rating process adopted by the various institutions.
CO3: Apply the principles on hire purchase and leasing system to make investment decisions.
CO4: Identify sources of venture capital funds.
CO5: Evaluate merger schemes and takeovers.

COURSE CODE: 17MBAF03 COURSE NAME: INSURANCE AND RISK MANAGEMENT

CO1: Demonstrate knowledge on various types of insurance contracts.
CO2: Appreciate the operation and management of insurance entities.
CO3: Evaluate the economic implications of organizational design and structure.
CO4: Acquire the skills to facilitate insurance product cost and pricing, marketing, and distribution.

COURSE CODE: 17MBAF04 COURSE NAME: BANKING

CO1: Gain practical knowledge in the context of banking in the financial system.
CO2: Analyze the operations of modern banking and financial institutions.
CO3: Analyze the functions and operations of modern central banks & international finance institutions.
CO4: Identify the modes of banking risk management.
CO5: Probe the recent trends in Banking Operations.

COURSE CODE: 17MBAF05 COURSE NAME: DERIVATIVES MANAGEMENT

CO1: Apply the knowledge of the derivatives to provide solutions undertaking risks.
CO2: Identify the fundamental features of a range of key financial derivative instruments.
CO3: Make informed judgment on the use of derivative instruments.
CO4: Evaluate the implications of risk in financial markets.

SYSTEMS - ELECTIVES

COURSE CODE: 17MBAS01 COURSE NAME: SOFTWARE PROJECT MANAGEMENT

CO1: Analyze the different phases of software project management.
CO2: Identify risk and create risk mitigation plan.
CO3: Apply software quality assurance for better quality software delivery.
CO4: Implement software project management effectively.

COURSE CODE: 17MBAS02 COURSE NAME: INTERNET AND E – COMMERCE

CO1: Recognize the impact of information and communication technologies.
CO2: Demonstrate an outstanding of the foundations of ecommerce.
CO3: Analyze the impact of e-commerce on business models and strategy.
CO4: Describe internet trading relationships including B2C, B2B intra-organizational.

COURSE CODE: 17MBAS03 COURSE NAME: INFORMATION SECURITY SYSTEMS

CO1: Familiarize with information security and vulnerabilities.
CO2: Analyze external and internal threats to an organization
CO3: Implement security policy and access control.
CO4: Audit and monitor information security and threats.

COURSE CODE: 17MBAS04 COURSE NAME: INFORMATION TECHNOLOGY APPLICATIONS

CO1: Describe the business applications like accounts, HRM and marketing.
CO2: Plan for ERP products over traditional development products.
CO3: Design for infrastructure requirements of e-commerce.
CO4: Evaluate the ERP design and implementation.

PRODUCTION - ELECTIVES

COURSE CODE: 17MBAP01 COURSE NAME: INTEGRATED MATERIALS MANAGEMENT

CO1: Apply various mechanisms in materials management and analyze the issues related to stores management.
CO2: Perform value analysis to achieve efficiency.
CO3: Make procurement decisions for production.
CO4: Evaluate modes of material handling to ensure smooth operations.

COURSE CODE: 17MBAP02 COURSE NAME: ADVANCED PRODUCTION MANAGEMENT

CO1: Realize the impact in a manufacturing environment.
CO2: Design production systems and procedures.
CO3: Evaluate productivity and related techniques.
CO4: Appreciate human aspects in Production Management.

COURSE CODE: 17MBAP03 COURSE NAME: OPERATIONS STRATEGY

CO1: Provide a clear and well-structured operations strategy.
CO2: Apply the ideas of operations strategy to a variety of business and organisations.
CO3: Provide a logical path through the key activities and decisions of operations strategy.
CO4: Design a unifying framework for analyzing strategic issues in operations.
CO5: Analyze the relationships between manufacturing and service companies.

COURSE CODE: 17MBAP04 COURSE NAME: TOTAL QUALITY MANAGEMENT

CO1: Evaluate principles of quality management and its applications.
CO2: Implement the basic principles of TQM organizations.
CO3: Apply the tools and techniques of quality management.
CO4: Evaluate the organizational requirements to apply TQM.
CO5: Analyze the strategic issues of TQM applications.

LOGISTICS - ELECTIVES

COURSE CODE: 17MBAL01 COURSE NAME: LOGISTICS AND SUPPLY CHAIN MANAGEMENT

CO1: Describe major logistics functions and activity.
CO2: Describe method of inventory planning.
CO3: Analyze the impact of technology on Logistics and SCM.
CO4: Explore avenues for Logistics and SCM.

COURSE CODE: 17MBAL02 COURSE NAME: WAREHOUSING AND INVENTORY MANAGEMENT

CO1: Analyze the role of warehousing in logistic and supply chain.
CO2: Apply warehouse inventory control fundamentals in accordance with company policy.
CO3: Analyze the classification of material handling equipment and typical applications.
CO4: Describe receiving and put away practices / system and storage systems.
CO5: Evaluate the recent trends in warehousing.

COURSE CODE: 17MBAL03 COURSE NAME: FUNDAMENTAL OF SHIPPING

CO1: Explore the shipping markets and its legal aspects.
CO2: Analyze the basic shipping operations and cargo handling.
CO3: Perform freight comparisons to minimize shipping charges.
CO4: Analyze the impact of EDI and VTMS.

COURSE CODE: 17MBAL04 COURSE NAME: EXPORT AND IMPORT MANAGEMENT

CO1: Analyze the foreign trade policy, schemes and promotion counsel.
CO2: Explore the role of EXIM authorities.
CO3: Construct and complete the documentation procedure on line with existing norms.
CO4: Develop institutional framework for EXIM management.

SEMESTER IV

MARKETING - ELECTIVES

COURSE CODE: 17MBAM06 COURSE NAME: BRAND MANAGEMENT

CO1: Apply the brand elements in a Marketing setup.
CO2: Design & implement brand strategies as position products.
CO3: Culminate the brand Personality for Business success.
CO4: Develop appropriate brand extension for different segments of consumers.
CO5: Apply appropriate Brand valuation Methods.

COURSE CODE: 17MBAM07 COURSE NAME: RURAL MARKETING

CO1: Understand the importance of Rural Marketing, Rural Environment and problems in Rural marketing in India.
CO2: Know the Strategies to be adopted by the corporate in Rural market.
CO3: Gain Conceptual knowledge about rural Consumer behaviour in the Indian context.
CO4: Design Rural Distribution channel for Business success.
CO5: Draw Conclusion &implications of Financial Institutions.

COURSE CODE: 17MBAM08 COURSE NAME: SOCIAL MEDIA MARKETING

CO1: Understand the evolution of Digital marketing with its various classifications.

CO2: Analyze and discuss the search engine marketing concept.
CO3: Recognize the social media marketing importance and different concepts.
CO4: Establish the tools used in affiliate marketing.
CO5: Recognize the web analytics trends in digital marketing.

COURSE CODE: 17MBAM09 COURSE NAME: INTERNATIONAL MARKETING

CO1: Apply basic international marketing theories and concepts to understand the environment.
CO2: Undertake strategic business analysis in order to develop appropriate international marketing objectives and strategies.
CO3: Identify and evaluate data and evidence related to international business.
CO4: Apply appropriate Marketing strategy in International trade.
CO5: Design suitable promotional strategy by using social networks.

COURSE CODE: 17MBAM10 COURSE NAME: MARKETING RESEARCH

CO1: Analyze the process of marketing research & its different processess.
CO2: Identify sources of information and different research methods.
CO3: Build a simple questionnaire from a web-based survey administration site.

HUMAN RESOURCE MANAGEMENT - ELECTIVES

COURSE CODE: 17MBAH06 COURSE NAME: NEGOTIATION AND CONFLICT MANAGEMENT

CO1: Integrate the skills needed for problem solving in organizations.
CO2: Understand the principles, strategies and tactics of effective negotiation.
CO3: Appreciate cultural differences to engage in cross-cultural or international negotiations.
CO4: Demonstrate an understanding of how to manage conflicts that lead to constructive outcomes.
CO5: Apply creative thinking to mitigate conflict situations for win-win solutions.

COURSE CODE: 17MBAH07 COURSE NAME: COMPENSATION AND REWARD MANAGEMENT

CO1: Relate the basic compensation concepts and within the wider context of organisations.
CO2: Develop knowledge on the reward management systems in organizations and its related legal Aspects.
CO3: Apply effectively the performance-based reward systems in organisational set-up.
CO4: Design & Implement reward processes appropriate to the context of organisation.
CO5: Analyse the implications for strategic rewards and the legality issues.

COURSE CODE: 17MBAH08 COURSE NAME: STRATEGIC HUMAN RESOURCE MANAGEMENT

CO1: Setup the HRD functions in an organization to strategically manage the HR.
CO2: Outline the key areas of Strategic Human Resource Management.
CO3: Contribute effectively to the management of HR in the international context.
CO4: Make informed career choices based on their self-assessment.
CO5: Demonstrate the employee engagement techniques needed, to generate effective commitment.

COURSE CODE: 17MBAH09 COURSE NAME: TALENT ACQUISITION

CO1: Demonstrate the Knowledge of Talent Acquisition Processes.
CO2: Analysis of the impacts of Talent Acquisition in the organization.
CO3: Implement Talent Management practices.
CO4: Develop leadership qualities among subordinate for effective succession of job roles.
CO5: Appreciate the latest trends in Talent Acquisition & Management.

COURSE CODE: 17MBAH10 COURSE NAME: INTERNATIONAL HUMAN RESOURCE MANAGEMENT

CO1: Recognize the enduring global contexts of International HRM.
CO2: Develop staffing for sustained growth of international operations.
CO3: Interpret the International Industrial Relation issues and performance management.
CO4: Demonstrate the diversity management in global context.
CO5: Appreciate the emerging trends in International culture.

FINANCE - ELECTIVES

COURSE CODE: 17MBAF06 COURSE NAME: MERGERS AND ACQUISITION

CO1: Develop, evaluate the application of financial theory & techniques to M & A decisions and transactions.
CO2: Develop and understand the common issues in merger and acquisitions (M & As).
CO3: Channelize new accounting procedures and corporate restructuring methods.
CO4: Learn new control mechanisms and techniques.
CO5: Implement new incorporation techniques in business.

COURSE CODE: 17MBAF07 COURSE NAME: INTERNATIONAL FINANCIAL MANAGEMENT

CO1: Discover Foreign Financial Market and its relevance to survival of companies.
CO2: Gain Knowledge about International Financial markets & instruments.
CO3: Develop a frame of reference pertaining to international financial management.
CO4: Develop critical and analytical skills and the ability to work independently.
CO5: Learn new trends of funding facilities and how it influences in IMF.

COURSE CODE: 17MBAF08 COURSE NAME: FINANCIAL MARKETS

CO1: Describe the components of financial markets and their role in the economy.
CO2: Analyse the role of Money Market in financing.
CO3: Evaluate the New Issue Market to promote financial products and services.
CO4: Analyse the trading mechanism in the stock exchanges.
CO5: Evaluate the investor's interest and the associated risks.

COURSE CODE: 17MBAF09 COURSE NAME: STRATEGIC COST MANAGEMENT

CO1: Demonstrate an understanding of the purpose of strategic management and models.
CO2: Identify the limitations of information produced by traditional cost and management accounting systems.
CO3: Analyse value chains and use the results of this analysis in evaluating potential strategies for competitive advantage.
CO4: Implement management control systems to achieve organizational excellence.
CO5: Apply new techniques in pricing standards.

COURSE CODE: 17MBAF10 COURSE NAME: PROJECT MANAGEMENT

CO1: Identify project resource requirements in consultation with stakeholders.
CO2: Implement project management tools and techniques in order to achieve project success.
CO3: Investigate complex business problems to propose project- based solutions.

SYSTEMS - ELECTIVES

COURSE CODE: 17MBAS05 COURSE NAME: ENTERPRISE RESOURCE PLANNING

CO1: Understand the basic functioning of ERP.
CO2: Understand the Supply Chain Management Implementation strategies.

CO3: Know the processes of ERP implementation cycle.
CO4: Get awareness of core and extended modules of ERP.
CO5: Facilitate and support Enterprise Integration Application.

COURSE CODE: 17MBAS06 COURSE NAME: SOFTWARE QUALITY ASSURANCE

CO1: Describe components of software quality assurance.
CO2: Gain knowledge in implementation in testing and assuring software quality maintenance.
CO3: Analyze software quality costs.
CO4: Evaluate SQA standards and software process assessments.
CO5: Predict problems and challenges.

COURSE CODE: 17MBAS07 COURSE NAME: DATA WAREHOUSING AND DATA MINING

CO1: Describe the fundamental concepts, benefits and problem areas associated with data warehousing.
CO2: Understand the various architectures and main components of a data warehouse.
CO3: Compare and contrast OLAP and data mining as techniques for extracting knowledge from a data warehouse.
CO4: Categorize major clustering methods.
CO5: Predict and classify issues related to data warehousing and data mining.

COURSE CODE: 17MBAS08 COURSE NAME: ANALYSIS AND DESIGN OF INFORMATION SYSTEMS

CO1: Gather data to analyze and specify the requirements of an Information system.
CO2: Design system components and environments Data Dictionary.
CO3: Build Decision Tables Terminology and Development.
CO4: Design a database for storing data and a user interface for data input and output.
CO5: Analyze modern approaches in system analysis and design.

PRODUCTION - ELECTIVES

COURSE CODE: 17MBAP05 COURSE NAME: SIX SIGMA

CO1: Implement Lean Methods and Six Sigma for process improvement.
CO2: Relate Lean Six Sigma concepts to the overall business mission and objectives.
CO3: Recognize the organizational factors for a successful process improvement program.
CO4: Use the concept of a Sigma Level to evaluate the capability of a process or organization.
CO5: Analyze the various verification methods used for quality checking.

COURSE CODE: 17MBAP06 COURSE NAME: SUPPLY CHAIN MANAGEMENT

CO1: Explore SCM for effective operations management.
CO2: Assess the strategic role and impact of IT technologies on supply chain integration.
CO3; Identify major slacks and formulate the approaches to manage them.
CO4: Conceptualize the phenomenon of bull-whip effect in SCM.
CO5: Analyze the various factors to select an appropriate location for a facility.

COURSE CODE: 17MBAP07 COURSE NAME: WORLD CLASS MANUFACTURING

CO1: Develop the strategy related to aggregate planning and production schedule.
CO2: Support manufacturing decisions based upon data derived.
CO3: Develop a strategy to minimize business risk and maximize new opportunities.
CO4: Assess the productive maintenance system with monitoring system.
CO5: Express the major project management with a flexible manufacturing system.

COURSE CODE: 17MBAP08 COURSE NAME: TECHNOLOGY MANAGEMENT

CO1: Develop awareness on the issues related to managing technological change.
CO2: Understand different approaches to managing innovation.
CO3: Identify drivers and barriers to technological innovation within an organization.
CO4: Understand what it takes to manage technological innovation.
CO5: Recognize the technology transformation process.

LOGISTICS - ELECTIVES

COURSE CODE: 17MBAL05 COURSE NAME: PORT AND TERMINAL MANAGEMENT

CO1: Recognize the concepts of port and its operations.
CO2: Apply the principles of port and terminal operations.
CO3: Analyze business activities of ports and terminals.
CO4: Evaluate port performance and suggest competitive port strategies.
CO5: Establish the marketing strategies and concept in the business environment.

COURSE CODE: 17MBAL06 COURSE NAME: PACKING MANAGEMENT

CO1: Identify the necessity of packaging and its standards.
CO2: Apply the cost theory and different level of packaging.
CO3: Analyze the value analysis and inventory control.
CO4: Design and implement the packing based on product characteristics.
CO5: Choose appropriate techniques and latest developments in packing.

COURSE CODE: 17MBAL07 COURSE NAME: FUNDAMENTALS OF E - LOGISTICS

CO1: Reflect the fundamentals of E-Logistics and its implementations.
CO2: Distinguish and identify the kind of E-logistics to satisfy the customer needs.
CO3: Apply the e-business strategy pertaining to maintain the customer relationship.
CO4: Develop the strategies based on electronic tools available.
CO5: Design & implement the bar coding and scanning with technology.

COURSE CODE: 17MBAL08 COURSE NAME: AIR CARGO LOGISTICS MANAGEMENT

CO1: Understand the airfreight operation and its services.
CO2: Apply the basic documentation required in air cargo management.
CO3: Apply strategies related to the rates and charges of the air cargo management.
CO4: Identify the components of market research in Airline Management.
CO5: Identify the strategies for effective Air cargo Management.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D17

SCHOOL NAME	**SCHOOL OF MANAGEMENT**
PROGRAMME NAME	**MSW**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Identify and conduct themselves as Professional Social Workers in the areas of varied social work practice with individuals, families, and groups, or leadership in public and nonprofit agencies.
PEO2	Demonstrate a commitment in working with diverse groups, commit to lifelong learning about diverse and oppressed groups in a cultural context.
PEO3	Demonstrate an ecological understanding of the intersection of social problems such as poverty, crime, social injustice, classism, and incorporate this understanding into their assessments and interventions.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Design and implement interventions, policies, programs, and services that are accessible and acceptable to people who may be different or diverse from the majority of the population served.
PO2	Apply a broad range of critical thinking skills of analysis and problem-solving to strengthen individuals, families and communities using interventions relevant to their areas of concentration and specialization.
PO3	Use skills relevant to their areas of concentration and specialization who advocate for human rights in order to empower individuals, families and communities.
PO4	Engage in research-informed practice and practice-informed research and to engage in program evaluation.
PO5	Demonstrate advanced knowledge about human development and behavior in the social environment, and draw upon this knowledge to assess the biological, psychological, social, and environmental factors that affect individuals, families, and communities.
PO6	Promote social and economic well-being by engaging in leadership and policy practice which addresses social problems. This practice includes analyzing, formulating, and advocating for policy and programs.
PO7	Engage, assess, intervene, and evaluate practice in their chosen areas of concentration and specialization at the advanced level utilizing research findings and evidence-based practice.

PROGRAMME NAME - MSW

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MSW101 COURSE NAME: INTRODUCTION TO SOCIAL WORK

CO1: Understand the fundamentals of social work like basic philosophy, history, concepts, methods, principles and fields. Envisage the upcoming areas of social work practice and education.
CO2: Proficient about fields and methods of Social Work profession required for orientation towards the Practical Social Work.

COURSE CODE: 18MSW102 COURSE NAME: SOCIOLOGY FOR SOCIAL WORK PRACTICE

CO1: Proficient about the social concepts and elements required for the Social Work profession in
(i) the elements of society
(ii) socialization and social groups
(iii) marriage and family system
(iv) caste system and social change
(v) social problems with special reference to India.

COURSE CODE: 18MSW103 COURSE NAME: PSYCHOLOGY FOR SOCIAL WORK PRACTICE

CO1: Understand the socio-psychological aspects of human growth and development.
CO2: Acquire Personality development and Mental Health.

COURSE CODE: 18MSW104 COURSE NAME: SOCIAL WORK WITH INDIVIDUALS

CO1: Implement the primary and direct method of the Social Work namely Social Case Work.
CO2: Gain practical knowledge in the application of Social casework on personality development and mental health.

SEMESTER II

COURSE CODE: 18MSW201 COURSE NAME: SOCIAL WELFARE ADMINISTRATION & SOCIAL LEGISLATION

CO1: Gain knowledge about Social Welfare Administration in India.
CO2: Understand the basic personal laws and acts for the protection of all the civilians in India.
CO3: Adopt various social legislation, social policy and measures for seeking remedies for the victims of oppression and violation.

COURSE CODE: 18MSW202 COURSE NAME: SOCIAL WORK WITH GROUPS

CO1: Independently organize group work meetings with clients.
CO2: Apply the techniques of social group work.

COURSE CODE:18MSW203 COURSE NAME: COMMUNITY ORGANIZATION AND SOCIAL ACTION

CO1: Study the social problems, design their own action methodologies and organize the communities

CO2: Create public opinions against anti-social elements / social problems and initiate direct social Actions.

COURSE CODE: 18MSW204 COURSE NAME: SOCIAL WORK RESEARCH AND STATISTICS

CO1: Identify social problems, make their own appropriate research designs and conduct independent research.
CO2: Suggest lasting solutions to social problems through evidence based research.

COURSE CODE: 18MSW205 COURSE NAME: COMPUTER APPLICATIONS FOR SOCIAL WORK

CO1: Understand the components of the computers and differentiate between hardware and software.
CO2: Apply various Microsoft Office based applications in communications, documentation and research.

SEMESTER III

COURSE CODE: 17MSW301 COURSE NAME: SCIENCE AND TECHNOLOGY APPLICATIONS FOR INCLUSIVE GROWTH

CO1: Understand various fields and social applications of Science and Technology.

COURSE CODE: 17MSWE01 COURSE NAME: LABOUR WELFARE

CO1: Practice and apply the fundamental theories of labour welfare in solving labour issues.

COURSE CODE: 17MSWE02 COURSE NAME: INTRODUCTION TO MEDICAL SOCIAL WORK

CO1: Understand the basics of medical social work and implement rehabilitation and public health programmes.

COURSE CODE: 17MSWE03 COURSE NAME: RURAL AND URBAN SOCIAL STRUCTURE

CO1: Understand the difference between rural and urban societies and able to solve the social problems faced by these communities.

COURSE CODE: 17MSWE04 COURSE NAME: LABOUR LEGISLATIONS

CO1: Demonstrate their knowledge of legal framework in industrial settings to tackle the Industrial relations issues.

COURSE CODE:17MSWE05 COURSE NAME: HOSPITAL ADMINISTRATION

CO1: Possess hospital administrative skills, care systems, finance and automation.

COURSE CODE: 17MSWE06 COURSE NAME: RURAL COMMUNITY DEVELOPMENT

CO1: Understand the panchayati raj principles, administrative systems and implement RCD programmes.

COURSE CODE: 17MSWE07 COURSE NAME: HUMAN RESOURCE MANAGEMENT

CO1: Demonstrate the skills in dealing with human subjects in industrial setting.

CO2: Forecast, recruit, train and conduct performance appraisal, record creation and maintenance.

COURSE CODE: 17MSWE08 COURSE NAME: PSYCHIATRIC SOCIAL WORK PRACTICE

CO1: Understand the basics of mental health problems.
CO2: Facilitate in field work training and applications.

COURSE CODE: 17MSWE09 COURSE NAME: WELFARE OF WEAKER SECTIONS

CO1: Acquire knowledge about weaker sections and skills to implement issue specific welfare and developmental programmes.

SEMESTER IV

COURSE CODE: 17MSW401 COURSE NAME: CORPORATE SOCIAL RESPONSIBILITY

CO1: Understand the concepts of CSR and able to implement CSR Projects.

COURSE CODE: 17MSWE10 COURSE NAME: INDUSTRIAL RELATIONS

CO1: Enrich their knowledge about bipartite and tripartite bodies in Industrial relations, ethical codes of industrial relations, collective bargaining and workers participation.

COURSE CODE: 17MSWE11 COURSE NAME: MENTAL HEALTH AND SOCIAL WORK

CO1: Demonstrate their knowledge and skills in identifying the specific mental health / mental illness issues in individuals and understand the treatment modalities for clinical treatment of the illness.

COURSE CODE: 17MSWE12 COURSE NAME: URBAN COMMUNITY DEVELOPMENT

CO1: Understand the concept of UCD and demonstrate skills in programme implementation.

COURSE CODE: 17MSWE13 COURSE NAME: ORGANIZATIONAL BEHAVIOUR

CO1: Tackle the need for organizational change, development and providing effective interventions.

COURSE CODE: 17MSWE14 COURSE NAME: COUNCELLING THEORIES AND PRACTICE

CO1: Demonstrate their skills to counsel the deprived clients in varying settings such as family, marriage, industry, etc.

COURSE CODE: 17MSWE15 COURSE NAME: NGO FORMATION AND MANAGEMENT

CO1: Register their own NGO, design and implement programmes.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D18

SCHOOL NAME	**SCHOOL OF MANAGEMENT**
PROGRAMME NAME	**MCom – International Business**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Apply the inculcated Business Ethics and Etiquettes to turn into a Professional in the field of International Business.
PEO2	Be creative leaders who are open-minded and receptive, capable of communicating effectively.
PEO3	Possess an understanding of different cultures and refined skills needed for successful International Communication.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply the mastery of knowledge in Documentation and Custom knowledge in the field of Export and Import.
PO2	Solve professional, legal and ethical issues pertaining to International Logistics and Freight Forwarding.
PO3	Impart knowledge of contemporary issues about society and environment.
PO4	Work in the field of EXIM, Customs, Customs Agency, Forex, Trading, Banking, Logistics, Marketing and Warehouse Distribution.
PO5	Function on Multicultural environment as a team member/leader and create a friendly environment.
PO6	Emerge as an Export, Import Entrepreneur.
PO7	Communicate effectively in Foreign Language – Spanish.
PO8	Demonstrate skills and understanding of International Business and Management Principles for Technological and Socially relevant Projects.
PO9	Recognize the need for professional advancement by engaging in lifelong learning.

PROGRAMME NAME - MCom – IB

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MIB101 COURSE NAME: GLOBAL BUSINESS ENVIRONMENT

CO1: Identify the main features of the International Business Environment and its main institutions.
CO2: Analyse the Political, Social, Economic, Technological and other configurations that support cross-border trade.
CO3: Apply an understanding of the nature of the Multinational firm as an Institutional structure for the conduct of cross-border trade and investment.
CO4: Analyse the key decisions that Multinational firms make in relation to the choice of Markets and entry strategies.

COURSE CODE: 18MIB102 COURSE NAME: INTERNATIONAL FINANCIAL ACCOUNTING

CO1: Understand the accounting concepts underlying the preparation and presentation of external financial statements.
CO2: Understand the sources of generally accepted accounting principles (both US GAAP and IFRS) and learn how to remain aware of changes to those principles.
CO3: Understand and articulate how economic events or alternative interpretations ofpast events would be reflected on financial statements.
CO4: Understand the ways in which accounting information is summarized and presented for internal analysis.
CO5: Understand the behaviour of costs and how to calculate and interpret cost variances relative to standards.

COURSE CODE: 18MIB103 COURSE NAME: PORT ECONOMICS

CO1: Acquire knowledge of various concepts for business problems in a port economicenvironment.
CO2: Consistent reasoning about the flow of vessels and passengers.
CO3: Become familiar to both the port governance and performance and port investment, finance and Pricing.

COURSE CODE: 18MIB104 COURSE NAME: INTERNATIONAL TRADE PROCEDURE I

CO1: Identify the highlights of Foreign Trade Policy 2015 - 2020.
CO2: Have overall knowledge about the schemes provided by the promotion councils and boards.
CO3: Identify sources of information on export/import products on various schemes.
CO4: Understand the principles of pre shipment and post shipment finance.

COURSE CODE: 18MIB105 COURSE NAME: COMPUTER PRACTICAL I - MS OFFICE

CO1: Categorize and create a word document effortlessly.
CO2: Apply various excel features for data analysis and interpretation.
CO3: Determine the output generated by access.
CO4: Experiment the various themes in MS power point.

COURSE CODE: 18MIB106 COURSE NAME: GLOBAL COUNTRY ANALYSIS – SELF STUDY

CO1: Analyse the business prospects in the world.
CO2: Locate and define the major cultural regions of the world.
CO3: Describe and know the location and distribution of various economic systems of the world.

COURSE CODE: 18MIB107 COURSE NAME: BUSINESS COMMUNICATION

CO1: Understand the importance of good communication in the world of business.
CO2: Adopt the techniques to improve various written and oral communications.
CO3: Acquire interpersonal communication skills.
CO4: Acquire the necessary skills, principles and techniques to plan, compose, revise and edit effective business messages.

SEMESTER II

COURSE CODE: 18MIB201 COURSE NAME: INTERNATIONAL MARKET RESEARCH

CO1: Acquire basic skills to use Research as an avenue of quest and Investigation.
CO2: Upgrade managerial skill for solving managerial dilemma in real life situation of business and act as a useful tool for long term and short term decision-making.
CO3: Clearly identify and analyse business problems and identify appropriate and effective ways to answer those problems.
CO4: Understand the ethical issues associated with the conduct of research.
CO5: Formulate and present effective research reports.

COURSE CODE: 18MIB202 COURSE NAME: INTERNATIONAL TRADE PROCEDURE II

CO1: Identify factors that indicate strong potential export/import markets in order to define market selection models or drive market selection systems.
CO2: Select between common modes of export/import in order to fit the business needs of exporting Organizations.
CO3: Identify sources of information on export/import restrictions and documentation associated with foreign shipping in order to facilitate export compliance for the exporting organization.
CO4: Understand the principles of determining the levy of central sales tax.

COURSE CODE: 18MIB203 COURSE NAME: INTERNATIONAL MARKETING MANAGEMENT

CO1: Understand the basic Concepts and Importance of International marketing.
CO2: Understand the scope and function of International marketing Strategies and practice.
CO3: Enhance knowledge in developing a new International Marketing place.
CO4: Understand and develop a brand equity and strategy in the context to global Marketing.
CO5: Deal about international and global marketing and will be able to apply their knowledge in their personal, disciplinary, and professional endeavours.

COURSE CODE: 18MIB204 COURSE NAME: INTERNATIONAL FINANCIAL MANAGEMENT

CO1: Explore the international integration of financial markets and analyze implications for financial Managers.
CO2: Identify derivative instruments and strategies used by multinational corporations to hedge financial risks.
CO3: Apply critical thinking skills in identifying and evaluating international financial issues and information.
CO4: Use analytical skills to identify and analyze material factors that are involved in business problems.
CO5: Use information technology as a tool to do essential business tasks.

COURSE CODE: 18MIB205 COURSE NAME: INTEGRATED LOGISTICS AND SUPPLY CHAIN MANAGEMENT

CO1: Gain a working knowledge of logistics principles and to expose students in the field of logistics.

CO2: Gain the key activities performed by the logistics function including distribution, transportation, global logistics and inventory control.

CO3: View logistics as more than an operational function that passively executes a plan, but as a strategic function that creates value and competitive advantage

CO4: Develop an understanding of organization & technology related issues involved in implementing ideas, which would lead to supply chain improvement.

COURSE CODE: 18MIB206 COURSE NAME: COMPUTER PRACTICAL II – SPSS PACKAGE

CO1: Generate decision-making information quickly using statistics that have rigor and power.
CO2: Generate descriptive statistics, cross tabulation and Frequencies.
CO3: Excel in Bivariate statistics – Means, t-test, ANOVA, Correlation and non-parametric test.
CO4: Predict for numerical outcomes: Linear Regression.

COURSE CODE: 18MIBI01 COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

CO 1: Understand the foundation of Entrepreneurship and maintaining Entrepreneurship Styles.
CO 2: Familiar with different Entrepreneurship theories and their implications.
CO 3: Detect weaknesses and, strengths within a business opportunity, and give suggestions of how to improve these weaknesses and utilize these strengths.

SEMESTER III

COURSE CODE: 17MIB301 COURSE NAME: SHIPPING AND PORT MANAGEMENT

CO1: Understand the General Structure of the Shipping Industry in the global logistics supply chain
CO2: Understand chartering of vessels and role shipping intermediaries in the context to Global Supply Chain.
CO3: Select Vessels for Global trading and how the cargos are handled at Port Terminal.
CO4: Identify the legal basis for the establishment of SAGARMALA Project and its benefits.
CO5: Explain the role of ports in India's maritime logistics and modal shift.

COURSE CODE: 17MIB302 COURSE NAME: INTERNATIONAL STRATEGIC MANAGEMENT

CO1: Create knowledge and understanding of management concepts principles and skills from a people, finance, marketing and organisational perspectives
CO2: Help in the development of appropriate organisational policies and strategies within a changing context to meet stakeholder interests
CO3: Determine the information systems to learn from failure key tools and techniques for the analysis and design of information systems, including their human and organisational as well as technical aspects.

COURSE CODE: 17MIB303 COURSE NAME: CORPORATE ETIQUETTE AND BUSINESS ETHICS

CO1: Project the Right First Impression.
CO2: Polish manners to behave appropriately in social and professional circles.
CO3: Enhance the ability to handle casual and formal situations in terms of personal grooming, dining and entertaining etiquette.
CO4: Develop and maintain a positive attitude and being assertive.
CO5: Master Cross Cultural Etiquette.

CO6: Handle difficult situations with grace, style and professionalism.

COURSE CODE: 17MIB304 COURSE NAME: ENTREPRENURSHIP DEVELOPMENT

CO1: Understand the foundation of Entrepreneurship and maintain Entrepreneurship Styles.
CO2: Understand different innovation and entrepreneurship theories and their implications.
CO3: Detect weaknesses and strengths within a business opportunity, and give suggestions of how to improve these weaknesses and utilize these strengths.
CO4: Understand the potential gender barriers in entrepreneurship.
CO5: Plan, organize and execute a project or new venture with the goal of bringing new products and service to the market.

COURSE CODE: 17MIB305 COURSE NAME: ELECTIVE I - CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Understand CRM concept and their role in value creation from the way companies manage their clients.
CO2: Identify the main elements of a CRM strategy and their impact on Marketing, Sales and Service initiatives.
CO3: Understand the transformations needed to adopt CRM.
CO4: Understand and apply some of the more used approaches by organizations to adopt CRM in their business.

COURSE CODE: 17MIB305 COURSE NAME: ELECTIVE I - SALES AND DISTRIBUTION MANAGEMENT

CO1: Identify potential customer segments and anticipate customer expectations and needs.
CO2: Have solid understanding of marketing and sales in the industrial sector and apply skills practically.
CO3: Understand the relevance of new electronic communication channels.
CO4: Manage business distribution channels and branding.

COURSE CODE: 17MIB305 COURSE NAME: ELECTIVE I - SERVICES MARKETING

CO1: Understand the theory and concepts pertaining to Services marketing.
CO2: Define the role of Services marketing, discuss its core concepts, and explain the relationship among customer value, satisfaction, productivity and quality.
CO3: Understand how to develop effective service marketing strategies that emphasizes the value exchange between suppliers and their customers
CO4: Discuss how marketing managers go about developing profitable customer relationships in the Services marketing area.

COURSE CODE: 17MIB306 COURSE NAME: INTERNATIONAL HUMAN RESOURCE MANAGEMENT

CO1: Understand the theory and concepts pertaining to international human resource management.
CO2: Describe the nature of international HRM, relate the HR issues applicable to different kinds of international companies and identify the principles of delivering and managing HR functions in MNCs.

COURSE CODE: 17MIB307 COURSE NAME: EXIM DOCUMENATION PRACTICAL

CO1: Understand the EXIM Documentation Process.
CO2: Identify the use of EXIM Documents used for Commercial Purpose.
CO3: Apply the fundamentals of Documentation Process for clearing goods within and out of the country.

COURSE CODE: 18MIBI01 COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

CO 1: Depict the foundation of Entrepreneurship and maintaining Entrepreneurship Styles.
CO 2: Familiar with different Entrepreneurship theories and their implications.
CO 3: Detect weaknesses and, strengths within a business opportunity, and give suggestions of how to improve these weaknesses and utilize these strengths.

SEMESTER IV

COURSE CODE: 17MIB401 COURSE NAME: LEGAL ASPECTS OF BUSINESS

CO1: Understand the basic principles and practices in doing a business.
CO2: Gain knowledge on the key activities performed in making business documents.
CO3: View business in a different perceptive regarding the government laws and the rights of a business man
CO4: Develop an understanding on dealing the contemporary issues in business legally.

COURSE CODE: 17MIB402 COURSE NAME: FOREX MANAGEMENT

CO1: Analyse alternative currency translation methods for settlement of goods
CO2: Examine the organization of the Foreign Exchange Market, the Spot Market, and the Forward Market, and how the information driven in these markets can be used by small business operators in controlling and managing foreign exchange.
CO3: Identify operational difficulties in financing, and settling in foreign currency, and currency Forecasting.
CO4: Identify foreign exchange risk management and the techniques available to small business operators for risk exposure containment.

COURSE CODE: 17MIB403 COURSE NAME: ELECTIVE II - BANKING

CO1: Formulate and implement an effective banking to reduce the potential loss.
CO2: Analyse the role of employee benefits in the management of a business firm.
CO3: Elucidate the liability and asset portfolio management problem of banks.
CO4: Analyse and evaluate the unique features of the banking industry and regulations.

COURSE CODE: 17MIB403 COURSE NAME: ELECTIVE II INSURANCE AND RISK MANAGEMENT

CO1: Communicate effectively both orally and in writing.
CO2: Formulate and implement an effective risk management program to reduce the potential loss
CO3: Analyse the role of life and health insurance, property-liability insurance, and employee benefits in the management of a business firm.
CO4: Incorporate the use of life and health insurance, property-liability insurance, and employee benefits into financial planning process.
CO5: Analyse and evaluate the unique features of the insurance industry and regulations.

COURSE CODE: 17MIB403 COURSE NAME: ELECTIVE II - SECURITY ANALYSIS AND PORTFOILO MANAGEMENT

CO1: Recognize and apply appropriate theories, principles, and concepts relevant to securities analysis and portfolio management.
CO2: Develop a reasoned argument to the solution of familiar and unfamiliar problems relevant to securities analysis and portfolio management.
CO3: Analyse and evaluate portfolio performance.

CO4: Demonstrate the ability to develop interpersonal skills relevant to security valuation and portfolio Management.

COURSE CODE: 17MIB404 COURSE NAME: BUSINESS CASE ANALYSIS – SELF STUDY

CO1: Enhance ability to critically analyse a business strategy.
CO2: Improve ability to integrate ideas from the range of business and economics disciplines that are components of a business strategy.
CO3: Develop new strategies that lead to competitive advantage.
CO4: Appreciate the need to provide strong justification and support for strategic choices.
CO5: Understand the team-based approach to problem identification and resolution.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D19

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc - Mathematics**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will be

PEO1	Professionals equipped with the knowledge and skills relevant to the practice of Mathematics and analytical decision making in an inter-disciplinary environment.
PEO2	Entrepreneurs empowered with the ability to think creatively, formulate Mathematical models and solve problems.
PEO3	Researchers enriched with the skills of Mathematical modeling and statistical analysis.
PEO4	Good citizens catering to the arising needs of the society with their inculcated values and environmental awareness.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Use Mathematical knowledge to analyze and solve problems.
PO2	Create Mathematical models, formulate precise statements and reason out logically.
PO3	Derive solutions for the models developed for a better functioning of the real world systems.
PO4	Create or select an appropriate technique in research methods including analysis, interpretation of data and synthesis of the information to provide valid conclusions.
PO5	Use the modern tools and software for obtaining solutions to the desired accuracy.
PO6	Serve the society with a willing heart as and when a Mathematician is required.
PO7	Be conscious of the environmental hazards and contribute to its minimization scientifically.
PO8	Apply ethical principles and commit to professional ethics, responsibilities and norms.
PO9	Recognize the need for individual and team work in an inter-disciplinary environment and participate effectively.
PO10	Present Mathematics clearly and precisely to an audience of peers, faculty and others.
PO11	Engage in lifelong learning.
PO12	Use Operations Research techniques effectively especially in the execution of any specific projects.

PROGRAMME NAME - BSc – MATHEMATICS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CMAT01 COURSE NAME: ALGEBRA AND TRIGONOMETRY

CO1: Sum the series using binomial, exponential and logarithmic expansions.
CO2: Acquire knowledge about theory of equations and solve the equations.
CO3: Solve algebraic equations approximately.
CO4: Expand trigonometric functions.
CO5: Separate real and imaginary parts of hyperbolic functions.

COURSE CODE: 18MAT101 COURSE NAME: DIFFERENTIAL CALCULUS

CO1: Explain Rolles' theorem, Mean value theorem and Taylor's theorem.
CO2: Predict maxima and minima of functions of two variables.
CO3: Evaluate the partial derivatives of homogenous functions.
CO4: Determine the tangent's and normal's of a curve using Differential Calculus.
CO5: Apply Differential Calculus in the geometry of Parabola, Ellipse and Hyperbola.

COURSE CODE: 18PHC01 COURSE NAME: ALLIED - PHYSICS I

CO1: Identify the properties of matter.
CO2: Explain the concepts of mechanics.
CO3: Analyze the laws of thermodynamics.
CO4: Compare conventional and non-conventional energy sources.
CO5: Differentiate the types of semi-conductors.

COURSE CODE: 18PHC02 COURSE NAME: ALLIED PRACTICAL – PHYSICS I LAB

CO1: Recognize physical properties of matter by interpreting the results of experiments.
CO2: Design circuits by knowing the characteristics of electronic components.

SEMESTER II

COURSE CODE: 18CMAT04 COURSE NAME: ANALYTICAL GOEMETRY 2D & 3D

CO1: Identify the difference between the 2D & 3D geometry.
CO2: Explain the standard forms of a straight line and its applications.
CO3: Describe the elements of Sphere and its applications.
CO4: Detail the characteristics of a Cone and its applications.
CO5: Apply the characteristics of a cylinder in geometry.

COURSE CODE: 18MAT201 COURSE NAME: INTEGRAL CALCULUS

CO1: Demonstrate the basics of Integration.
CO2: Analyze the different types of Integrals.
CO3: Apply change of order for finding double integrals.
CO4: Evaluate integrals by transforming Cartesian to polar coordinates.
CO5: Acquire knowledge about Beta and Gamma functions and their applications.

COURSE CODE: 18PHC03 **COURSE NAME: ALLIED – PHYSICS II**

CO1: Differentiate the properties of magnetic materials.
CO2: Explain the properties of light.
CO3: Design the logic circuits using gates.
CO4: Analyze the different atomic models.
CO5: Compare the properties of rays.

COURSE CODE: 18PHC04 **COURSE NAME: ALLIED PRACTICAL – PHYSICS II LAB**

CO1: Demonstrate simple physics experiments.
CO2: Differentiate logic gates.

SEMESTER III

COURSE CODE: 17MAT301 **COURSE NAME: DIFFERENTIAL EQUATIONS**

CO1: Solve standard 1st order ordinary differential equations.
CO2: Build solutions to 2nd order linear ordinary differential equations.
CO3: Recognize and solve Euler's Homogeneous Linear differential equation.
CO4: Find the solution of non-linear PDEs of standard types.
CO5: Identify and solve PDEs of Lagrange's type.

COURSE CODE: 17MAT302 **COURSE NAME: MATHEMATICAL STATISTICS I**

CO1: Acquire knowledge about Distribution Functions in probability.
CO2: Demonstrate the concept of Mathematical expectation for a distribution.
CO3: Apply the elements of Probability Distribution in data analysis.
CO4: Analyze data using Correlation & Regression.
CO5: Fit an appropriate curve for the given data.

COURSE CODE: 17CMAT05 **COURSE NAME: VECTOR CALCULS AND FOURIER SERIES**

CO1: Explain the geometrical and physical significance of Vector Differentiation.
CO2: Apply Vector Integration to find the work done by a force and to find the volume of solids.
CO3: Evaluate vector integrals using Gauss, Green's and Stoke's theorems.
CO4: Expand periodic functions as Fourier series.
CO5: Compute RMS value and apply Parseval's theorem.

COURSE CODE: 17CMAT06 **COURSE NAME: SKILL BASED - OPERATIONS RESEARCH I**

CO1: Formulate and solve Linear Programming Problems.
CO2: Solve the Transportation and Assignment Problems.
CO3: Construct the Network for a project to study the system and take better decision.
CO4: Find the optimal replacement period for an asset using replacement strategies.
CO5: Apply sequencing algorithms in sequencing problems and plan accordingly.

COURSE CODE: 17MAT303 **COURSE NAME: ALLIED - OFFICE AUTOMATION**

CO1: Apply the knowledge of Science to use various techniques in the field Computer applications.
CO2: Use the modern scientific tools and apply the computer skills for creating innovative products.
CO3: Utilize the computer knowledge in the field of global, economic and societal context for sustainable development.

COURSE CODE: 17CMAT02 COURSE NAME: ALLIED - MS OFFICE LAB

CO1: Explain the basics of MS Office.
CO2: Prepare newsletters, Mathematical expressions, mail merge concepts in MS Word.
CO3: Acquire the Knowledge to prepare the Power Point Presentation.
CO4: Explain the commands in MS Access.
CO5: Apply the Statistical Concepts in MS Excel.

SEMESTER IV

COURSE CODE: 17MAT401 COURSE NAME: FOURIER AND LAPLACE TRANSFORMS

CO1: Determine Fourier Cosine and Sine Transforms of a time domain function.
CO2: Compute Inverse Fourier Cosine and sine Transforms of a frequency domain function.
CO3: Analyze the Laplace Transforms of standard functions.
CO4: Find the Inverse Laplace Transforms of frequency domain functions.
CO5: Solve ordinary differential equations using transforms.

COURSE CODE: 17MAT402 COURSE NAME: MATHEMATICAL STATISTICS II

CO1: Acquire knowledge about point & interval estimation of a sample.
CO2: Determine MLE & moments of the given sample.
CO3: Analyze data using large sample tests.
CO4: Interpret data using t and x^2 tests.
CO5: Analyze variance using F-test.

COURSE CODE: 17CMAT03 COURSE NAME: NUMERICAL METHODS

CO1: Solve algebraic and transcendental equations.
CO2: Find the solution of system of linear Algebraic Equations.
CO3: Identify the problems in Interpolation with equal and unequal intervals and solve them.
CO4: Compute derivatives and integrals numerically.
CO5: Examine the numerical solution of ordinary differential equation.

COURSE CODE: 17CMATE01 COURSE NAME: ELECTIVE - DISCRETE MATHEMATICS

CO1: Validate arguments using Mathematical Logic.
CO2: Visualize the fundamental ideas of relations and functions.
CO3: Describe the different types of formal languages.
CO4: Apply automata theory in machine learning.
CO5: Acquire knowledge about lattices.
CO6: Simplify the given Boolean expressions.

COURSE CODE: 17CMAT07 COURSE NAME: SKILL BASED - OPERATIONS RESEARCH II

CO1: Solve problems in two person zero sum games.
CO2: Formulate and solve problems in decision making.
CO3: Study queuing models to take optimal decisions.
CO4: Manage inventory using suitable algorithms.
CO5: Simulate and predict the future occurrences to study the system in detail.

COURSE CODE: 17CSC08 COURSE NAME: ALLIED - COMPUTER PROGRAMMING IN C

CO1: Explain the basics of programs and programming, select appropriate data types and control structures for solving a given problem.

CO2: Illustrate the representation of arrays, strings and usage of string operations, knowledge of pointers and dynamic memory allocation.
CO3: Explain the basics of file handling mechanism, compare between structure oriented programming and object oriented programming.

COURSE CODE: 17MAT403 COURSE NAME: ALLIED - COMPUTER PROGRAMMING IN C LAB

CO1: Gain knowledge about basic programming concepts.
CO2: Implement mathematical concepts in programming.

SEMESTER V

COURSE CODE: 16MAT501 COURSE NAME: REAL ANALYSIS I

CO1: Describe fundamental properties of the real numbers that lead to the formal development of real Analysis.
CO2: Acquire knowledge about countable and uncountable sets.
CO3: Compare Bolzano –Weirstrass theorem and Cantor intersection Theorem in analysis.
CO4: Analyze the basic topological properties of the real numbers.
CO5: Apply the notion of continuous functions and their properties in a real number system.

COURSE CODE: 16MAT502 COURSE NAME: COMPLEX ANALYSIS I

CO1: Find the absolute value and argument of complex numbers.
CO2: Determine the analyticity and differentiability of complex functions.
CO3: Analyze the convergence of a complex power series.
CO4: Verify the harmonicity of a function and transform functions in complex plane.
CO5: Evaluate the integral of complex functions.

COURSE CODE: 16MAT503 COURSE NAME: ABSTRACT ALGEBRA

CO1: Explain the basic concepts of groups.
CO2: Determine subgroups, cyclic subgroups, normal subgroups and quotient groups of a given group.
CO3: Illustrate homomorphism and automorphism between groups and permutation groups.
CO4: Establish ring homomorphism between rings.
CO5: Analyze rings using ideals, quotient rings and Euclidean rings.

COURSE CODE: 16MAT504 COURSE NAME: STATICS

CO1: Find the resultant of forces acting at a point.
CO2: Explain moments, couples and resultant of system of couples.
CO3: Represent coplanar forces analytically and reduce a system of forces to a single force.
CO4: Analyze the equilibrium of objects on inclined planes using friction.
CO5: Determine tension at a point of a string in equilibrium.

COURSE CODE: 16CMAT08 COURSE NAME: ACCOUNTANCY (SKILL BASED)

CO1: Explain the concepts and conventions of Accounting.
CO2: Prepare the Final Statement of Accounts to assess the Profitability and Financial Position of the Business.
CO3: Gain Knowledge about preparation of Cash Book and BRS.
CO4: Ascertain the amount of Deprecation by applying different methods.
CO5: Gain working knowledge of accounting and their application in case of nonprofit organization.

SEMESTER VI

COURSE CODE: 16MAT601 — **COURSE NAME: REAL ANALYSIS II**

CO1: Describe fundamental properties of the set functions of real and topological mapping.
CO2: Acquire knowledge about continuity and monotonic functions.
CO3: Analyze the differentiability of real functions and related theorems.
CO4: Establish the relation between functions of bounded variation and monotonic functions.
CO5: Apply the notation, definition and properties of Riemann Stieltjes integral.

COURSE CODE: 16MAT602 — **COURSE NAME: COMPLEX ANALYSIS II**

CO1: Use Cauchy's, Liouville's and Morera's theorem to evaluate complex integrals.
CO2: Expand complex functions in Taylor's and Laurent's series.
CO3: Find the singularities and residues of complex functions.
CO4: Evaluate definite integrals using Residue theorem.
CO5: Analyze fundamental theorem of algebra.

COURSE CODE: 16MAT603 — **COURSE NAME: LINEAR ALGEBRA**

CO1: Apply matrices to solve system of linear equations.
CO2: Verify Cayley's Hamilton theorem for a square matrix.
CO3: Analyze vector spaces through Homomorphisms and Isomorphisms.
CO4: Explain the concepts of dual space, inner product vector space and orthogonal vector space.
CO5: Illustrate the Linear Transformations in vector spaces and determine the characteristic roots and vectors.

COURSE CODE: 16MAT604 — **COURSE NAME: DYNAMICS**

CO1: Derive the equations of motion and apply them.
CO2: Analyze Projectile and its Characteristics.
CO3: Demonstrate the fundamental laws of impact and its applications.
CO4: Explain a SHM and find the general solution of the SHM equation.
CO5: Apply the principles of Central Orbits in rotational motion.

COURSE CODE: 16MATE02 — **COURSE NAME: GRAPH THEORY**

CO1: Explain the basic concepts of graphs, sub graphs, and operations on graphs.
CO2: Determine connectedness and connectivity of nodes in a graph.
CO3: Compare the properties of Eulerian and Hamiltonian graphs.
CO4: Explain the basic concepts of trees in graph theory.
CO5: Analyze trees through their matrix representation, paths and connections.

COURSE CODE: 16CMAT09 — **COURSE NAME: PROJECT IN OPERATIONS RESEARCH**

CO1: Use Operations Research Techniques effectively, especially in the execution of any specific projects.
CO2: Develop a report that describes a model and solving techniques and propose recommendations to the decision maker.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D20

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc – Mathematics with Computer applications**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Be professionals equipped with the knowledge and Computer skills relevant to the practice of Mathematics and analytical decision making in an inter-disciplinary environment.
PEO2	Be entrepreneurs empowered with the ability to think creatively, formulate Mathematical models and solve problems using computer programming.
PEO3	Emerge as researchers enriched with the skills of Mathematical modelling and data analytics.
PEO4	Be good citizens catering to the arising needs of the society with their inculcated values and environmental awareness.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Use Mathematical and Computer knowledge to analyze and solve problems.
PO2	Create Mathematical models, formulate precise statements and reason out logically.
PO3	Derive solutions for the models developed for a better functioning of the real world systems.
PO4	Create or select an appropriate technique in research methods including analysis, interpretation of data and synthesis of the information to provide valid conclusions.
PO5	Use the modern tools, software and advanced programming for obtaining solutions to the desired accuracy.
PO6	Serve the society with a willing heart as and when a Mathematician with computer knowledge is required.
PO7	Be conscious of the environmental hazards and contribute to its minimization scientifically.
PO8	Apply ethical principles and commit to professional ethics, responsibilities and norms.
PO9	Recognize the need for individual and team work in an inter-disciplinary environment and participate effectively.
PO10	Present Mathematics clearly and precisely to an audience of peers, faculty and others.
PO11	Engage in life-long learning.
PO12	Use Data analytics and Big Data techniques effectively especially in the execution of any specific projects.

PROGRAMME NAME - BSc – MATHEMATICS WITH CA

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CMAT01 COURSE NAME: ALGEBRA AND TRIGONOMETRY

CO1: Sum the series using binomial, exponential and logarithmic expansions.
CO2: Acquire knowledge about theory of equations and solve the equations.
CO3: Solve algebraic equations approximately.
CO4: Expand trigonometric functions.
CO5: Separate real and imaginary parts of hyperbolic functions.

COURSE CODE: 18MAC101 COURSE NAME: OFFICE AUTOMATION AND INTERNET BASICS

CO1: Apply the knowledge of science to use various techniques in the field of computer applications.
CO2: Use the modern scientific tools and apply the computer skills for creating innovative products.
CO3: Utilize the computer knowledge in the field of global, economic and societal context for sustainable development.

COURSE CODE: 18CMAT02 COURSE NAME: MS OFFICE LAB

CO1: Understand the basics of computer system.
CO2: Prepare newsletters, Mathematical expressions, mail merge concepts in MS Word.
CO3: Acquire the Knowledge to prepare the Power Point Presentation.
CO4: Work in MS Access.
CO5: Apply the Statistical Concepts in MS Excel.

COURSE CODE: 18MAC102 COURSE NAME: STATISTICS I

CO1: Acquire knowledge about Distribution Functions.
CO2: Demonstrate the concept of Mathematical expectation.
CO3: Apply the concept of Probability Distribution.
CO4: Analyze using Correlation Regression.
CO5: Solve the problems on curve fitting.

SEMESTER II

COURSE CODE: 18CMAT03 COURSE NAME: NUMERICAL METHODS

CO1: Solve algebraic and transcendental equations.
CO2: Find the solution of system of linear Algebraic Equations.
CO3: Identify the problems in Interpolation with equal and unequal intervals and solve it.
CO4: Analyse problems in Numerical Differentiation and Integration.
CO5: Examine the numerical solution of ordinary differential equation.

COURSE CODE: 18MAC201 **COURSE NAME: PROGRAMMING IN C++**

CO1: Demonstrate fundamental programming concepts such as variables, conditional statements, looping constructs, and methods (procedures).
CO2: Describe how the class mechanism supports encapsulation and information hiding.
CO3: Apply the concept of constructors, destructors and operator overloading.
CO4: Design programs for real world examples with code reusability through inheritance.
CO5: Apply virtual functions in polymorphism.

COURSE CODE: 18MAC202 **COURSE NAME: PROGRAMMING IN C++ LAB**

CO1: Write C++ Programs using basic Programming concepts.
CO2: Write C++ Programs using Control Structures, arrays and functions.
CO3: Demonstrate Mathematical Concepts in C++.

COURSE CODE: 18MAC203 **COURSE NAME: STATISTICS II**

CO1: Acquire knowledge about point & interval estimation.
CO2: Solve the problems on MLE & Moments.
CO3: Analysis using Large sample tests.
CO4: Analysis using t test.
CO5: Analysis using χ^2 tests.

SEMESTER III

COURSE CODE: 17MAC301 **COURSE NAME: CALCULUS**

CO1: Evaluate the curvature, evaluates and envelope problems.
CO2: Demonstrate the concept of Integration and its types.
CO3: Evaluate and apply the Reduction formula, double and triple integrals in real life problems.
CO4: Apply the change of variables in double and triple integrals.
CO5: Acquire knowledge about Beta and Gamma functions and its applications.

COURSE CODE: 17MAC302 **COURSE NAME: VISUAL BASIC**

CO1: Explain about IDE and GUI
CO2: Select appropriate controls for designing forms
CO3: Choose appropriate data types, inbuilt functions and control structures for solving problems
CO4: Acquire knowledge in using arrays and developing functions
CO5: Get knowledge in accessing databases

COURSE CODE: 17MAC303 **COURSE NAME: VISUAL BASIC LAB**

CO1: Design and implement SDI and MDI.
CO2: Develop simple programs using arrays, functions and controls
CO3: Design a menu
CO4: Perform data manipulation using access databases.

COURSE CODE: 17CMAT04 **COURSE NAME: ANALYTICAL GOEMETRY 2D & 3D**

CO1: Identify the difference between the 2D & 3D.
CO2: Explain straight line and its applications.
CO3: Describe Sphere and its applications
CO4: Describe Cone and its applications.
CO5: Describe Cylinder and its applications

COURSE CODE: 17CMAT06 **COURSE NAME: OPERATIONS RESEARCH I**

CO1: Formulate and solve Linear Programming Problems.
CO2: Solve the Transportation and Assignment Problems.
CO3: Construct the Network for a project to study the system and take better decision.
CO4: Solve Replacement problems and find the optimal replacement period.
CO5: Solve sequencing problems and plan accordingly.

COURSE CODE: 18PHC01/17PHC01 **COURSE NAME: ALLIED - PHYSICS I**

CO1: Identify the properties of matter.
CO2: Express the concepts of mechanics.
CO3: Analyze the laws of thermodynamics.
CO4: Explain Conventional and Non-conventional energy sources.
CO5: Differentiate the type of semiconductor.

COURSE CODE: 18PHC02/17PHC02 **COURSE NAME: ALLIED PHYSICS I LAB**

CO1: Recognize physical properties of matter by interpreting the results of experiment.
CO2: Design circuits by knowing the characteristics of electronic components.

SEMESTER IV

COURSE CODE: 17MAC401 **COURSE NAME: DIFFERENTIAL EQUATIONS AND LAPLACE TRANSFORMS**

CO1: Recall the concept of first order linear differential equations.
CO2: Understand the concept of first order higher degree ordinary differential equations.
CO3: Solve linear partial differential equations by using the Lagrange's method.
CO4: Analyze the concepts of Laplace transforms and inverse Laplace transforms to solve ODE with constant coefficients.

COURSE CODE: 17MAC402 **COURSE NAME: WEB PROGRAMMING**

CO1: Design web page with all HTML features like frames, images, links etc.,
CO2: Create a web pages using HTML and linking it with external Cascading Style Sheets.
CO3: Build dynamic web pages using PHP Programming.
CO4: Design an Interactive Website using PHP by implementing Looping and Functions.

COURSE CODE: 17MAC403 **COURSE NAME: WEB PROGRAMMING LAB**

CO1: Design web page with all HTML features like frames, images, links etc.,
CO2: Implement Style Sheets and Link it with HTML program.
CO3: Design an Interactive Website using PHP by implementing Looping and Functions.

COURSE CODE: 17CMAT05 COURSE NAME: VECTOR CALCULS AND FOURIER SERIES

CO1: Know the geometrical and physical significance of Vector Differentiation and to apply them.
CO2: Apply the Vector Integration to find the work done by a force and to find the volume of solids.
CO3: Derive Gauss, Green's and Stoke's theorem and their verification and application in real life problems.
CO4: Gain knowledge about Fourier Series.
CO5: Understand the concept of RMS value and Parseval's theorem.

COURSE CODE: 17CMATE01 COURSE NAME: DISCRETE MATHEMATICS

CO1: Solve Mathematical Logic problems.
CO2: Visualize the fundamental ideas of relations and functions.
CO3: Describe the different types of formal languages.
CO4: Apply automata theory.
CO5: Acquire knowledge about lattices.
CO6: Simplify the Boolean expressions.

COURSE CODE: 17CMAT07 COURSE NAME: OPERATIONS RESEARCH II

CO1: Solve game theory problems.
CO2: Formulate and solve Decision Problems.
CO3: Study queuing systems to take optimal decisions.
CO4: Solve Inventory Problems.
CO5: Simulate and predict the future occurrences to study the system in detail.

COURSE CODE: 18PHC03/17PHC03 COURSE NAME: ALLIED II - PHYSICS II

CO1: Differentiate the properties of magnetic material.
CO2: Understand the properties of light.
CO3: Design the logical circuits using gates.
CO4: Analyze the different atomic models.
CO5: Compare the properties of rays.

COURSE CODE: 18PHC04/17PHC04 COURSE NAME: ALLIED PHYSICS II LAB

CO1: Demonstrate simple Physics Experiments.
CO2: Differentiate Logic gates.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D21

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc - Physics**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Become leading Researchers and Entrepreneurs and create a platform for earth, planetary and space scientists.
PEO2	Exhibit interest in life-long learning including higher studies that provide sustained development and involve in innovative researches.
PEO3	Continuously update themselves in the field of Physical Science to understand the social needs and generate novel solutions at National and International level.
PEO4	Be ready to work effectively as a team, in the respective fields by using their interpersonal skills.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply core and multidisciplinary knowledge in all respects to overcome contemporary issues in the field.
PO2	Plan, design and execute complex experiments using appropriate methods to analyze data and interpret through theoretical knowledge.
PO3	Communicate effectively in oral and written forms.
PO4	Analyze, formulate, review research literature and arrive at a conclusion by identifying complex problems.
PO5	Apply numerical, analytical and logical skills during competitive examinations.
PO6	Employ the Mathematical and Computing knowledge in the appropriate disciplinse.
PO7	Understand ethical, legal and social responsibilities to find effective solutions.

PROGRAMME NAME - BSc – PHYSICS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18PH101 COURSE NAME: PROPERTIES OF MATTER & ACOUSTICS

CO1: Compare the types of elasticity.
CO2: Calculate coefficient of viscosity.
CO3: Determine the surface tension of liquid.
CO4: Understand the gravitational field and gravitational potential.
CO5: Discuss the properties of ultrasonic and factors affecting the acoustics of building.

COURSE CODE: 18PH102 COURSE NAME: MECHANICS

CO1: Determine the linear and angular momentum of particle.
CO2: Find the moment of inertia of bar, disc and sphere.
CO3: Understand the concept of simple and compound pendulum.
CO4: Explain the Phase space relation of microscopic and macroscopic systems.
CO5: Calculate the center of pressure of the surface of liquid.

COURSE CODE: 18PH103 COURSE NAME: MATHEMATICS I

CO1: Solve the problems in matrix algebra.
CO2: Evaluate the differential calculus problems.
CO3: Evaluate the integral calculus problems.
CO4: Solve ODE problems using Laplace transform.
CO5: Explain the Fourier series and its applications.

COURSE CODE: 18PH104 COURSE NAME: PRACTICAL I - GENERAL EXPERIMENTS 1

CO1: Recognize the physical properties of matter by interpreting the results of experiment.
CO2: Determine the gravitational force and radius of gyration using compound pendulum.
CO3: Demonstrate team work skills to collaborate by working in groups on a laboratory experiment.

SEMESTER II

COURSE CODE: 18PH201 COURSE NAME: HEAT AND THERMODYNAMICS

CO1: Calculate the different velocity of the gases.
CO2: Compare the types of thermometers.
CO3: Understand the fundamental laws of radiation.
CO4: Differentiate thermal conductivity measurement methods.
CO5: Understand the concept of law of thermodynamics and carnot's theorem.

COURSE CODE: 18PH202 COURSE NAME: BASIC ELECTRONICS & SEMI CONDUCTOR DEVICES

CO1: Classify electrical circuits.
CO2: Understand the concept of Network theorems.
CO3: Analyze the AC circuits with passive components.
CO4: Differentiate the characteristics of semiconductor devices.
CO5: Explain the application of semiconductor devices.

COURSE CODE: 18PH203 COURSE NAME: MATHEMATICS II

CO1: Derive the differential equations.
CO2: Solve the types of differential equations.
CO3: Solve the problems in vector analysis.
CO4: Derive the problems on theory of equations.
CO5: Gain knowledge about complex numbers.

COURSE CODE: 18PH204 COURSE NAME: PRACTICAL II - GENERAL EXPERIMENTS II

CO1: Understand the thermal properties of materials practically.
CO2: Design a circuit to verify theorems and analyze the circuits by knowing the characteristics of electronic components.
CO3: Use the semiconductor devices in simple electronics projects.
CO4: Develop team work skills through group wise experimentation.

SEMESTER III

COURSE CODE: 17PH301 COURSE NAME: OPTICS

CO1: Know the principles, properties and errors present in the lenses.
CO2: Understand the theory of interference and calculate the wavelength of the visible spectra by various Methods.
CO3: Differentiate the fresnal & fraunhoffer diffraction methods.
CO4: Explain about the working principles of polarization.
CO5: Discuss the types of laser and analyze the theory of holography and working principles of optical fibre.

COURSE CODE: 17PH302 COURSE NAME: ENERGY PHYSICS

CO1: Get knowledge about Energy sources.
CO2: Explain the measurement technique of solar energy.
CO3: Understand the concept of wind and bio energy.
CO4: Discuss the application of geo thermal energy.

COURSE CODE: 17PH303 COURSE NAME: GENERAL EXPERIMENTS III

CO1: Calculate the refractive index of liquids and solids.
CO2: Calibrate the volt meter and calculate the wave length of spectrum.
CO3: Calculate the gravitational constant using various methods.

COURSE CODE: 17PH304 COURSE NAME: ALLIED CHEMISTRY FOR PHYSICS

CO1: Understand the fundamental concept of chemical bonding and hybridization.
CO2: Know the basic concepts in nuclear chemistry.
CO3: Understand the concept of thermodynamics and electrochemistry.
CO4: Understand the types of fuel gases and batteries.

COURSE CODE: 17PH305 COURSE NAME: ALLIED CHEMISTRY LAB FOR PHYSICS

CO1: Perform experiments, analyze data, interpret results and observe in scientific aspects.
CO2: Identify the presence or absence of special elements or halogens, aliphatic or aromatic and functional group present using tests based on solubility.
CO3: Work effectively in diverse teams in laboratory.

COURSE CODE: 17PH306 **COURSE NAME: SKILL BASED I - DIGITAL ELECTRONICS AND APPLICATIONS**

CO1: Realize different logic gates and analyzing the outputs.
CO2: Demonstrate the knowledge of Boolean algebra including algebraic manipulation/simplification, and application of Demorgan's theorems and Karnaugh map reduction method.
CO3: Analyze and design the combinational and sequential logic circuits.

SEMESTER IV

COURSE CODE: 17PH401 **COURSE NAME: ELECTRICITY & MAGNETISM**

CO1: Know the energy storage in the capacitor.
CO2: Understand the concept of electricity.
CO3: Apply the concept of AC circuits.
CO4: Find the intensity of potential in the magnet.
CO5: Compare the properties and losses of magnetic material.

COURSE CODE: 17PHE01 **COURSE NAME: SOLID STATE PHYSICS**

CO1: Identify the types of crystal structure and their properties.
CO2: Understand the characteristics of Bonding.
CO3: Discuss the classical free electron theory of metals.
CO4: Differentiate the types of semiconductor materials and their applications.
CO5: Explain the concepts and effects of dielectric and superconducting materials.

COURSE CODE: 17CSC08 **COURSE NAME: COMPUTER PROGRAMMING IN C**

CO1: Implement programs using control structures for solving a given problem.
CO2: Demonstrate arrays, strings and usage of string operations.
CO3: Analyze various pointer concepts and dynamic memory allocation.
CO4: Interpret file operations.

COURSE CODE: 17PHE02 **COURSE NAME: MATERIAL SCIENCE**

CO1: Know the properties and application of conductor materials.
CO2: Explain carrier concentration of semiconductor materials.
CO3: Understand the concept of magnetic storage device.
CO4: Compare the optical properties of conducting and non conducting materials.

COURSE CODE: 17PHE03 **COURSE NAME: THERMAL PHYSICS**

CO1: Know the basic principle of thermometry.
CO2: Determine the thermal conductivity.
CO3: Explain the concept of heat engine.

COURSE CODE: 17PH402 **COURSE NAME: PRACTICAL IV - GENERAL EXPERIMENTS IV**

CO1: Calibrate the ammeter.
CO2: Find refractive index of light.
CO3: Develop team work skills through group wise experimentation.

COURSE CODE: 17PH403 **COURSE NAME: PRACTICAL V- GENERAL ELECTRONICS LAB**

CO1: Apply the knowledge of basic gates and operational amplifier for the design of different applications.

CO2: Design regulated power supply for the given voltage.
CO3: Demonstrate a square wave generator circuit for the given frequency.

COURSE CODE: 17PH404 COURSE NAME: C PROGRAMMING LAB

CO1: Implement basic mathematical operations.
CO2: Implement concept in Physics.
CO3: Compare various ranges in different laws of physics.
CO4: Analyze the incident of angles.

COURSE CODE: 17PH405 COURSE NAME: SKILL BASED II - LINEAR INTEGRATED CIRCUITS

CO1: Know the fabrication process of IC.
CO2: Differentiate the types of operational amplifier.
CO3: Apply the concept of operational amplifier.
CO4: Generate sine wave and square wave.
CO5: Demonstrate voltage regulator circuit.

SEMESTER V

COURSE CODE: 16PH501 COURSE NAME: CLASSICAL MECHANICS AND RELATIVITY

CO1: Get the knowledge of system of particle.
CO2: Analyze the basic principles of Lagrangian Formulations.
CO3: Discuss the principle of Hamiltonian function.
CO4: Explain the concept of Relativity principles.
CO5: Understand the applications of General Relativity.

COURSE CODE: 16PH502 COURSE NAME: ATOMIC PHYSICS AND SPECTROSCOPY

CO1: Understand the concept of Atomic structure and vector atomic model.
CO2: Compare the properties of waves and rays.
CO3: Understand the Electromagnetic spectrum.
CO4: Explain the basic principles of rotational and vibrational spectrum

COURSE CODE: 16PH503 COURSE NAME: MATHEMATICAL PHYSICS

CO1: Differentiate the basic mathematical functions.
CO2: Explain different special functions.
CO3: Know the elementary ideas of Differentiation and Integration.
CO4: Understand the nature of the Fourier series.
CO5: Apply the matrices technique for problem solving.

COURSE CODE: 16PH504 COURSE NAME: SKILL BASED III - BIO MEDICAL INSTRUMENTATION

CO1: Get the knowledge of man, machine and instrument.
CO2: Analyze the sources of bio electric potential.
CO3: Understand the concept of electrode theory and differentiate electrodes.
CO4: Discuss various medical recording instruments.
CO5: Explain the working of monitoring devices in medical field.

COURSE CODE: 16PH505 COURSE NAME: PRACTICAL VII - ADVANCE EXPERIMENTS I

CO1: Recognize the physical properties of matter by interpreting the results of experiment.
CO2: Determine the wavelength of the given laser source using grating.

CO3: Demonstrate team work skills/able to collaborate by working in groups on a laboratory experiment.

SEMESTER VI

COURSE CODE: 16PH601 COURSE NAME: NUCLEAR & PARTICLE PHYSICS

CO1: Understand the properties and structure of Nucleus.
CO2: Compare the radioactive element.
CO3: Explain the working of a nuclear reactor.
CO4: Differentiate the types of Accelerators.
CO5: Understand the role of elementary particle responsible for fundamental interaction.

COURSE CODE: 16PH602 COURSE NAME: QUANTUM MECHANICS

CO1: Explain the origin of quantum mechanics.
CO2: Understand the concept of dual nature of matter and uncertainty principle.
CO3: Explain the postulates of quantum mechanics.
CO4: Discuss the applications of Schrodinger's wave equation.
CO5: Apply the concept of operator in angular momentum.

COURSE CODE: 16PHE04 COURSE NAME: ASTRO PHYSICS

CO1: Know about the astronomical measurement instruments and their physical concepts.
CO2: Understand the spectral classifications of the celestial objects.
CO3: Explain Milky Way and galaxies.
CO4: Compare external galaxies.
CO5: Get the knowledge about Principles and concept of cosmology.

COURSE CODE: 16PHE05 COURSE NAME: LASER PHYSICS

CO1: Get Knowledge of laser fundamentals.
CO2: Compare the properties of types of laser.
CO3: Explain laser industrial application.
CO4: Discuss application of laser in medical field and communication field.

COURSE CODE: 16PHE06 COURSE NAME: PRINCIPLES OF COMMUNICATION SYSTEM

CO1: Understand the basic principles of communication system
CO2: Differentiate the various types of modulation systems
CO3: Know about the different pulse modulation communication system
CO4: Get the knowledge about the data involving in the communication
CO5: Analyze the fibre optics communication.

COURSE CODE: 16PH604 COURSE NAME: ADVANCED EXPERIMENTS II

CO1: Recognize the physical properties of matter by interpreting the results of experiment.
CO2: Demonstrate LCR Bridge.
CO3: Develop team work skills through group wise experimentation.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D22

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc - Chemistry**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Nurture the needs of industries and laboratories related to chemistry by adopting standard operating procedures, safe handling of chemicals and interpretation of research problems.
PEO2	Have strong competence in the field of chemistry to pursue research and innovation and/ or become an entrepreneur.
PEO3	Be experts in the interdisciplinary nature of chemistry and effectively communicate in written and oral forms.
PEO4	Strive for continuous self-development and lifelong learning and engage in their daily work with environmental awareness and social values.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply the knowledge of Science, Mathematical and Technological principles to practical situations in their respective professional careers.
PO2	Design and conduct experiments, interpret and analyze the data obtained through scientific reasoning and solve analytical problems from a molecular perspective.
PO3	Identify, formulate and solve the technological problems in the industry and understand professional and ethical responsibilities.
PO4	Acquire broad education in Chemical Sciences necessary to understand the impact of experimental solutions for global, economic and social environment.
PO5	Function with people from different disciplines and communicate effectively in multicultural environment and work with professionalism.
PO6	Use the techniques, skills and modern technological tools necessary to succeed in the graduate competitive examinations and pursue higher education in Chemical Technology.
PO7	Engage in life-long learning and continuous updation in technical knowledge through self-learning.

PROGRAMME NAME - BSc – CHEMISTRY

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CH101 COURSE NAME: CORE I - GENERAL CHEMISTRY I

CO1: Understand the fundamental nomenclature of organic compounds.
CO2: Understand the fundamental properties of atoms and electrons and various states of matter.
CO3: Write electronic configurations, orbital diagrams, nomenclature of compounds and quantum number for electrons.
CO4: Understand the proper laboratory safety techniques, the scientific method of collecting and analyzing information.

COURSE CODE: 18CH102 COURSE NAME: CORE II - PRACTICAL I - VOLUMETRIC ANALYSIS

CO1: Perform simple calculations involving percentage concentrations and calculate the effect of dilution on concentrations.
CO2: Solve volumetric problems using titration & calculate relative molecular mass of a compound.
CO3: Carry out titrimetric procedures using standard solutions.
CO4: Apply knowledge about concentrations of solutions and express in estimation procedures.

COURSE CODE: 18CH103 COURSE NAME: ALLIED I - BIOCHEMISTRY

CO1: Understand the basic structures and functions of cells in the human body, applying biomedical concepts and terminology.
CO2: Understand the principles that determine the three-dimensional structure of biological macro-molecules and be able to explain detailed examples of how structure enables function.
CO3: Classify the criteria and nomenclature of the different types of simple and complex biomolecules, according to their structural characteristics.
CO4: Impart and understand how to apply fundamental chemical principles to the study of biological systems.
CO5: Schematize the molecular structure of the different types of complex biomolecules.

COURSE CODE: 18CH104 COURSE NAME: ALLIED PRACTICAL I - BIOCHEMISTRY

CO1: Understand the principles behind the qualitative and quantitative estimation of biomolecules (proteins, carbohydrates, lipids and enzymes) and laboratory analysis of the same in the body fluids.
CO2: Devise and evaluate suitable experimental methods for the investigation of relevant areas of clinical and molecular biology.
CO3: Demonstrate safe laboratory skills (including proper handling of materials and chemical waste) for particular laboratory experiments.
CO4: Acquire skills for laboratory procedures and techniques that will enable them to go for more specialists training later in their career.

SEMESTER II

COURSE CODE: 18CH201 COURSE NAME: CORE III - GENERAL CHEMISTRY II

CO1: Understand the fundamental nomenclature and functions of organic and compounds.

CO2: Understand the concepts in thermodynamics, different thermodynamic quantities such as heat and how they are measured, related or transformed from one to other.
CO3: Understand the types of heats of reaction.

COURSE CODE: 18CH202 COURSE NAME: CORE IV- POLYMER CHEMISTRY

CO1: Understand the importance of industrial polymers and their classification.
CO2: Understand the various mechanisms and techniques of polymerization.
CO3: Understand Polymer chemistry and its usage in fields that develop products typically such as plastics, synthetic fibers; agricultural chemicals, paints adhesives and biomedical appliances.

COURSE CODE: 18CH203 COURSE NAME: CORE PRACTICAL – II - INORGANIC QUALITATIVE ANALYSIS

CO1: Use instruments for chemical analysis and separation.
CO2: Perform experiments, analyze data and interpret results and observe scientific conduct.
CO3: Identify presence or absence of number of cat-ions or anions in solution, using tests based on acid – base and solubility.
CO4: Work effectively in diverse teams in laboratory.

COURSE CODE: 18CH204 COURSE NAME: ALLIED II - MATHEMATICS

CO1: Understand the importance and applications of mathematics.
CO2: Gain knowledge about the concepts and applications and solve problems in matrices algebra.
CO3: Gain knowledge about solving simple differential calculus problems.
CO4: Solve simple integral calculus problems.
CO5: Solve the type's differential equations and acquire knowledge about theory of equations.

SEMESTER III

COURSE CODE: 17CH301 COURSE NAME: CORE IV - GENERAL CHEMISTRY III

CO1: Elucidate the concepts in organic reaction mechanisms.
CO2: Analyze ideas of nuclear chemistry, nuclear energy and solar energy, surface chemistry and adsorption.
CO3**:** Distinguish the concepts in acids, bases, non-aqueous solvents and thermodynamics.

COURSE CODE: 17CH302 COURSE NAME: CORE V - INORGANIC CHEMISTRY I

CO1: Examine the concepts of chemical bonding and representative elements.
CO2: Analyze the concepts in metallurgy, transition and inner transition elements.
CO3: Differentiate the properties of noble gases.

COURSE CODE: 17CH303 COURSE NAME: CORE PRACTICAL III - ORGANIC QUALITATIVE ANALYSIS

CO1: Identify the components present in organic compound.
CO2: Prove the component in organic compounds and observe in scientific aspects.
CO3: Work effectively in diverse teams in laboratory.

COURSE CODE: 17CH304 COURSE NAME: ALLIED PHYSICS FOR CHEMISTRY

CO1: Determine the Young's modulus.
CO2: Understand the properties of light.
CO3: Explain the logic gates.
CO4: Differentiate crystal structure.
CO5**:** Know about the stars and black holes.

COURSE CODE: 17CH305 COURSE NAME: ALLIED PHYSICS PRACTICAL FOR CHEMISTRY

CO1: Recognize physical properties of matter by interpreting the results of experiments.
CO2: Determine the gravitational force and radius of gyration using Compound pendulum.
CO3: Differentiate logic gates.
CO4**:** Demonstrate team work skills/ ability to collaborate by working in groups on a laboratory experiments.

COURSE CODE: 17CHI01 COURSE NAME: OE I - CHEMISTRY IN CHANGING LIFE STYLE

CO1: Enumerate wide application of chemistry.
CO2: Develop awareness about simple applications of chemistry in daily life.
CO3: Analyse different components present in consumer products in daily life.

COURSE CODE: 17CH306 COURSE NAME: SKILL BASED COURSE I - POLYMER CHEMISTRY

CO1: Categorize the importance of industrial polymers and their classification.
CO2: Evaluate the various mechanisms and techniques of polymerization.
CO3: Develop suitable synthetic route for polymer based products and synthetic fibers.

SEMESTER IV

COURSE CODE: 17CH401 COURSE NAME: CORE VI - INORGANIC CHEMISTRY II

CO1: Differentiate between the concepts of coordination compounds and organometallic compounds.
CO2: Analyze the basic concepts in industrially important inorganic materials.
CO3: Develop an idea about bioinorganic chemistry.

COURSE CODE: 17CH402 COURSE NAME: CORE VII - ANALYTICAL CHEMISTRY

CO1: Develop the habit of handling analytical data.
CO2: Differentiate basic analytical methods and their applications.
CO3: Analyze the basic concepts in different spectroscopic methods.
CO4: Get domain knowledge in electro gravimetric analysis and polarimetry.

COURSE CODE: 17CH403 COURSE NAME: CORE PRACTICAL IV - APPLIED CHEMISTRY PRACTICAL I

CO1: Execute industrially important applications in chemistry.
CO2: Perform experiments, analyze data, interpret results and observe in scientific aspects.
CO3: Work effectively in diverse teams in laboratory.

COURSE CODE: 17CHE01 **COURSE NAME: ELECTIVE I - TECHNOLOGY OF DYEING OF NATURAL FIBRES**

CO1: Differentiate the terms used in dye chemistry.
CO2: Apply the application and mechanism of dying process.
CO3: Enhance awareness in future trends in textile finishing.

COURSE CODE: 17CHE02 **COURSE NAME: ELECTIVE I - APPLIED CHEMISTRY**

CO1: Differentiate the characteristic properties of water and water treatment methods.
CO2: Analyze various petroleum processing techniques.
CO3: Apply the mechanism and properties of lubricants.
CO4: Distinguish between refractories and abrasives.
CO5: Create the awareness about corrosion and its prevention methods.

COURSE CODE: 17CHE03 **COURSE NAME: ELECTIVE I - AGRICULTURAL CHEMISTRY**

CO1: Enumerate how to overcome the deficiency of soil by application of fertilizers and manures.
CO2: Develop an idea about the purification of water.
CO3: Analyze the classification and applications of pesticides, insecticides, fungicides and herbicides.

COURSE CODE:17CH404 **COURSE NAME: SKILL BASED SUBJECT II: TEXTILE CHEMISTRY**

CO1: Examine about the fabrics which we use daily.
CO2: Identify the different types of yarn available and their uses in various fields.

SEMESTER V

COURSE CODE: 16CH501 **COURSE NAME: CORE VIII - ORGANIC CHEMISTRY I**

CO1: Elucidate the structure of some simple compounds.
CO2: Establish the stereochemistry of organic compounds.
CO3: Synthesize the organic compounds like amines and phenols.
CO4: Identify the suitable reagents and derive the mechanisms of some important organic reactions.

COURSE CODE: 16CH502 **COURSE NAME: CORE IX - PHYSICAL CHEMISTRY I**

CO1: Apply the phase rule concept in industries.
CO2: Identify the materials used in different light emitting devices.
CO3: Derive the expression of rate equation.
CO4: Apply the suitable catalyst in different industries.

COURSE CODE: 16CH503 **COURSE NAME: CORE PRACTICAL V - PHYSICAL CHEMISTRY**

CO1: Calculate the rate constants of various types of chemical reactions.
CO2: Conduct experiments, analyze data and interpret results in kinetic study.
CO3: Work effectively in the field of chemical industry.
CO4: Use electrochemical instruments in various industries.

COURSE CODE: 16CH504 COURSE NAME: CORE PRACTICAL VI - GRAVIMETRIC ANALYSIS

CO1: Acquire the quantitative skills in gravimetric analysis and in organic preparations.
CO2: Plan experimental projects and execute them.

COURSE CODE: 16CHI02 COURSE NAME: OE II - FOOD AND WATER CHEMISTRY

CO1: Analyze the characteristics properties of water and water treatment methods.
CO2: Identify the biologically important constituents of food and vitamins in our daily life.
CO3: Have clear idea about food poisoning and food adulteration.

COURSE CODE: 16CH505 COURSE NAME: SKILL BASED SUBJECT III - PHARMACEUTICAL CHEMISTRY

CO1: Differentiate terminology used in pharmaceutical industries.
CO2: Gain Knowledge about the mechanism of drugs.
CO3: Identify medical plants and apply it in practical life.

SEMESTER VI

COURSE CODE: 16CH601 COURSE NAME: CORE X – ORGANIC CHEMISTRY II

CO1: Explore the reactivity of carbonyl compounds.
CO2: Identify the reducing agent used in various chemical industries.
CO3: Elucidate and isolate the natural product used in Pharma industries.

COURSE CODE: 16CH602 COURSE NAME: CORE XI – PHYSICAL CHEMISTRY II

CO1: Apply the concepts of various factors influencing chemical equilibrium and electrolytic conductance.
CO2: Analyze working principle and manufacturing process of engine used in various industries.
CO3: Differentiate types of solutions and its colligative properties.
CO4: Elucidate the structure of crystals using laws of crystallography.

COURSE CODE: 16CH603 COURSE NAME: CORE XII – SPECTROSCOPY

CO1: Predict the structure of compounds using UV and IR spectra.
CO2: Interpret and analyze data of chemical compounds used in industrial field.
CO3: Develop domain knowledge of on fundamental concepts in spectroscopy.

COURSE CODE: 16CHE04 COURSE NAME: ELECTIVE II - CHEMISTRY FOR EVERYDAY LIFE

CO1: Create awareness about applications of chemistry in daily life.
CO2: Identify the medical plants and apply it practical life
CO3: Suggest suitable diet plant for various life style diseases.

COURSE CODE: 16CHE05 COURSE NAME: ELECTIVE II - INDUSTRIAL CHEMISTRY

CO1: Suggest suitable fertilizers used in agro industry.
CO2: Create awareness about chemicals used in explosives and processing techniques in leather industry.
CO3: Analyze different types of industrial materials and their applications.

COURSE CODE: 16CHE06 COURSE NAME: ELECTIVE II - MEDICAL CHEMISTRY

CO1: Enumerate an introduction to chemistry of drugs and some common diseases.
CO2: Elucidate of the mode of action in drugs and basic ideas about chemotherapy.
CO3: Synthesis the important health promoting drugs.

COURSE CODE: 16CH605 COURSE NAME: SKILL BASED COURSE IV - DYE CHEMISTRY

CO1: Differentiate the terms and definitions in dye chemistry and use of popularly used dye chemicals.
CO2: Identify various synthetically important reactions with a view to appreciate their scope, limitations and potential use in synthetic sequences.
CO3: Enumerate suitable reaction sequences to achieve the synthesis of target molecules.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D23

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc - Electronics and Communication System**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Pursue a successful professional career in the ever growing electronic industries and the related fields by applying technical knowledge.
PEO2	Possess technical competence and the ability to design, develop, optimize and implement electronic systems.
PEO3	Be successful entrepreneurs who could analyze and develop products to offer solutions for contemporary issues in the society.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply technical skills in solving complex problems.
PO2	Visualize and perform multidisciplinary tasks.
PO3	Troubleshoot and maintain standard in electronic circuits and systems.
PO4	Take professional decisions based on the impact of social and technical issues.
PO5	Communicate effectively as an individual or a leader to manage multidisciplinary/ multi-cultural teams.
PO6	Update their knowledge continuously through lifelong learning that contributes to individual and organizational growth.
PO7	Solve social, ethical and legal issues of electronics and its related fields.
PO8	Design a system by selecting appropriate techniques/methodologies, resources and simulation tools to provide better living environment for the society.

PROGRAMME NAME - BSc – ECS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18EC101 COURSE NAME: BASIC ELECTRONICS

CO1: Identify electronic components.
CO2: Differentiate and demonstrate the voltage and current source.
CO3: Put into practice and use the electronic components.

COURSE CODE: 18EC102 COURSE NAME: ELECTRIC CIRCUITS AND NETWORK ANALYSIS

CO1: Design simple electric circuits and to analyze the network theorems.
CO2: Analyze various electric networks by using theorems.
CO3: Develop the electric circuits applications by using the principles.

COURSE CODE: 18EC103 COURSE NAME: COMPONENTS AND NETWORK ANALYSIS

CO1: Apply the concept of basic circuit and theorems.
CO2: Simplify the circuits using series and parallel equivalents and using Thevenin's and Norton's equivalent circuits.
CO3: Design resonance circuits.
CO4: Use the oscilloscope for the display and measurements of signals.

COURSE CODE: 18EC104 COURSE NAME: MATHEMATICS I

CO1: Formulate problems on Matrices.
CO2: Evaluate the problems on Differential Calculus.
CO3: Evaluate the problems on Integral Calculus.
CO4: Solve the ODE problems using Laplace transform.
CO4: Explain the Fourier series and its applications.

SEMESTER II

COURSE CODE: 18EC201 COURSE NAME: ELECTRONIC DEVICES

CO1: Explain the structure of the basic electronic devices.
CO2: Know the characteristics and operations of semiconductor devices.
CO3: Use the special diodes for various applications.

COURSE CODE: 18ECP01 COURSE NAME: DIGITAL ELECTRONICS AND LAB

CO1: Realize different logic gates and analyze the outputs.
CO2: Demonstrate the knowledge of Boolean algebra including algebraic manipulation/simplification, and Application of DeMorgan's theorems and Karnaugh map reduction method.
CO3: Analyze and design the combinational and sequential logic circuits.

COURSE CODE: 18EC202 COURSE NAME: PRACTICAL II - ELECTRONIC DEVICES

CO1: Experiment the fundamental operations of the main semiconductor electronic devices.
CO2: Design and construct electronic circuits using semiconductor devices.

COURSE CODE: 18EC203 COURSE NAME: MATHEMATICS II

CO1: Solve the Second Order linear differential equations.
CO2: Solve the problems using numerical methods.
CO3: Solve the problems on numerical differentiation and integration.
CO4: Gain knowledge about special functions.
CO5: Expand trigonometric functions.

SEMESTER III

COURSE CODE: 17EC301 COURSE NAME: ELECTRONIC PRINCIPLES AND CIRCUITS

CO1: Design Filter Circuits.
CO2: Classify the Amplifiers.
CO3: Design oscillator based on the applications.
CO4: Design and make use of multivibrator circuits.

COURSE CODE: 17EC302 COURSE NAME: PRACTICAL IV – ELECTRONIC PRINCIPLES AND CIRCUITS LAB

CO1**:** Design rectification and filter circuits.
CO2: Design Regulated power supply and amplifier circuits.
CO3: Construct all multivibrator circuits.
CO4: Apply the principle of oscillator in designing various oscillator circuits.

COURSE CODE: 17EC303 COURSE NAME: ALLIED III - COMPUTER PROGRAMMING I [C & C++PROGRAMMING]

CO1**:** Explain the basics of programs and programming.
CO2**:** Select appropriate data types and control structures for solving a given problem.
CO3**:** Illustrate the representation of arrays, strings and usage of string operations.
CO4**:** Knowledge of pointers and dynamic memory allocation.
CO5**:** Explain the basics of file handling mechanism.
CO6**:** Differentiate between structures oriented programming and object oriented programming.
CO7**:** Use of object oriented programming language like C++ and associated libraries to develop object oriented programs.
CO8**:** Understand and apply various object oriented features like inheritance, data abstraction.

COURSE CODE: 17EC304 COURSE NAME: ALLIED PRACTICAL I - COMPUTER LAB I – C & C ++ PROGRAMMING

CO1**:** Understand the basic programming concepts.
CO2**:** Write simple programs using control structures, arrays and functions
CO3: Implement simple programs using pointers and file concepts.

COURSE CODE: 17EC305 COURSE NAME: SKILL BASED I – ELECTRONIC COMMUNICATION

CO1**:** Explain the basic building blocks of communication systems.
CO2**:** Analyze the performance of amplitude modulation techniques.
CO3**:** Demonstrate Balance Modulator.
CO4**:** Compare ungrounded and grounded antennas.

COURSE CODE: 17ECC02 COURSE NAME: PRACTICAL III - DIGITAL ELECTRONICS

CO1: Verify the logic gates & Demorgan's theorem.
CO2: Convert the binary and gray code.
CO3: Design adder and Subtractor circuits.
CO4: Construct encoder and decoder circuit.

SEMESTER IV

COURSE CODE: 17EC401 COURSE NAME: INSTRUMENTS AND MEASUREMENTS

CO1: Differentiate various meters and transformers and put them into practice.
CO2: Measure frequency, amplitude, phase with Oscilloscope.
CO3: Balance the bridges to find unknown values & use AC and DC bridges for relevant parameter measurement.
CO4: Test the signal generation and analysis it.
CO5: Test and troubleshoot electronic circuits using various measuring instruments.

COURSE CODE: 17EC402 COURSE NAME: ICS AND THEIR APPLICATIONS

CO1: List out various planners process.
CO2: Describe the characteristics of Operational Amplifiers.
CO3: Develop various application using Operational Amplifier.
CO4: Design applications using timers.
CO5: Discuss the various applications of special purpose IC's.

COURSE CODE: 17EC403 COURSE NAME: PRACTICAL V - ELECTRONIC COMMUNICATION

CO1: Design Modulation and Detection circuits.
CO2: Demonstrate the working of TV.
CO3: Experiment the operations of audio systems.
CO4: Install LAN and Public addressing system.

COURSE CODE: 17EC404 COURSE NAME: PRACTICAL VI - INTEGRATED CIRCUITS

CO1: Design various circuits using Operational Amplifier.
CO2: Analyze the Op-Amp circuit and its parameter.
CO3: Develop Multivibrator circuits.
CO4: Design oscillator of desired frequency.
CO5: Design voltage regulator circuits.

COURSE CODE: 17EC405 COURSE NAME: ALLIED IV - COMPUTER PROGRAMMING II - VISUAL BASIC PROGRAMMING

CO1: Explore Visual Basic's Integrated Development Environment (IDE).
CO2: Implement syntax rules in Visual Basic programs.
CO3: Explain variables and data types used in program development.
CO4: Write and apply loop structures to perform repetitive tasks.
CO5: Write and apply procedures, sub-procedures, and functions to create manageable code.
CO6: Create one and two dimensional arrays for sorting, calculating, and displaying of data.
CO7: Write Windows applications using forms, controls, and events.

COURSE CODE: 17EC406 **COURSE NAME: ALLIED PRACTICAL II - COMPUTER LAB II - VISUAL BASIC PROGRAMMING**

CO1: Understand the FORM designing in visual basic.
CO2: Understand the various visual basic string operations.
CO3: Understand the various controls and its usages.
CO4: Understand the data base connectivity's.

COURSE CODE: 17EC407 **COURSE NAME: SKILL BASED II - BIO MEDICAL INSTRUMENTATION**

CO1: Classify the sensors and transducers.
CO2: Enumerate principle, operation and the background knowledge of biomedical instruments.
CO3: Analysis the different types of bio medical signals like EEG, ECG, and EMG etc.
CO4: Design a patient monitoring system.
CO5: Analyze the various biomedical recorders.

COURSE CODE: 17ECE01 **COURSE NAME: ELECTIVE I - ELECTRONIC DATA & AUDIO VIDEO COMMUNICATION**

CO1: Analyze the knowledge of the data communication and their types.
CO2: Design pulse modulation and the its various types.
CO3: Analyze the major components of LAN network the network security concept.
CO4: Analyze Performance of spread spectrum communication system.
CO5: Demonstrate the performance of various TV.

COURSE CODE: 17ECE02 **COURSE NAME: ELECTIVE I - MATERIAL SCIENCE**

CO1: Define the theorem and various properties of conducting materials.
CO2: Analyze semiconductor, magnetic and optical materials.
CO3: Describe the principles, bonding scheme and its general physical properties & applications.
CO4: Apply engineering principles of modern engineering materials.
CO5: Inspect the advanced materials and their applications, such as electronic materials, optical materials and magnetic materials.

COURSE CODE: 17ECE03 **COURSE NAME: ELECTIVE – I: MOBILE COMMUNICATION**

CO1: Describe the various generations of mobile communications.
CO2: Apply the concepts of cellular communication and wireless communication in mobile applications
CO3: Demonstrate the GSM mobile communication standard, its architecture, logical channels, advantages and limitations.
CO4: Create knowledge on communication protocols.
CO5: Compare the 3G mobile standards with 2G technology.

SEMESTER V

COURSE CODE: 16EC501 **COURSE NAME: MODERN COMMUNICATION SYSTEM**

CO1: Explain the Different types of Pulse communication systems.
CO2: Analyze the performance of Digital modulation techniques.
CO3: Derive the expression of Wave guide equation.
CO4: Demonstrate the Satellite communication system.
CO5: Classify the Optical sources and detectors and to discuss their principle.

COURSE CODE: 16EC502 **COURSE NAME: 8051 MICROCONTROLLER**

CO1: Gain Comprehensive knowledge about architecture and addressing modes of 8051.
CO2: Develop Assembly language program using instructions for applications.
CO3: Create I/O Interfacing techniques with 8051 Microcontroller.
CO4: Configure Peripherals and prioritize the interrupts.
CO5: Design and develop program for real time applications.

COURSE CODE: 16EC503 **COURSE NAME: PRACTICAL VII - INDUSTRIAL AND POWER ELECTRONICS**

CO1: Analyze the characteristics of SCR, firing circuits and commutation techniques.
CO2: Design and construct power electronic circuits.

COURSE CODE: 16EC504 **COURSE NAME: PRACTICAL VIII - 8051 MICROCONTROLLER**

CO1: Apply the fundamentals of assembly level programming of microcontroller.
CO2: Design and Develop program for real time interfaces.
CO3: Troubleshoot interactions between software and hardware.

COURSE CODE: 16EC505 **COURSE NAME: PRACTICAL IX - BIO MEDICAL INSTRUMENTATION**

CO1: Design the pacemaker and defibrillator circuits.
CO2: Design the temperature measurement circuit using thermistor.
CO3: Analyze the pressure measurement of human being.

COURSE CODE: 16EC506 **COURSE NAME: SKILL BASED COURSE III - INDUSTRIAL AND POWER ELECTRONICS**

CO1: Articulate the basics of power electronic devices.
CO2: Implement the commutation methods.
CO3: Design AC Voltage Controller, chopper and Inverter circuits.
CO4: Design of power electronic converters and timing circuits.

COURSE CODE: 16ECIO1 **COURSE NAME: OE I - MOBILE PHONE SERVICING**

CO1: Apply the important concept and principle of Mobile Cellular technology.
CO2: Identify the mobile phone hardware repair and the tools used to repair the problem.
CO3: Describe the Mobile Phone disassembly and assembly process.
CO4: Analyze the working of various Mobile phone systems.
CO5: Troubleshoot the Hardware and Software faults in the mobile phone.

SEMESTER VI

COURSE CODE: 16EC601 **COURSE NAME: VLSI SYSTEM DESIGN AND VHDL PROGRAMMING**

CO1: Differentiate various architecture modeling.
CO2: Design Digital circuits using Basic Identifier, Extended Identifier and Data objects.
CO3: List out various operators in modeling the design units.
CO4: Apply the concept of signal and variable assignment statement in programming various design units.
CO5: Design and develop various hardware models using the programming knowledge.

COURSE CODE: 16EC602 **COURSE NAME: PRACTICAL X - VHDL PROGRAMMING**

CO1: Apply the programming knowledge in designing various digital systems.
CO2: Design and develop various sequential digital circuits.
CO3: Troubleshoot and rectify the errors in the design.
CO4: Write test codes and check the output of the design for the accuracy.

COURSE CODE: 16EC603 **COURSE NAME: PRACTICAL XI - MODERN COMMUNICATION**

CO1: Design the digital modulation and Detection circuits.
CO2: Demonstrate the various Shift keying Techniques.
CO3: Estimate the efficiency of Fiber optic system.

COURSE CODE: 16EC604 **COURSE NAME: SKILL BASED COURSE IV - WIRELESS AND NETWORK COMMUNICATION**

CO1: Compare various wireless communication systems.
CO2: Describe the concepts of cellular systems.
CO3: Analyze the switches used for the communication network.
CO4: Define and distinguish FDMA, CDMA and TDMA.
CO5: Differentiate 2G, 3G & 4G wireless networks.

COURSE CODE: 16EC605 **COURSE NAME: PROJECT AND VIVA VOCE**

CO1: Apply learned methodologies and techniques to solve the problems.
CO2: Design and develop hardware circuits.
CO3: Test and debug the developed project.

COURSE CODE: 16ECE04 **COURSE NAME: ELECTIVE II - ELECTRONIC DESIGN AND AUTOMATION**

CO1: Classify the boards and layers.
CO2: Design layout and make use of the Photo printing and etching techniques.
CO3: Draw schematic using ORCAD.
CO4: Design and simulate using P Spice.

COURSE CODE: 16ECE05 **COURSE NAME: ELECTIVE II - EMBEDDED SYSTEMS**

CO1: Describe the internal architecture of PIC16F877A and write programs in high level language.
CO2: Identify and understand the function of different peripherals of PIC microcontroller.
CO3: Interface LCD, Keyboard, ADC, DAC, Sensors, Relays, DC motor with PIC16 microcontroller.
CO4: Characterize real-time systems and describe their functions.
CO5: Analyze, design and implement a real-time system.

COURSE CODE: 16ECE06 **COURSE NAME: ELECTIVE II - TELECOMMUNICATION SWITCHING AND NETWORKS**

CO1: Define telecommunication standards.
CO2: Describe Electronic mailing concepts.
CO3: Analyze Switching and transmission network.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D24

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**MSc Electronics and Communication System**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Be able to pursue a successful professional career in electronic industries and the related fields by applying the gained knowledge.
PEO2	Become entrepreneurs by analysing and developing products to offer solutions for the real time problems in the field of electronics that are technically feasible, economically viable and socially relevant.
PEO3	Be able to maintain professional proficiency in the rapidly advancing, scientific and technical areas to transform the knowledge to the next generation.
PEO4	Become a leading researcher with innovative ideas to analyze, synthesize and interpret the data pertaining to meet contemporary issues for a sustainable development.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply hardware and software skills in solving complex problems.
PO2	Troubleshoot and maintain standard in electronic circuits and systems.
PO3	Visualize and work on multidisciplinary tasks.
PO4	Handle the modern hardware and software tools to develop a new system for the needs of electronic industries and customers.
PO5	Apply principles, methodologies and techniques to design, simulate, build and debug complex electronic circuits.
PO6	Take professional decisions based on the impact of social and technical issues.
PO7	Prepare and develop technical plans using Hardware Description Language in the field of VLSI.
PO8	Design and develop embedded products using advanced techniques.
PO9	Use Mathematical and Computational techniques to analyze and design various products in signal processing.
PO10	Communicate effectively and transfer knowledge by training the younger generations to excel in the field of Electronics.

PROGRAMME NAME - MSc – ECS

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MEC101 COURSE NAME: 8051 MICROCONTROLLER AND ITS APPLICATIONS

CO1: Describe architecture and operation of Microcontroller 8051.
CO2: Foster ability to understand the design concept of Microcontroller.
CO3: Design various applications using its peripherals.
CO4: Analyze the data transfer information through serial and parallel ports.
CO5: An in-depth knowledge of applying the concepts on real time applications

COURSE CODE: 18MEC102 COURSE NAME: VHDL PROGRAMMING

CO1: Describe the concept of MOS technology in VLSI chip fabrication.
CO2: Create hardware modeling and the design flow of syntax declaration.
CO3: Create knowledge for VHDL code using data types.
CO4: Model and synthesize solutions using the basic VHDL language elements, and VHDL.
CO5: Develop the concept of three style of modeling for Code creating.

COURSE CODE: 18MEC103 COURSE NAME: MICROWAVE AND RADAR NAVIGATION SYSTEM

CO1: Classify waveguides and its propagation.
CO2: Compare the performance of TWT and Klystron.
CO3: Differentiate the types of Microwave Antenna and Arrays.
CO4: Analyze the Performance of Radar and its types.
CO5: Compare the types of CW Radar and FM CW radar.

COURSE CODE: 18MEC104 COURSE NAME: DIGITAL COMMUNICATION AND NETWORK TECHNIQUES

CO1: Analyze the performance of a digital communication system in terms of various modulations.
CO2: List and describe the categories of Networks.
CO3: Differentiate the OSI layers and their function.
CO4: Identify the components of LAN implementation.
CO5: Identify the major issues and technologies in network security.

COURSE CODE: 18MEC105 COURSE NAME: PRACTICAL I - 8051 MICROCONTROLLER

CO1: Apply the fundamentals of assembly level programming of microcontroller.
CO2: Work with standard Microcontroller interfaces including serial ports, Digital-to-Analog converters and Analog-to-Digital converter.
CO3: Develop program for real time applications using Microcontroller.

COURSE CODE: 18MEC106 COURSE NAME: PRACTICAL II - VHDL PROGRAMMING

CO1: Code in VHDL for synthesis.
CO2: Decompose a digital system into a controller (FSM) and data path, and code accordingly.
CO3: Write VHDL test benches.
CO4: Synthesize a RTL code and implement digital systems on FPGAs.

SEMESTER II

COURSE CODE: 18MEC201 COURSE NAME: EMBEDDED SYSTEM DESIGN AND RTOS

CO1: Describe the internal architecture of PIC16F877A and write the programs in high level language.
CO2: Identify and understand the functions of different peripherals of PIC microcontroller.
CO3: Interface LCD, Keyboard, ADC, DAC, Sensors, Relays, DC motor with PIC16 microcontroller.
CO4: Characterize real-time systems and describe their functions.
CO5: Analyze, design and implement a real-time system.

COURSE CODE: 18MEC202 COURSE NAME: VERILOG PROGRAMMING

CO1: Create hardware modeling and the design flow.
CO2: Use Hardware description languages for Data flow and structural style of modeling.
CO3: Create the code in Verilog using behavioral style of modeling.
CO4: Model and synthesize solutions using the basic Verilog HDL language elements and programs.
CO5: Solve architectural synthesis problems, and apply Verilog HDL to combinational circuits and Synchronous circuits and verify the circuits using Verification Techniques.

COURSE CODE: 18MEC203 COURSE NAME: ANALYSIS AND PROCESSING OF SIGNALS

CO1: Compare various types of signals and systems.
CO2: Compute and interpret convolution and correlation systems for random process.
CO3: Use Fourier transform to analyze continuous time signals and systems.
CO4: Use discrete time Fourier transform to analyze discrete time signals and systems.
CO5: Structure for realization of IIR and FIR filters.
CO6: Demonstrate the production of speech, voice recognition and Image capturing.

COURSE CODE: 18MEC204 COURSE NAME: MOBILE COMMUNICATION SYSTEMS AND STANDARDS

CO1: Describe the various generations of mobile communications.
CO2: Apply the concept of cellular communication and wireless communication in mobile applications.
CO3: Demonstrate the GSM mobile communication standard, its architecture, logical channels and its advantages and limitations.
CO4: Create knowledge on communication protocols.
CO5: Compare the 3G mobile standards with 2G technology.

COURSE CODE: 18MECE01 COURSE NAME: SATELLITE COMMUNICATION

CO1: Foster to work using Instrument Landing System.
CO2: Acquire knowledge about Satellite Navigation System.
CO3: Characterize the GPS Signal generation.

COURSE CODE: 18MECE02 COURSE NAME: CRYPTOGRAPHY

CO1: Account for the cryptographic theories, principles and techniques that are used to establish security properties.
CO2: Analyze and use methods for cryptography.
CO3: Reflect about limits and applicability of methods for network security.
CO4: Acquire the concept cryptanalysis in wireless techniques.
CO5: Analyze the principle of Cipher technology in IP security.

COURSE CODE: 18MECE03 COURSE NAME: DIGITAL IMAGE PROCESSING

CO1: Demonstrate the fundamentals of digital image processing and image transforms.
CO2: Perform Gray level transformations for Image enhancement.
CO3: Apply histogram equalization for image enhancement.
CO4: Use and implement order-statistics image enhancement methods.

COURSE CODE: 18MEC205 COURSE NAME: PRACTICAL III - EMBEDDED SYSTEM DESIGN

CO1: Experiment the compiler in the embedded system design process.
CO2: Apply the practical knowledge in various testing techniques & Debug the embedded system.
CO3: Develop application skill on core domain

COURSE CODE: 18MEC206 COURSE NAME: PRACTICAL IV - VERILOG PROGRAMMING

CO1: Write Coding in Verilog for synthesis.
CO2: Decompose a digital system into a controller (FSM) and data path, and code accordingly.
CO3: Write Verilog test benches.
CO4: Synthesize RTL code and implement digital systems circuits also hardware components on FPGAs.

SEMESTER III

COURSE CODE: 17MEC301 COURSE NAME: DIGITIAL SIGNAL PROCESSOR

CO1: Describe DSP computational building blocks and knows how to achieve speed in DSP architecture/ Processor.
CO2: Classify the addressing modes of DSP TMS320C54XX and program DSP processor.
CO3: Design application using peripheral interfaces.
CO4: Implement the serial and parallel communication.
CO5: Prioritize and control the operation of External bus interface.

COURSE CODE: 17MEC302 COURSE NAME: ARDUINO PROGRAMMING

CO1: Describe the architecture of the AVR Microcontroller.
CO2: Develop program using Arduino IDE.
CO3: Configure Library and develop applications using Arduino.
CO4: Implement Arduino Communication Techniques in real world applications.
CO5: Interface various sensors and motors to control the movement of Robot.

COURSE CODE: 17MEC303 COURSE NAME: VIRTUAL INSTRUMENTATION

CO1: Create the knowledge on systems for virtual instruments and use for software programming.
CO2: Use software concept for virtual instruments and create blocks.
CO3: Recognize the components of Virtual instrumentations and use them for programming techniques.
CO4: Use LAB VIEW software for instrument control, measurement, data acquisition and data handling.
CO5: Create a test and instrumentation setup for any given application by DAQ systems.

COURSE CODE: 17MEC304 COURSE NAME: PRACTICAL V - VIRTUAL INSTRUMENTATION

CO1: Describe the basics and interfacing of VI.
CO2: Simulate basic electronics circuit.
CO3: Develop LAB VIEW skills to design basic computer-based instrumentation.
CO4: In-depth knowledge of providing virtual instruments on LAB VIEW Environment.
CO5: Design VI for Graphical User Interface.

COURSE CODE: 17MEC305 COURSE NAME: PRACTICAL VI - DIGITAL SIGNAL PROCESSOR

CO1: Write basic mathematical and electronic problems in MATLAB.
CO2: Articulate importance of Software's in research by simulation work.
CO3: Demonstrate the real time applications with DSP.
CO4: Carry out simulations of TMS320C54X DSP using Code composer studio.

COURSE CODE: 17MEC306 COURSE NAME: PRACTICAL VII - ARDUINO PROGRAMMING

CO1: Interface AVR Microcontrollers with sensors and communication devices.
CO2: Assemble and control the movement of Robot.
CO3: Interface various sensors with Arduino development kit.
CO4: Implement the concept in the real time applications.

COURSE CODE: 17MECE04 COURSE NAME: ASIC DESIGN

CO1: Describe the circuit design aspects at the next level transistor and block level abstractions of FPGA and ASIC design.
CO2: Identify the programmable ASIC logic cells and I/O Cells to carry out FPGA and ASIC designs.
CO3: Design a logic synthesis tool for mapping RTL onto a cell library in the ASIC designs.
CO4: Describe the back-end physical design flow, including floor planning, placement and routing.

COURSE CODE: 17MECE05 COURSE NAME: AUTOMOTIVE EMBEDDED SYSTEMS

CO1: Design and develop automotive embedded systems.
CO2: Analyze various embedded products used in automotive industry.
CO3: Evaluate the opportunities involving technology, a product or a service required for developing a startup idea used for automotive applications.
CO4: Interface devices and build a complete system.

COURSE CODE: 17MECE06 COURSE NAME: ROBOTICS AND AUTOMATION

CO1: Describe the Robot organization of remote manipulations.
CO2: Describe the kinematics motions of robot.
CO3: Classify the various types of sensors using robot hardware of their design concepts.
CO4: Illustrate the Programming methods & various languages of robots.
CO5: Design the various application of Robot control using voice and infrared.

COURSE CODE: 17MECI01 COURSE NAME: FUNDAMENTALS OF EMBEDDED SYSTEMS

CO1: Describe the difference between the general computing system and embedded system and also recognize the classification of embedded systems.
CO2: Describe the architecture of the Processor/ Controller.
CO3: Design real time embedded system using the concepts of RTOS.
CO4: Analyze various examples of embedded system.

SEMESTER IV

COURSE CODE: 17MEC401 COURSE NAME: PROJECT WORK AND VIVA VOCE

CO1: Improve self-learning capacity and accomplish responsibilities.
CO2: Identify and analyse the hardware troubleshooting.
CO3: Apply learned methodologies and techniques to solve the problems.
CO4: Design and develop hardware circuits.

CO5: Test and debug the developed project.
CO6: Prepare the project report in professional way.
CO7: Demonstrate the developed project and present the report.
CO8: To design a project in needed by present real-world problems.

COURSE CODE: 17MEC402 **COURSE NAME: MEMS and NEMS**

CO1: Differentiate the types of micro sensor and actuator.
CO2: Describe the properties of material used for micro system.
CO3: Design a component and select a fabrication process or sequence of processes suitable for Production of a MEMS device.
CO4: Identify, Formulate and solve problems relating to MEMS manufacturing.
CO5: Apply the properties of Nano Material in different applications.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D25

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc - Biotechnology**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Use their in-depth knowledge of the concepts of the structure, morphological feature analysis and physiological functions by applying fundamental technical knowledge and skills to find workable solutions for the technological challenges in core and allied areas of Biotechnology.
PEO2	Adopt innovative technology by continuously updating their knowledge for achieving personal and organizational growth.
PEO3	Perform their duties efficiently, effectively and ethically at individual level and also at group level in a multidisciplinary team, contributing to the welfare of the society.
PEO4	Have strong communication and interpersonal skills, broad knowledge, and clarity of the branches under the umbrella of Biotechnology.
PEO5	Engage in life-long learning, to remain valid as a professional and obtain additional qualifications to enhance their career in the upcoming biotechnology industries.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply knowledge of Applied Sciences and Research Fundamentals in the areas of Cell and Molecular Biology, Microbiology, Biochemistry, Bioinformatics and Bioprocess Technology
PO2	Impart knowledge of contemporary issues related to health, environment and industry.
PO3	Use the techniques, skills, and modern scientific tools necessary for laboratory practice with appropriate considerations for societal and environmental constraints.
PO4	Utilize core knowledge in a global, economic and environmental context for sustainable development.
PO5	Use various techniques / and its valuable products which will be of great use to the society, during crisis.
PO6	Demonstrate knowledge of recent trends in the field of Biotechnology with inculcated ethical values.
PO7	Communicate effectively in both verbal and written forms.

PROGRAMME NAME - BSc – BT

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18BT101 COURSE NAME: CELL BIOLOGY AND GENETICS

CO1: Explore the basic structure of all cellular organelles and its functions.
CO2: Impart knowledge about the concepts and chromosomal organizations and numerical alterations.
CO3: Apply the techniques, skills and modern scientific tools necessary for gene transfer mechanisms.

COURSE CODE: 18BT102 COURSE NAME: ALLIED 1 - CHEMISTRY I

CO1: Apprehend the bonding of orbitals.
CO2: Explain the concepts in Thermodynamic Electrochemistry.
CO3: Infer the role of fertilizers in plant growth.

COURSE CODE: 18BT103 COURSE NAME: LAB IN CELL BIOLOGY AND GENETICS

CO1: Apprehend the principles, handling and applications of instruments.
CO2: Explain the various cells and their functions.
CO3: Analyse the concepts of Mendelian and Molecular genetics.

COURSE CODE: 18BT104 COURSE NAME: ALLIED PRACTICAL I - LAB IN CHEMISTRY I

CO1: Create interest in application side of chemistry.
CO2: Perform experiments, analyzes data, interpret results and observe in scientific aspects.

SEMESTER II

COURSE CODE: 18BT201 COURSE NAME: BIOCHEMISTRY

CO1: Apply their knowledge of Biochemistry to correlate the structure and functional relationships of biomolecules in living organisms.
CO2: Explain the metabolic pathways from the perspective of biochemical reactions.
CO3: Explain the classification criteria and nomenclature of the different types of simple and complex biomolecules, according to their structural characteristics.

COURSE CODE: 18BT202 COURSE NAME: CHEMISTRY II

CO1: Apprehend the bonding of orbitals.
CO2: Explain the concepts in Thermodynamic Electrochemistry.
CO3: Infer the role of fertilizers in plant growth.

COURSE CODE: 18BT203 COURSE NAME: LAB IN BIOCHEMISTRY

CO1: Discuss the reagent preparation and standardization.
CO2: Recollect the principles behind the qualitative and quantitative estimation of biomolecules (Amino acid, Proteins and Carbohydrates)

CO3: Develop a broad and balanced foundation of Biochemical knowledge and practical skills relevant to Biochemistry or Biotechnology.
CO4: Evaluate suitable experimental methods for the investigation of relevant areas of Clinical and Molecular biology.

COURSE CODE: 18BT204 **COURSE NAME: LAB IN CHEMISTRY II**

CO1: Create interest in application side of Chemistry.
CO2: Perform experiments, analyzes data, interpret results and observe in scientific aspects.
CO3: Explain the work effectively in diverse teams in laboratory.

SEMESTER III

COURSE CODE: 17BT301 **COURSE NAME: BASICS OF IMMUNOLOGY**

CO1: Use the techniques, skills, and modern scientific tools necessary for laboratory practice in understanding the basic immunological principles involved in research and clinical studies.
CO2: Impart knowledge about the mechanisms and differences between primary and secondary responses and their relevance to immunizations.
CO3: Discuss the role of antigen presenting cells, lymphocytes, and phagocytic cells in immune responses.

COURSE CODE: 17BT302 **COURSE NAME: ALLIED III - OFFICE AUTOMATION**

CO1: Processing data in computer with different data types and Store them in Storage.
CO2: Selecting appropriate Programming language for the application.
CO3: Creating a Word Document for an official need.
CO4: Manipulating with rows and columns in a spreadsheet.
CO5: Create a database with MS Access and to manipulate with records.

COURSE CODE: 17BT303 **COURSE NAME: INDUSTRIAL BIOTECHNOLOGY**

CO1: Use the knowledge of science in the field of fermentation industry and its application of its derived products.
CO2: Impart knowledge in the discovery of new novel Antibiotics and its laboratory practices.
CO3: Adapt and use modern and innovative materials and practices of the recovery and purification of fermented products.

COURSE CODE: 17BT304 **COURSE NAME: LAB IN IMMUNOLOGY**

CO1: Demonstrate the basic knowledge of fundamental concepts in Immunology.
CO2: Apply the knowledge about different Immunological techniques for qualitative analysis.
CO3: Adopt the recent techniques and modern scientific tools necessary for Immunological laboratory practice.

COURSE CODE: 17BT305 **COURSE NAME: LAB IN OFFICE AUTOMATION**

CO1: Design a document for an official need with all features of MS Word.
CO2: Implement various calculations in MS Excel using Formula.
CO3: Design a Power Point Presentation with all features in MS Power Point.
CO4: Use all possible SQL commands to manipulate data in MS Access.

SEMESTER IV

COURSE CODE: 17BT401 COURSE NAME: RECOMBINANT DNA TECHNOLOGY

CO1: Discuss the basic knowledge of Science in DNA isolation and its purification process.
CO2: Impart knowledge of conducting experiments and research in gene cloning strategies.
CO3: Apply the various techniques and its valuable products by using Cloning vectors process.

COURSE CODE: 17BT402 COURSE NAME: BIOINFORMATICS AND BIOSTATISTICS

CO1: Discuss the basic knowledge of science in the field of Bioinformatics.
CO2: Apply and use modern and innovative software tools to analyze genome sequences.
CO3: Apply various techniques of statistical analysis for representation of data and its measures.

COURSE CODE: 17BT403 COURSE NAME: BIOINSTRUMENTATION

CO1: Apply the knowledge of science and its principles in the field of Bioinstrumentation.
CO2: Use various techniques / and its valuable products which will be of great use in the process of different types of Spectroscopy.
CO3: Analyse and interpret experiments, and apply experimental laboratory practices of instrumentation principles.

COURSE CODE: 17BT404 COURSE NAME: LAB IN RECOMBINANT DNA TECHNOLOGY

CO1: Perform techniques in recombinant DNA technology.
CO2: Apply of Genetic engineering techniques in basic and applied.
CO3: Proficiency in designing and conducting experiments involving genetic manipulation.

COURSE CODE: 17BT405 COURSE NAME: LAB IN BIOINFORMATICS

CO1: Retrieve and analyze data's from Bioinformatics search engine.
CO2: Apply and use modern and innovative software tools related to Bioinformatics analysis.
CO3: Apply basic knowledge of Bioinformatics tool for the purpose of Gene /protein analysis.

COURSE CODE: 17BTE01 COURSE NAME: GENETICS

CO1: Impart knowledge about the concepts and organization of genetic material and use the modern and innovative practices of research sites of genetic materials.
CO2: Use the knowledge of science and conduct various experiments of gene mapping for different organisms.
CO3: Apply the techniques, skills, and modern scientific tools necessary for gene transfer mechanisms.

COURSE CODE: 17BTE02 COURSE NAME: BIOPHYSICS

CO1: Explain the concepts of Physical Chemistry and map their application on a rapidly expanding interdisciplinary interface, combining biology, chemistry and physics.
CO2: Explain the need for rigorous mathematical treatment with the simplicity of presentation.

COURSE CODE: 17BTE03 COURSE NAME: GENOMICS

CO1: Overview of genome variation in population including technologies to detect the variation.

CO2: Explain the genome association study (GWAS) detect disease associated markers in multifactorial diseases.
CO3: Apply HTS technologies to explore changes in gene expression.

SEMESTER V

COURSE CODE: 16BT501 COURSE NAME: ENVIRONMENTAL BIOTECHNOLOGY

CO1: Explain the principles and concepts of Environmental pollution, Bioremediation and its applications.
CO2: Implement the knowledge on waste disposal, waste water treatment and waste management.
CO3: Analyse the various process involved in Bioremediation and apply the knowledge on Bio-pesticide formulation.

COURSE CODE: 16BT502 COURSE NAME: ENZYMOLOGY

CO1: Apply the knowledge of applied science and research fundamentals in the areas of Enzymology, Purification techniques of enzymes.
CO2: Impart knowledge about the importance of enzymes structures and its discovery.
CO3: Apply various techniques for enzymes of economic importance and in the industrial application.

COURSE CODE: 16BTI02 COURSE NAME: HERBAL TECHNOLOGY II

CO1: Apply science and research fundamentals in the areas of herbal drugs and the importance of WHO guidelines of medicinal plants.
CO2: Use various techniques / and its valuable products which will be of great use in the plant tissue cultures techniques and its application
CO3: Demonstrate knowledge of recent trends in the phytochemical standardization techniques.

COURSE CODE: 16BT503 COURSE NAME: LAB IN ENVIRONMENTAL BIOTECHNOLOGY

CO1: Identify and characterize the microbes in waste water.
CO2: Estimate the physical and chemical parameters of water.
CO3: Apply the concept of composting.

COURSE CODE: 16BT504 COURSE NAME: LAB IN INDUSTRIAL BIOTECHNOLOGY

CO1: Impart knowledge in the discovery of new noval Antibiotics and its laboratory practices.
CO2: Adapt and use modern and innovative materials and practices of the recovery and purification of fermented products.
CO3: Use various techniques / and its valuable products which will be of great use in the Lyophilization techniques.

SEMESTER VI

COURSE CODE: 16BT601 — **COURSE NAME: PLANT BIOTECHNOLOGY AND ANIMAL BIOTECHNOLOGY**

CO1: Analyse types and different techniques in tissue culture.
CO2: Apply the concept of various molecular techniques in plant and animal cell culture.
CO3: Describe the importance of gene transfer techniques and its preservation techniques.

COURSE CODE: 16BT602 — **COURSE NAME: GENOMICS AND PROTEOMICS**

CO1: Relate applied science and research fundamentals in the areas of recent advances in Genomics, Metabolomics and Proteomics.
CO2: Demonstrate the recent trends in the field of Human genome project, its mapping and sequencing.
CO3: Categorize the concept of Proteomics its applications and its sequencing.

COURSE CODE: 16BT603 — **COURSE NAME: LAB IN PLANT BIOTECHNOLOGY AND ANIMAL BIOTECHNOLOGY**

CO1: Outline and learn the basics of plant and animal tissue culture and requirements to setup the lab
CO2: Describe the types and different techniques in tissue culture.
CO3: Use the techniques, skills and laboratory practices in various animal tissue culture experiments and its processing.

COURSE CODE: 16BT604 — **COURSE NAME: LAB IN CLINICAL CHEMISTRY**

CO1: Impart knowledge about the concepts of Clinical Biotechnology and its disorders of different Metabolism.
CO2: Use the knowledge of modern methods for disease diagnostics using Molecular markers.
CO3: Apply the techniques, skills, and modern scientific tools necessary for Gene therapy.

COURSE CODE: 16BTE06 — **COURSE NAME: ELECTIVE II - BIOPHYSICS**

CO1: Examine the concepts of physical chemistry and map their application on a rapidly expanding interdisciplinary interface, combining Biology, Chemistry and Physics.
CO2: Explain the balance the need for rigorous mathematical treatment with the simplicity of presentation.
CO3: Analyse the concepts of thermodynamics and its laws of Biophysics.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D26

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**MSc - Biotechnology**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the Graduates will

PEO1	Use their in-depth knowledge of the concepts of the structure, morphological feature analysis and physiological functions, by applying fundamental technical knowledge and skills to find workable solutions to technological challenges and problems in core and allied areas of Biotechnology.
PEO2	Have a strong foundation in the core biotechnology concepts in order to evaluate real life problems and to propose biotechnological solutions with economic and social viability.
PEO3	Develop analytical skills on laboratory techniques so as to design, carry out and interpret scientific experiments.
PEO4	Sensitize environmental, industrial, health and bioethical issues, intellectual property rights and be open for life-long learning through biotechnological application oriented activities.
PEO5	Be receptive to new technologies and attain professional competence such as advanced degree, professional registration and publications.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply the knowledge of Science, Mathematics and Research fundamentals in the areas of Biotechnology, such as Plant and Animal Tissue Culture, Industrial Biotechnology, Genetic Engineering, Environmental Biotechnology and other related fields.
PO2	Identify and analyze the complex biotechnology oriented problems and provide appropriate solutions.
PO3	Apply the research based knowledge and methods to design new experiments, analyze, Interpret data and to arrive valid conclusions.
PO4	Create competency in industrial bioprocess techniques for the production of various primary and secondary metabolites.
PO5	Design a biobased system, component/process or protocol to solve the essential issues related to public health, environment, society and economy.
PO6	Obtain leadership skills for scientific innovation and work as entrepreneurs with strong communication skills and ethics.

PROGRAMME NAME - MSc – BT

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MBT101 COURSE NAME: CELL AND MOLECULAR GENETICS

CO1: Apprehend the cell signaling process, transportation across membrane, ion channel and receptor function.
CO2: Infer various macromolecules and their classes.
CO3: Demonstrate the mechanism of regulation of gene activities in Prokaryotes and Eukaryotes.

COURSE CODE: 18MBT102 COURSE NAME: BIOCHEMISTRY

CO1: Demonstrate the structure and functions of Biomolecules
CO2: Analyze fundamental chemical principles and reactions are utilized in Biochemical processes.
CO3: Develop the interrelationship of metabolic pathways in relation to overall physiological states.

COURSE CODE: 18MBT103 COURSE NAME: BIOINSTRUMENTATION AND RESEARCH METHODOLOGY

CO1: Describe the principle and application of instruments in Biotechnology
CO2: Design and perform good research activities
CO3: Analyze the statistical data of biological results

COURSE CODE: 18MBT104 COURSE NAME: MICROBIOLOGY

CO1: Apprehend the microbial physiology, taxonomy and culture methods.
CO2: Analyse the significant role of microbes in soil and their interactions.
CO3: Describe the microbes play a vital role in food and industrial production of products.
CO4: Explain the microbial diseases and epidemiological profiles of microorganism.

COURSE CODE: 18MBT105 COURSE NAME: PRACTICAL I - LAB IN MOLECULAR GENETICS AND MICROBIOLOGY

CO1: Apprehend the knowledge of cell and Molecular genetics.
CO2: Explain the techniques involved in culture isolation and methods.
CO3: Examine the identification and characterization of microorganisms.

COURSE CODE: 18MBT106 COURSE NAME: PRACTICAL II - LAB IN BIOCHEMISTRY AND BIOINSTRUMENTATION

CO1: Analyze the principles involved in quantifying Biomolecules.
CO2: Illustrate the enzyme kinetics.
CO3: Examine the principle and application of instruments used in analysis and characterization of Biomolecules.

SEMESTER II

COURSE CODE: 18MBT201 COURSE NAME: IMMUNOTECHNOLOGY

CO1: Acquire the knowledge about basics of immune system and its components and the mechanism of cell mediated immunity.
CO2: Illustrate the immune response related to microbial infection, allergy and hypersensitivity.
CO3: Discuss the organ transplantation and immunological anomalies related to autoimmune disorders.

COURSE CODE: 18MBT202 COURSE NAME: GENETIC ENGINEERING

CO1: Infer important enzymes and their roles in Genetic Engineering.
CO2: Construct various vectors used for gene cloning and expression.
CO3: Demonstrate various molecular techniques for Genetic Engineering.

COURSE CODE: 18MBT203 COURSE NAME: PLANT BIOTECHNOLOGY

CO1: Acquire the knowledge of plant cells and tissue culture techniques.
CO2: Describe the plant metabolites and its uses.
CO3: Examine the plant Genetic Engineering in the improvement of plants for human welfare.

COURSE CODE: 18MBT204 COURSE NAME: ANIMAL BIOTECHNOLGY

CO1: Demonstrate the animal cell culture techniques and its growth parameters.
CO2: Acquire the Knowledge of tissue engineering and vaccine production.
CO3: Discuss the transgenic animals and transplantation methodology.

COURSE CODE: 18MBT205 COURSE NAME: PRACTICAL III - LAB IN IMMUNO TECHNOLOGY AND GENETIC ENGINEERING

CO1: Apply these concepts and techniques in producing various industrially important microbial products.
CO2: Examine the immunological assays to analyse antibody- antigen interaction.

COURSE CODE: 18MBT206 COURSE NAME: PRACTICAL IV - LAB IN PLANT BIOTECHNOLOGY AND ANIMAL BIOTECHNOLOGY

CO1: Outline the basics of plant and tissue culture and requirements to setup the lab.
CO2: Illustrate the types and different techniques in tissue culture.

COURSE CODE: 18MBTE01 COURSE NAME: MEDICAL BIOTECHNOLOGY

CO1: Demonstrate the various metabolic immune disorders.
CO2: Demonstrate the various chromosomal abnormalities related to industrial toxicants.
CO3: Articulate various diagnostic tools and gene therapy techniques for improvise treatment strategy.

COURSE CODE: 18MBTE02 COURSE NAME: FOOD BIOTECHNOLOGY

CO1: Outline the processing and preservation techniques of diary and fermented products.
CO2: Emphasize the importance of food safety, food quality, food plant sanitation, food laws and regulations, food engineering and packaging in food industry.

COURSE CODE: 18MBTE03 COURSE NAME: PROTEOMICS AND GENOMICS

CO1: Outline the sequencing concepts, tools and various instrumentation for Genomics and Proteomics analysis
CO2: List out the various steps involved in Protein Engineering.
CO3: Acquire the knowledge of protein sequencing and synthesis of peptides
CO4: Illustrate the various tools used for the Genome and Proteome analysis, Protein purification and determination techniques, Sequencing of the Biomolecules.

SEMESTER III

COURSE CODE: 17MBT301 COURSE NAME: PLANT BIOTECHNOLOGY

CO1: Explain the basic concepts and state of the art techniques and methods underlying plant Biotechnology research including the genetic basis of several important plant properties and the molecular basis of plant breeding.
CO2: Analyse the problems related to plant production and protection through Biotechnological approaches.

COURSE CODE: 17MBT302 COURSE NAME: ANIMAL BIOTECHNOLOGY

CO1: Solve the societal problems via Biotechnological approaches.
CO2: Acquire the knowledge of animal conservation and breeding and techniques for animal diseases diagnosis.
CO3: Acquire the knowledge of transgenic animals and their applications in Biotechnology.

COURSE CODE: 17MBT303 COURSE NAME: BIOINSTRUMENTATION AND BIOSTATISTICS

CO1: Examine the instrumentation technique for analysis of specific property of a sample
CO2: Apply the basic concepts to design, conduct the experiments, analyse and interpret the data.
CO3: Use of various modern analytical equipment which would make them more knowledgeable about Good Laboratory Practices.

COURSE CODE: 17MBT304 COURSE NAME: BIOSAFETY, BIOETHICS AND IPR

CO1: Illustrate the different forms of Intellectual property.
CO2: Describe the types of patents and patenting system in India.
CO3: Analyse the different market approval procedures in India.

COURSE CODE: 17MBTE04 COURSE NAME: ELECTIVE II - PROTEOMICS AND GENOMICS

CO1: Outline the sequencing concepts, tools and various instrumentation for Genomics and Proteomics Analysis.
CO2: List out the various steps involved in Protein Engineering.
CO3: Acquire the knowledge of protein sequencing and synthesis of peptides.
CO4: Illustrate the various tools used for the Genome and Proteome analysis, Protein purification and determination techniques, Sequencing of the biomolecules.

COURSE CODE: 17MBTE05 COURSE NAME: ELECTIVE II - AGRO INDUSTRIAL BIOTECHNOLOGY

CO1: Produce hybrid plant using plant breeding methods.
CO2: Predict the concept of sustainable agriculture growth for the developing nation.
CO3: Employ the new methodology for the production of Livestock, management of waste in agro-industry.

COURSE CODE: 17MBTE06 COURSE NAME: ELECTIVE II - CLINICAL BIOTECHNOLOGY

CO1: Classify pathogenic microorganisms.
CO2: Characterize and analyse genetic disorders.
CO3: Examine the expression of Pharmaceutical products in plants and their formulations.

COURSE CODE: 17MBTI01 COURSE NAME: FIRST AID AND SAFETY

CO1: Design and implement a workplace for first-aid programs.
CO2: Formulate the strategy for safety measures.
CO3: Identify and assess the workplace risks that have potential to cause worker injury/ illness.

SEMESTER IV

COURSE CODE: 17MBT401 COURSE NAME: PROJECT WORK AND VIVA VOCE

CO1: Identify the issues addressed within framework of specific thesis.
CO2: Develop competence in research design, plan, create, analyse and critically evaluate different technical solutions.
CO3: Apply analytical techniques/experimental methods.
CO4: Develop the project management skills, report writing skills, problem solving skills and communication and interpersonal skills.

Prepared by (HoD)	Approved by (Dean)	
		Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D27

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BSc – Catering Science & Hotel Management**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the graduates will

PEO1	Flaunt high standards with regard to performance in academic and value based quality education in hotel management.
PEO2	Have acquired a holistic knowledge of catering and hospitality operating procedures and entrepreneurship initiatives.
PEO3	Have obtained good communication and inter-personal skills to deliver better performance on the job globally.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Perform effectively and efficiently to the standards expected globally in different sectors of hospitality industry.
PO2	Use appropriate tools and techniques necessary for practices in different operational areas of hotels, restaurants & other hospitality sectors.
PO3	Perform at the operational and supervisory levels proceeding to managerial level.
PO4	Function effectively as an individual and in a team to accomplish common objectives.
PO5	Communicate effectively within the organization and society at large, being able to comprehend and prepare effective reports and give and receive clear instructions.
PO6	Analyze situations, identify problems, formulate solutions for the problems and implement corrective measures and actions.
PO7	Undertake and organize catering related activities.
PO8	Understand health, legal, environmental and ethical issues and the responsibilities relevant to the hospitality professional practice.
PO9	Recognize the need for and develop the ability to engage in continuous learning in the context of change in hospitality sectors.

PROGRAMME NAME - BSc – CS & HM

Upon the successful completion of the course, the students will be able

SEMESTER I

COURSE CODE: 18HM101 — COURSE NAME: FOOD PRODUCTION I

CO1: To use ingredients appropriately in cooking.
CO2: To carry out pre-preparation of food and preparation of basic masalas & gravy.
CO3: To use appropriate fuel and cook food through various methods.
CO4: To handle kitchen equipment & perform duties in well planned kitchen layout.
CO5: To adopt hygienic practices and safety measures in the kitchen.

COURSE CODE: 18HM102 — COURSE NAME: FOOD AND BEVERAGE SERVICE I

CO1: To recognize various types of restaurant and their features.
CO2: To handle food service equipment professionally.
CO3: To work in various ancillary sections of food service areas.
CO4: To carry out various styles of service in a professional manner.
CO5: To identify & serve various non-alcoholic beverages.

COURSE CODE: 18HM103 — COURSE NAME: FRONT OFFICE OPERATIONS I

CO1: To identify types of hotels, rooms, room rates and guests.
CO2: To perform duties efficiently in coordination with other departments.
CO3: To handle reservations.
CO4: To check-in guests and handle overbooking.
CO5: To check-out guests and be updated in emerging trends.

SEMESTER II

COURSE CODE: 18HM201 — COURSE NAME: FOOD PRODUCTION II

CO1: To prepare basic stocks and sauces for continental dishes.
CO2: To identify various types of soup & pasta, prepare basic egg recipes.
CO3: To identify types, cuts and cooking methods of fish, poultry and game.
CO4: To recognize types, quality points, cuts and cooking methods of various meats.
CO5: To adopt food hygiene practices and follow HACCP principles and food safety regulations.

COURSE CODE: 18HM202 — COURSE NAME: FOOD AND BEVERAGE SERVICE II

CO1: To identify various courses in French classical menu.
CO2: To identify, plan & set cover for various types of menu.
CO3: To identify, plan & set cover for various types of breakfast.
CO4: To prepare the restaurant for service and handle different guests and situations.
CO5: To take food order and present the bill.

COURSE CODE: 18HM203 — COURSE NAME: PRACTICAL I - FOOD PRODUCTION I

CO1: To fulfill the pre-requisites for working in the kitchen.
CO2: To prepare and present 5 course Indian menus.
CO3: To prepare and present 5 course Continental menus.

COURSE CODE: 18HM204 COURSE NAME: PRACTICAL II - FOOD AND BEVERAGE SERVICE I

CO1: To handle cutlery, crockery and glassware,
CO2: To compile breakfast, luncheon and dinner menu,
CO3: To set the cover and carry out service procedure for food & beverages,
CO4: To prepare and present the bill,

COURSE CODE: 18HM205 COURSE NAME: HOUSEKEEPING OPERATIONS I

CO1: To perform duties effectively in housekeeping department.
CO2: To handle cleaning equipment and use cleaning agents.
CO3: To clean guest rooms as per procedure.
CO4: To clean public areas, carpets, furniture and floors.
CO5: To work in control desk & to do flower arrangement.

COURSE CODE: 18HM206 COURSE NAME: PRACTICAL III - HOUSEKEEPING OPERATIONS

CO1: To handle cleaning equipment, use cleaning agents and polishes.
CO2: To clean guest rooms & public areas.
CO3: To do bed making and flower arrangement.
CO4: To provide first aid and handle situations.

SEMESTER III

COURSE CODE: 17HM301 COURSE NAME: FOOD PRODUCTION III

CO1: To understand the history and techniques of Indian cooking.
CO2: To identify the characteristics of North Indian regional cuisine.
CO3: To identify the characteristics of South Indian regional cuisine.
CO4: To recognize various volume catering establishments.
CO5: To adopt F&B control measures in volume cooking.

COURSE CODE: 17HM302 COURSE NAME: FOOD & BEVERAGE SERVICE III

CO1: To identify alcoholic beverages & differentiate fermentation and distillation.
CO2: To recognize various types of wines and their production.
CO3: To recognize various types of sparkling, fortified and aromatized wines.
CO4: To identify wines of various countries.
CO5: To suggest and pair various types of wines with food.

COURSE CODE: 17HM303 COURSE NAME: BAKERY AND CONFECTIONERY I

CO1: To apply basic principles in baking process.
CO2: To use raw material appropriately in baking process.
CO3: To prepare basic yeast dough.
CO4: To prepare yeast products and desserts.
CO5: To prepare basic pastes and its products.

COURSE CODE: 17HM304 COURSE NAME: HOUSEKEEPING OPERATIONS II

CO1: To undertake tasks in linen/uniform room.
CO2: To undertake tasks in laundry.
CO3: To recognize principles of interior designing.
CO4: To adopt safety & security measures and to handle emergency situations.
CO5: To identify types of pest & understand emerging trends.

COURSE CODE: 17HM305 COURSE NAME: PRACTICAL VI - MS OFFICE

CO1: To create documents using MS Word.
CO2: To prepare spreadsheet using MS Excel.
CO3: To make power point presentations.

COURSE CODE: 17HMI01 COURSE NAME: TOURISM & TRAVEL MANAGEMENT

CO1: To understand the concepts related to tourism.
CO2: To recognize various types of tourism.
CO3: To suggest to tourists the tourism infrastructure available.
CO4: To understand the services offered by travel agent and tour operator.
CO5: To adhere to travel formalities and plan a tour itinerary.

SEMESTER IV

COURSE CODE: 17HM401 COURSE NAME: FOOD PRODUCTION - IV

CO1: To identify ingredients, equipment and dishes of Oriental cuisine.
CO2: To identify ingredients, equipment and dishes of Mediterranean cuisine.
CO3: To identify ingredients, equipment and dishes of World cuisine.
CO4: To work efficiently in well planned layout and environment.
CO5: To develop new recipes and identify supervisory functions.

COURSE CODE: 17HM402 COURSE NAME: FOOD & BEVERAGE SERVICE - IV

CO1: To understand production and identify types of Beer, Cider and Perry.
CO2: To understand production and identify types of Whisky and Brandy.
CO3: To understand production and identify types of rum, gin and vodka.
CO4: To understand production and identify types of tequila & liqueurs and serve alcoholic beverages.
CO5: To recognize types of bar and do service of cigar and cigarettes.

COURSE CODE: 17HM403 COURSE NAME: BAKERY AND CONFECTIONERY - II

CO1: To prepare biscuits and cookies.
CO2: To prepare different types of cake.
CO3: To apply decorating techniques to cakes.
CO4: To prepare basic syrups, creams, icing and sauces.
CO5: To prepare custard, puddings and desserts.

COURSE CODE: 17HM404 COURSE NAME: PRACTICAL IV - FOOD PRODUCTION PRACTICAL II

CO1: To prepare Indian regional cuisines in bulk.
CO2: To prepare and present International cuisines.

COURSE CODE: 17HM405 COURSE NAME: PRACTICAL V - FOOD AND BEVERAGE SERVICE II

CO1: To compile menus with appropriate wine suggestions.
CO2: To prepare a wine list.
CO3: To take beverage orders.
CO4: To carry out appropriate service procedure for alcoholic beverages.
CO5: To carry out appropriate service procedure for cigars and cigarettes.

COURSE CODE: 17HM406 COURSE NAME: FRONT OFFICE OPERATIONS II

CO1: To perform duties effectively at bell desk.
CO2: To provide guest services and handle emergency situations.
CO3: To sell hotel facilities.
CO4: To adopt credit control measures.
CO5: To develop soft skills.

COURSE CODE: 17HM407 COURSE NAME: PRACTICAL VII - FRONT OFFICE OPERATIONS

CO1: To take reservation, handle check-in and check-out of guests.
CO2: To calculate statistical data.
CO3: To handle situations of overbooking, emergencies and guest complaints.

COURSE CODE: 17HME01 COURSE NAME: PRINCIPLES OF NUTRITION

CO1: To identify nutrients and their functions and comprehend digestion of food.
CO2: To select the right kinds and amounts of carbohydrates and proteins for good health.
CO3: To identify the right kinds and amounts of lipids and water intake for good health.
CO4: To include the right kinds and amounts of vitamins and minerals in diet for good health.
CO5: To determine individual energy needs and plan balanced meals.

SEMESTER V

COURSE CODE: 16HM501 COURSE NAME: FOOD PRODUCTION - V

CO1: To understand larder operations &identify basic larder preparations.
CO2: To prepare various type of cold meat dishes.
CO3: To recognize the different types of appetizers and non edible displays.
CO4: To prepare different types of salads and sandwiches.
CO5: To communicate effectively in kitchen & to give food trial.

COURSE CODE: 16HM502 COURSE NAME: FOOD & BEVERAGE SERVICE - V

CO1: To carryout service of brunch, tea and room service.
CO2: To understand preparation & service various cocktails and mocktails.
CO3: To plan efficiently for function catering.
CO4: To plan and organize outdoor catering.
CO5: To know how to develop customer relationships.

COURSE CODE: 16HM503 COURSE NAME: FOOD AND BEVERAGE MANAGEMENT

CO1: To enhance the meal experience of customers.
CO2: To identify customers in the market and promote service.
CO3: To understand types of budget, cost, profits & pricing.
CO4: To adhere to food purchase & control procedure.
CO5: To adhere to beverage purchase & control procedure.

COURSE CODE: 16HM504 COURSE NAME: PRACTICAL VIII - FOOD PRODUCTION III

CO1: To prepare and present international dishes for food trail
CO2: To prepare and present salads and sandwiches
CO3: To prepare and present plate garnish
CO4: To display basic vegetable and fruit carving

COURSE CODE: 16HM505 COURSE NAME: PRACTICAL IX - FOOD AND BEVERAGE SERVICE III

CO1: To carry out the service of brunch & high tea.
CO2: To take room service order and execute the service.
CO3: To carry out service from guerdon trolley.
CO4: To serve various cocktails and mocktails.
CO5: To prepare duty rota and allocate stations to the wait staff.
CO6: To prepare function prospectus and plan function menus.

COURSE CODE: 16HM506 COURSE NAME: PRACTICAL X - BAKERY & CONFECTIONERY

CO1: To prepare and present various types of yeast products.
CO2: To prepare and present cookies and cakes.
CO3: To prepare and present various types of puddings, paste products & meringues.

COURSE CODE: 16HME02 COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

CO1: To understand the concept of entrepreneur and entrepreneurship.
CO2: To recognize the motivating factors and competencies to become an entrepreneur.
CO3: To identify, select and formulate a project.
CO4: To acquire the knowledge and Entrepreneurial skills needed to succeed in a range of hospitality and service business sector.
CO5: To prepare a business plan for starting a Restaurant business.

COURSE CODE: 16HME02A COURSE NAME: FOOD SERVICE FACILITY PLANNING

CO1: To understand the prerequisites for planning a food service facility.
CO2: To understand the functional planning concept of a food service facility.
CO3: To understand the prerequisites for designing a workplace.
CO4: To estimate the space requirements & configure layouts for food service facility.

COURSE CODE: 16HME02B COURSE NAME: HOTEL MARKETING MANAGEMENT

CO1: To understand the concept of marketing.
CO2: To understand the types of hospitality related markets.
CO3: To acquire knowledge on the products & services in hospitality marketing.
CO4: To understand the role of advertising in hospitality industry.

COURSE CODE: 16HMI02 COURSE NAME: HOSPITALITY MANAGEMENT

CO1: To identify different sectors of hospitality industry.
CO2: To identify different types of hotels, guests, guest rooms and room rates.
CO3: To understand basic functions and sections of major departments of hotels.
CO4: To realize ethics and etiquettes required for hospitality industry.
CO5: To update on emerging trends in hospitality industry.

SEMESTER VI

COURSE CODE: 16HM601 COURSE NAME: INDUSTRIAL EXPOSURE TRAINING

CO1: To attain employability skills & enhance personal attributes.
CO2: To attain professional skills to work in the hospitality industry.

Prepared by (Director)	Approved by (Dean)	Principal & Secretary

SRI RAMAKRISHNA COLLEGE OF ARTS & SCIENCE	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D28

SCHOOL NAME	**SCHOOL OF SCIENCE & HUMANITIES**
PROGRAMME NAME	**BA – English Literature**

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the graduates will

PEO1	Set their career in two strong platforms: Language and Literature
PEO2	Explore the fields like Teaching, Editing, Content Writing, Creative Writing, Journalism, Mass Media, and Human Resource Management etc...
PEO3	Contribute to the growth, unity and integrity of the society.

PROGRAMME OUTCOMES

Upon completion of the programme, the students will be able to

PO1	Apply knowledge of Language, Literature and History as and when required.
PO2	Use appropriate knowledge to identify and analyze literary techniques in texts.
PO3	Create Literature: simple poems, short stories and essays.
PO4	Select and apply appropriate literary theories to analyze a text.
PO5	Work effectively as a professional in the fields like Teaching, Mass Media, Publishing and others.
PO6	Communicate plain literary concepts within the profession and with the society at large. The ability includes Listening, Speaking, Reading and Writing; and it enables them to comprehend, write, edit and review.
PO7	Understand the roles and responsibilities of the literature professional.
PO8	Identify and address their own needs in a changing world and engage in life-long learning to maintain their competence that allow them to contribute for the societal growth.

PROGRAMME NAME - BA ENGLISH

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18E01 — COURSE NAME: PART II - ENGLISH I

CO1: Carry basic knowledge on application of grammar in speaking and writing.
CO2: Explore public speaking.
CO3: Apply formal style in letter writing and comprehension.
CO4: Adapt the spirit to hone the language skill.

COURSE CODE: 18BAE101 — COURSE NAME: CORE I – PROSE I

CO1: Comprehend a prose passage.
CO2: Identify different styles in writing.
CO3: Analyse the concept of prose passage.
CO4: Evaluate different kinds of sentence structures.

COURSE CODE: 18BAE102 — COURSE NAME: CORE II – FICTION I

CO1: Identify various techniques in a fiction.
CO2: Understand major and minor plots.
CO3: Analyse themes.
CO4: Evaluate the characters.

COURSE CODE: 18BAE103 — COURSE NAME: ALLIED I – SOCIAL HISTORY OF ENGLAND

CO1: Carry basic knowledge of social history of England.
CO2: Comprehend the growth of the society chronologically.
CO3: Interconnect history and literature.
CO4: Probe deep into the lives of literary character with the help of the social background.

SEMESTER II

COURSE CODE: 18E02 — COURSE NAME: PART II - ENGLISH II

CO1: Carry basic knowledge on application of grammar in speaking and writing.
CO2: Deliver short public speeches and to take part in Group Discussion.
CO3: Prepare reports and paragraphs.
CO4: Adapt the spirit to hone the languages skills through reading prose and poetry.

COURSE CODE: 18BAE201 — COURSE NAME: CORE III - POETRY I

CO1: Understand and enjoy poems.
CO2: Identify the elements of poetry.
CO3: Present the appraisal of a poem.
CO4: Write a poem.

COURSE CODE: 18BAE202 **COURSE NAME: CORE IV - DRAMA I**

CO1: Understand and enjoy Drama.
CO2: Identify the elements of Drama.
CO3: Apply Freytag's pyramid in a play.
CO4: Analyze major and minor characters and themes.

COURSE CODE: 18BAE203 **COURSE NAME: ALLIED II - HISTORY OF ENGLISH LITERATURE**

CO1: Learn history of different literary ages.
CO2: Familiar with the number of great writers.
CO3: Interconnects the history and the writer's life and his works.
CO4: Analyze different ages.

SEMESTER III

COURSE CODE: 17E03 **COURSE NAME: PART II - ENGLISH III**

CO1: Carry basic knowledge on application of language.
CO2: Apply formal style in writing and speaking.
CO3: Adapt the spirit to hone the language skills.

COURSE CODE: 17BAE301 **COURSE NAME: CORE V – POETRY II**

CO1: Understand and enjoy poems.
CO2: Identify the elements of poetry.
CO3: Present the appraisal of a poem.
CO4: Write a poem.

COURSE CODE: 17BAE302 **COURSE NAME: CORE VI - FICTION II**

CO1: Identify various techniques in a fiction.
CO2: Understand major and minor plots.
CO3: Analyse themes.
CO4: Evaluate the characters.

COURSE CODE: 17BAE303 **COURSE NAME: ALLIED III – LITERARY FORMS AND TERMS**

CO1: Carry basic knowledge of the different literary forms.
CO2: Differentiate different types of genres.
CO3: Carry thorough knowledge on Movements.
CO4: Attempt short creative writings.

COURSE CODE: 17BAE304 **COURSE NAME: SKILL BASED SUBJECT I – MULTI SKILL DEVELOPMENT**

CO1: Comprehend and communicate skillfully.
CO2: Write professionally.
CO3: Carry sharpened career skills.
CO4: Adapt self-grooming.

COURSE CODE: 17BAEI01 COURSE NAME: OE I – ENGLISH FOR COMPETITIVE EXAMINATIONS

CO1: Enrich their vocabulary.
CO2: Frame grammatically correct sentences.
CO3: Comprehend the passages skillfully.
CO4: Adapt the modern usage of the language.

SEMESTER IV

COURSE CODE: 17E04 COURSE NAME: PART II - ENGLISH IV

CO1: Carry basic knowledge on application of language.
CO2: Apply formal style in writing and speaking.
CO3: Adapt the spirit to hone the language skills.

COURSE CODE: 17BAE401 COURSE NAME: CORE VII – PROSE II

CO1: Comprehend a prose passage.
CO2: Identify different styles in writing.
CO3: Analyse the concept of prose passage.
CO4: Evaluate different kinds of sentence structures.

COURSE CODE: 17BAE402 COURSE NAME: CORE VIII – DRAMA II

CO1: Understand and enjoy Drama.
CO2: Identify the elements of Drama.
CO3: Apply Freytag's pyramid in a play.
CO4: Analyze major and minor characters and themes.

COURSE CODE: 17BAE403 COURSE NAME: ALLIED IV – LITERARY CRITICISM

CO1: Be familiar with a number of critical theories.
CO2: Analyze different schools of criticism.
CO3: Classify different ages of criticism.
CO4: Apply criticism in reviewing.

COURSE CODE: 17BAE404 COURSE NAME: SKILL BASED SUBJECT II – WRITING SKILLS

CO1: Comprehend and write skillfully.
CO2: Write professionally.
CO3: Carry sharpened diction.
CO4: Make drafts.

COURSE CODE: 17BAEE01 COURSE NAME: ELECTIVE I – COMPARATIVE LITERATURE

CO1: Compare literature of different societies.
CO2: Compare regional literature with World Literature.
CO3: Compare different authors and ages.
CO4: Compare different genres of literature.

COURSE CODE: 17BAEE02 COURSE NAME: ELECTIVE I – INTRODUCTION TO LINGUISTICS

CO1: Understand the techniques of the language.
CO2: Master the phonetic skill.
CO3: Categorize parts of grammar.
CO4: Be familiar with the sounds, signs and symbols of the language.

COURSE CODE: 17BAEE03 COURSE NAME: ELECTIVE I – DEVELOPING PROFESSIONAL COMMUNICATION

CO1: Set short term and long term goals.
CO2: Face interviews in a smart way.
CO3: Adapt business etiquettes.
CO4: Apply communication techniques in business.

SEMESTER V

COURSE CODE: 16BAE501 COURSE NAME: CORE IX – SHAKESPEARE

CO1: Identify the techniques used in comedies, tragedies and historical plays.
CO2: Compare the plays and sonnets of Shakespeare with other plays and sonnets.
CO3: Carry an idea about the complete works of Shakespeare.
CO4: Sketch the prominent characters of Shakespearean plays.

COURSE CODE: 16BAE502 COURSE NAME: CORE X – AMERICAN LITERATURE

CO1: Compare Poems of American Literature with the Indian Writing in English.
CO2: Understand the philosophical writing of America.
CO3: Carry the knowledge about the American society through reading fiction and short stories.
CO4: Analyse the play, fiction and the short stories.

COURSE CODE: 16BAE503 COURSE NAME: CORE XI – INDIAN WRITING IN ENGLISH

CO1: Identify the techniques used by Indian authors.
CO2: Compare earlier and contemporary Indian Writing in English.
CO3: Analyse the different genres.
CO4: Write simple poems / prose passages with literary value.

COURSE CODE: 16BAE504 COURSE NAME: CORE XII – NEW LITERATURES IN ENGLISH

CO1: Compare the works of different nations.
CO2: Identify the style and technique used by African American Writers.
CO3: Familiar with the techniques of Commonwealth Literature.
CO4: Analyse poems / fiction / Drama.

COURSE CODE: 16BAE505 COURSE NAME: SKILL BASED SUBJECT - APPLIED ENGLISH

CO1: Comprehend skillfully.
CO2: Draft paragraphs and essays.
CO3: Precise a passage.
CO4: Write Letters and Book Reviews.

COURSE CODE: 16BAEI02 **COURSE NAME: OE II - CORPORATE ENGLISH**

CO1: Enrich their grammar knowledge.
CO2: Frame grammatically correct sentences.
CO3: Adopt professional communication in speaking and writing.
CO4: Draft professional e-mails.

SEMESTER VI

COURSE CODE: 16BAE601 **COURSE NAME: CORE XIII - INTENSIVE STUDY OF AN AUTHOR - RABINDRANATH TAGORE**

CO1: Identify philosophy in Literature.
CO2: Carry an overall idea about Rabindranath Tagore's Writing.
CO3: Analyze Indianism in Tagore's Writing.
CO4: Compare Tagore with other versatile writers.

COURSE CODE: 16BAE602 **COURSE NAME: CORE XIV - INDIAN LITERATURE IN ENGLISH TRANSLATION**

CO1: Compare Regional Literature with English Literature.
CO2: Identify the style and the technique applied in translation.
CO3: Analyze the works with the help of literary theories.
CO4: Translate simple works into English Language & vice versa.

COURSE CODE: 16BAE603 **COURSE NAME: CORE XV - WOMEN'S STUDIES**

CO1: Carry knowledge about feminism.
CO2: Connect the current issues with creative writing.
CO3: Differentiate men's writing and women's writing.
CO4: Identify the techniques used by women writers in creative writing.

COURSE CODE: 16BAE604 **COURSE NAME: SKILL BASED SUBJECT IV - PUBLIC SPEAKING**

CO1: Speak effectively.
CO2: Learn the nuances in speaking.
CO3: Demonstrate careful Choice of Words, Appropriate Grammar, Syntax and Intelligible Pronunciation.
CO4: Employ appropriate nonverbal behavior that supports the verbal message.

COURSE CODE: 16BAE605 **COURSE NAME: PROJECT**

CO1: Obtain prime knowledge on formulating thesis.
CO2: Analyze a work of Literature from different literary approaches.
CO3: Apply different theories and themes.
CO4: Apply research methods and incorporate source material into their writing.

COURSE CODE: 16BAEE04 **COURSE NAME: ELECTIVE II - ETHICS IN LITERATURE**

CO1: Learn the value of moral values.
CO2: Identify the moral left behind in a poem / prose / story.
CO3: Develop a mindset to learn from everything.
CO4: Analyze a work of literature from sociological point of view.

COURSE CODE: 16BAEE05 COURSE NAME: ELECTIVE II - INTRODUCTION TO PHONETICS

CO1: Differentiate British and American pronunciation.
CO2: Carry a basic knowledge on Phonetics.
CO3: Transcript into phonetic language.
CO4: Use right accent and rhythm in speaking.

COURSE CODE: 16BAEE06 COURSE NAME: ELECTIVE II - CHILDREN'S LITERATURE

CO1: Connect science, society, religion and literature.
CO2: Carry a basic knowledge on writing literature for children.
CO3: Use Mythology in writing.
CO4: Apply techniques in fantasy writing.

Prepared by (HoD)	Approved by (Dean)	
		Principal & Secretary

SRI RAMAKRISHNA	PROGRAMME EDUCATIONAL OBJECTIVES & PROGRAMME OUTCOMES	SRCAS/PPO/D29

SCHOOL NAME	SCHOOL OF SCIENCE & HUMANITIES
PROGRAMME NAME	MA – English Literature

PROGRAMME EDUCATIONAL OBJECTIVES

After 2 or 3 years of completion of the programme, the graduates will

PEO1	Set their career in two strong platforms: Language and Literature
PEO2	Explore the fields like Teaching, Editing, Content Writing, Creative Writing, Journalism, Mass Media, and Human Resource Management etc...
PEO3	Contribute to the growth, unity and integrity of the society at large.

PROGRAMME OUTCOMES

Upon the completion of the programme, the students will be able to

PO1	Apply knowledge of Language, Literature, Criticism, Psychology and History in their Profession.
PO2	Use appropriate knowledge and skills to identify, formulate, analyze, and solve complex problems for reaching substantiated conclusions.
PO3	Conduct investigations of complex problems through appropriate approaches and interpretation of literature.
PO4	Identify and distinguish the different techniques in literary genres.
PO5	Create, select, apply, adapt, and extend appropriate literary theories and techniques with an understanding of the associated limitations.
PO6	Work effectively as a member and a leader in the fields like Teaching, Mass Media, BPS, HRM and others.
PO7	Communicate complex literary concepts within the profession and with the society at large. The ability includes Listening, Speaking, Reading and Writing which enable them to comprehend, write, edit and review.
PO8	Understand the roles and responsibilities of the literature professional.
PO9	Analyze personal, social and psychological domains.
PO10	Apply ethics, accountability and equity in all walks of life.
PO11	Apply the techniques, skills, modern literary theory and criticism which are necessary for the research work.
PO12	Identify and address their own needs in a changing world and engage in life-long learning to maintain their competence that allow them to contribute for the societal growth.

PROGRAMME NAME - MA ENGLISH

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18MAE101 — **COURSE NAME: PAPER I – BRITISH LITERATURE I (From the Age of Chaucer to the Age of Milton)**

CO1: Familiar with diverse schools of poetry and Bacon's writing style.
CO2: Develop a holistic understanding of early British Literature.
CO3: Analyse a work with the help of early criticism.

COURSE CODE: 18MAE102 — **COURSE NAME: PAPER II – AMERICAN LITERATURE**

CO1: Familiar with the concepts of various genres in American Literature.
CO2: Develop critical competence and acumen to interpret and analyze American literary works.
CO3: Apply the concepts of criticism in an analysis of a work.

COURSE CODE: 18MAE103 — **COURSE NAME: PAPER III – INDIAN WRITING IN ENGLISH**

CO1: Interconnects the literature with the Indian life and analyse the work logically.
CO2: Apply various approaches to make an analytical study.
CO3: Create a simple work of own, based on Indian concepts.

COURSE CODE: 18MAE104 — **COURSE NAME: PAPER IV – CHILDREN'S LITERATURE**

CO1: Carry a strong knowledge children's writing.
CO2: Apply mythological/ fantasy / oral stories in writing and reading.
CO3: Analyse children's themes.
CO4: Able to write a short story.

COURSE CODE: 18MAE105 — **COURSE NAME: PAPER V – NEW LITERATURE IN ENGLISH**

CO1: Understand contemporary new world literature.
CO2: Critically analyse different genres of new Literature.
CO3: Compare a literature of one nation with the other.

SEMESTER II

COURSE CODE: 18MAE201 — **COURSE NAME: PAPER VI – BRITISH LITERATURE II (From the Age of Neo-classical Age to the Romantic Age)**

CO1: Develop a holistic understanding of Romantic Literature.
CO2: Analyse the development of different genres like prose and fiction of British Literature.
CO3: Compare the literary criticism of past centuries with the 18th century literary criticism.

COURSE CODE: 18MAE202 — **COURSE NAME: PAPER VII – SHAKESPEARE**

CO1: Get a deep insight into Elizabethan Age through Shakespearean writing.

CO2: Analyse different genres of Shakespearean plays.
CO3: Analyse various elements used by Shakespeare in his plays.

COURSE CODE: 18MAE203 COURSE NAME: PAPER VIII - LITERARY CRITICISM

CO1: Carry a basic knowledge of technical analysis.
CO2: Get a deep insight into five approaches of Literary Criticism.
CO3: Analyse a fiction or drama with the help of any one suitable approach.

COURSE CODE: 18MAE204 COURSE NAME: PAPER IX - INTENSIVE STUDY OF AN AUTHOR T. S. ELIOT

CO1: Carry an overall idea about T. S. Eliot's writing.
CO2: Apply critical approach in T. S. Eliot's writing.
CO3: Compare T. S. Eliot's writings with other contemporary writers.

COURSE CODE: 18MAEE01 COURSE NAME: PAPER X – ELECTIVE PAPER I - ENGLISH LANGUAGE TEACHING

CO1: Aware of the development and changes happened in the field of English Language Teaching.
CO2: Study the standard of the students and able to teach English by adapting the suitable methodology.
CO3: Able to use different tools for teaching language and literature and able to conduct different kinds of tests.

COURSE CODE: 18MAEE02 COURSE NAME: PAPER X – ELECTIVE PAPER I - TRANSLATION STUDIES I

CO1: Carry a thorough knowledge on translation theories.
CO2: Apply different techniques in translation practice.
CO3: Able to translate methodologically.

COURSE CODE: 18MAEE03 COURSE NAME: PAPER X – ELECTIVE PAPER I – BIOGRAPHY AND TRAVELOGUE

CO1: Understand the difference between Biography, Autobiography, Memoirs and Travelogue.
CO2: Explore the lives of Versatile personalities around the world.
CO3: Able to understand accurate, first hand, factual, reliable records of people.
CO4: Able to write Memoirs and Travelogues.

SEMESTER III

COURSE CODE: 17MAE301 COURSE NAME: PAPER XI – BRITISH LITERATURE III (From Victorian Age to the Modern Age)

CO1: Familiar with the writing style of different Prose Writers.
CO2: Develop a holistic understanding of Victorian and Modern Age Literature.
CO3: Analyse a work with the help of criticism.

COURSE CODE: 17MAE302 COURSE NAME: PAPER XII - RESEARCH METHODOLOGY

CO1: Write a research article methodologically.
CO2: Use citations in writing.
CO3: Prepare Bibliography.
CO4: Apply the methodology in Documentation.

COURSE CODE: 17MAE303 COURSE NAME: PAPER XII – PHONETICS

CO1: Carry complete understanding of Consonants, Vowels and Diphthongs.
CO2: Differentiates Indian English from Other accents.
CO3: Apply accent and intonation.
CO4: Transcribe phonetic symbols to English.

COURSE CODE: 17MAE304 COURSE NAME: PAPER XIII - COMPUTER FUNDAMENTALS THEORY

CO1: Thorough with Microsoft Office tools and techniques.
CO2: Visually communicate well.
CO3: Able to edit, format, present and publish.
CO4: Work with Computer Networks.

COURSE CODE: 17MAEE04 COURSE NAME: ELECTIVE II – MASS COMMUNICATION AND JOURNALISM

CO1: Aware of emerging trends in communication, journalism and mass media
CO2: Carries knowledge about making newspaper.
CO3: Draft advertisements.
CO4: Apply technology in writing.

COURSE CODE: 17MAEE05 COURSE NAME: ELECTIVE II - TRANSLATION STUDIES II

CO1: Conversant with the Principles and Theories of Translation.
CO2: Differentiate the process of translation involved in different genres.
CO3: Apply technology in translation.
CO4: Translate a work to English and English to his/her mother tongue.

COURSE CODE: 17MAEE06 COURSE NAME: ELECTIVE II - COMMUNICATION SKILL FOR CAREER ADVANCEMENT

CO1: Comprehend and communicate skillfully.
CO2: Write professionally.
CO3: Carries sharpened career skills.
CO4: Adapt self-grooming.

COURSE CODE: 17MAEI01 COURSE NAME: INTERDISCIPLINARY COURSE BUSINESS COMMUNICATION IN ENGLISH

CO1: Use technical terms in business communication.
CO2: Draft Business Letters
CO3: Prepare Reports and Memos

SEMESTER IV

COURSE CODE: 17MAE401 COURSE NAME: PAPER XV – WOMEN'S STUDIES

CO1: Carries knowledge about feminism.
CO2: Connect the current issues with creative writing.
CO3: Differentiates men's writing and women's writing.
CO4: Identify the techniques used by women writers in creative writing.

COURSE CODE: 17MAE402 COURSE NAME: PAPER XVI – CONTEMPORARY LITERARY THEORY

CO1: Obtain prime knowledge on Literary Theory.
CO2: Make gender based approach in literature.
CO3: Apply Social, Marxist and economic views in literature.
CO4: Differentiate Structuralism and Post Structuralism.

COURSE CODE: 17MAE403 COURSE NAME: PAPER XVII– BUSINESS COMMUNICATION

CO1: Learn Professional Communication.
CO2: Prepare Reports, Advertisements and Graphic Aids.
CO3: Write research articles.
CO4: Edit and Proofread.

COURSE CODE: 17MAE404 COURSE NAME: PAPER XVIII - ENVIRONMENTAL LITERATURE

CO1: Connects nature, literature and society.
CO2: Apply ecological theories in Literature.
CO3: Familiar with Environmental Specialist Writers.
CO4: Create a simple nature based creative work.

COURSE CODE: 17MAE405 COURSE NAME: PROJECT WORK & VIVA VOCE

CO1: Obtain prime knowledge on formulating thesis.
CO2: Analyze a work of Literature from different literary approaches.
CO3: Apply different theories and themes.
CO4: Apply research methods and incorporate source material into their writing.

Prepared by (HoD)	Approved by (Dean)	
		Principal & Secretary

LANGUAGES

PART I - TAMIL

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18T01 **COURSE NAME: பகுதி I தமிழ் - I**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

SEMESTER II

COURSE CODE: 18T02 **COURSE NAME: பகுதி I தமிழ் – II**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

SEMESTER III

COURSE CODE: 17T03 **COURSE NAME: பகுதி I தமிழ் – III (FOR II B.A ENGLISH)**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

COURSE CODE: 17BCT01 **COURSE NAME: அடிப்படைத் தமிழ் - I (FOR ALL II UG)**

CO1: தமிழ் மொழியின் அடிப்படை இலக்கணம் அறிதல்
CO2: தமிழ் மொழியின் பேசும் எழுதும் திறன் பெறுதல்

COURSE CODE: 17AT01 **COURSE NAME: சிறப்புத் தமிழ் - I (FOR ALL II UG)**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

COURSE CODE: 17TI01 **COURSE NAME: திறன் மேம்பாட்டுத் தமிழ் (FOR ALL II UG)**

CO1: மொழியை நுட்பமாக கையாளும் திறன்
CO2: பேச்சு மற்றும் எழுத்துசார் தொடர்பு திறன்கள் மேம்படுதல்

SEMESTER IV

COURSE CODE: 17T04 **COURSE NAME: பகுதி I தமிழ் – IV (FOR II B.A ENGLISH)**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

COURSE CODE: 17BCT02 **COURSE NAME: அடிப்படைத் தமிழ் - II (FOR ALL II UG)**

CO1: பண்பாட்டை வெளிக்காட்டும் இலக்கியங்களை அறிதல்
CO2: தமிழ் மொழியின் அறம்சார் வாழ்வியல் விழுமியங்களை உணர்தல்

COURSE CODE: 17AT02 **COURSE NAME: சிறப்புத் தமிழ் - II (FOR ALL II UG)**

CO1: படைப்பாற்றல் திறன் வளர்த்தல்
CO2: வாழ்வியல் விழுமியங்களை உணர்தல்

SEMESTER V

COURSE CODE: 16TI02 **COURSE NAME: ஊடகத் தமிழ் (FOR ALL III UG)**

CO1: ஊடகத்துறையின் அடிப்படைகளை அறிதல்
CO2: ஊடகத்துறையின் மொழிசார் பயிற்சியும் திறன்களும் மேம்படுதல்

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

HINDI

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18H01 — **COURSE NAME: HINDI I**

CO1: Know about the Hindi writers and get moral values from different stories.
CO2: Perform in competitive exams.

COURSE CODE: 17H03 — **COURSE NAME: HINDI III**

CO1: Compute in Hindi.
CO2: Understand the poetry.

SEMESTER II

COURSE CODE: 18H02 — **COURSE NAME: HINDI II**

CO1: Avoid grammatical mistakes.
CO2: Know the letter writing methods.
CO3: write laghu kathayam by studying the stories.

COURSE CODE: 17H04 — **COURSE NAME: HINDI IV**

CO1: Enjoy learning the ancient language spoken in India during 19th century.
CO2: Know about different languages spoken in different parts of the country.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

FRENCH

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18F01 — **COURSE NAME: FRENCH I**

CO1: Learn the articles and possessive adjectives.
CO2: Form the verbal conjugations.
CO3: Know the French culture.

COURSE CODE: 17F03 — **COURSE NAME: FRENCH III**

CO1: Learn the personal pronouns and Demonstrative adjectives.
CO2: Learn about the communication and Technology (Mobile and Internet).
CO3: Develop the knowledge in French culture and Civilization.

COURSE CODE: 18CF01 — **COURSE NAME: FRENCH FOR CATERING SCIENCE & HOTEL MANAGEMENT I**

CO1: Know the ways of greeting others in French.
CO2: Attain knowledge in tourism of France.

SEMESTER II

COURSE CODE: 18F02 — **COURSE NAME: FRENCH II**

CO1: Learn the name of the professions, dimensions and colors in French.
CO2: Know the imperfect tense and part participle of verbs.

COURSE CODE: 17F04 — **COURSE NAME: FRENCH IV**

CO1: Learn the hobbies, French Holidays and Festivals.
CO2: Write a letter and form a negative sentence.
CO3: Know the ordinary health problems.

COURSE CODE: 18CF02 — **COURSE NAME: FRENCH FOR CATERING SCIENCE & HOTEL MANAGEMENT II**

CO1: Know the vocabulary relating to Hotel, Restaurant and French cuisine.
CO2: Make simple sentences in French related to tourism and hotel management.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

PART II - ENGLISH

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18E01 **COURSE NAME: PART II - ENGLISH I**

CO1: Carry basic knowledge on application of grammar in speaking and writing.
CO2: Explore public speaking.
CO3: Apply formal style in letter writing and comprehension.
CO4: Adapt the spirit to hone the language skill.

SEMESTER II

COURSE CODE: 18E02 **COURSE NAME: PART II - ENGLISH II**

CO1: Carry a basic knowledge on application of grammar in speaking and writing.
CO2: Deliver short public speeches and take part in Group Discussion.
CO3: Prepare reports and paragraphs.
CO4: Adapt the spirit to hone the languages skills through reading prose and poetry.

Prepared by (HoD)	Approved by (Dean)	Principal & Secretary

ABILITY ENHANCEMENT COURSES

1. PART IV - VALUE EDUCATION

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18VE01 **COURSE NAME: VALUE EDUCATION**

CO1: Develop a sense of self-respect and respect for others.
CO2: Occupy one's own social space and help others live peacefully.
CO3: Develop scientific temper and logical reasoning and to apply in day to day life.

Prepared by	Approved by	
		Principal & Secretary

2. PART IV - ENVIRONMENTAL STUDIES

Upon the successful completion of the course, the students will be able to

SEMESTER II

COURSE CODE: 18ES01 **COURSE NAME: ENVIRONMENTAL STUDIES**

CO1: Understand the principles of ecology and major concepts in environmental sciences.
CO2: Identify the key concepts in Environmental pollution that apply to air, land and water issues on a global scale and population growth.
CO3: Relate the Socio- Environmental issues and apply them to the analysis or question related to the environment.
CO4: Understand the human rights, women and child welfare in the environment.

Prepared by	Approved by	
		Principal & Secretary

SKILL ENHANCEMENT COURSES

1. PART IV - PERSONALITY APTITUDE & CAREER ENHANCEMENT – PACE FOR UG

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CPE01 **COURSE NAME: PACE I**

CO1: Identify their individual level of communication, aptitude and employability skills to understand their competency level.
CO2: Plan their career and set their goals.
CO3: Prove their presentation skills and also intra and interpersonal skills.
CO4: Communicate well with improved sentence making skill and vocabulary.

SEMESTER II

COURSE CODE: 18CPE02 **COURSE NAME: PACE II**

CO1: Apply fundamentals of English grammar in usage, identify common errors and pronunciation well.
CO2: Display the art of Communication both verbally and non-verbally with business etiquette.
CO3: Take part in Group Discussion, Interview along with the ability of effective team work and group behavior.
CO4: Present public speaking without fear and with fundamental social etiquettes.
CO4: Equipped in the various exercises like Group Discussion, Debate and Extempore and so on.

SEMESTER III

COURSE CODE: 17CPE03 **COURSE NAME: PACE III**

CO1: Solve questions on basic Quants, Verbal and Reasoning ability.
CO2: Inter-relate all the linguistic concepts learnt and apply them while solving questions on Verbal ability.
CO3: Develop the habit of Reading.
CO4: Understand the relevance and application of Emotional Intelligence in the Recruitment Process.
CO5: Answer basic level Interview Questions.

SEMESTER IV

COURSE CODE: 17CPE04 **COURSE NAME: PACE IV**

CO1: Solve questions on Quants, Verbal and Reasoning ability on concepts that are pre-requisites in the current Placement Scenario.
CO2: Solve questions on Critical Reasoning.
CO3: Participate effectively in Group Discussions without any inhibitions.
CO4: Finalize their Resumes and answer higher level questions in an Interview.

SEMESTER V

COURSE CODE: 16CPE05 **COURSE NAME: PACE V**

CO1: Utilize time, being creative and have more insight on business environment.
CO2: Equip themselves adequate skill-set that are required to participate effectively in the Placement Process.
CO3: Develop Personal Effectiveness Skills and Resume Building.
CO4: Make use of impression management in-terms of participating effectively in interviews.

Prepared by	Approved by	
		Principal & Secretary

2. MASTERS' ABILITY AND CAREER ENHANCEMENT – MACE FOR PG

Upon the successful completion of the course, the students will be able to

SEMESTER I

COURSE CODE: 18CME01 **COURSE NAME: MACE I**

CO1: Set goals.
CO2: Learn fundamentals of English grammar, common errors of pronunciation and parts of speech.
CO3: Understand individual communication skills, aptitude and skills required for employment.
CO4: Enhance their English language.
CO5: Listen better, improve their body language, and adopt good manners and etiquettes.
CO6: Write better and communicate effectively.

SEMESTER II

COURSE CODE: 18CME02 **COURSE NAME: MACE II**

CO1: Enhance their ability to deal with quantities.
CO2: Understand and improve arithmetic reasoning.
CO3: Build better vocabulary and grammar.
CO4: Improve the group behavior and team building.
CO5: Prepare resumes, speak in public, debate and discuss in groups.

Prepared by	Approved by	
		Principal & Secretary