GOVERNMENT DEGREE COLLEGEBHADRACHALAM
BHADRADRI KOTHAGUDEM DISTRICT
TELANGANA STATE
AFFILIATED TO KAKATIYA UNIVERSITY –WARANGAL

PROGRAMME OUTCOMES OF UG BA, B COM, B.SC

Graduates of a Bachelor's Degree will have a broad and coherent body of knowledge in their disciplines, with a deep understanding of the underlying principles and concepts in one or more disciplines as a basis for independent lifelong learning.

At the end of an undergraduate Programme Student will be able to

- Describe and define critical concepts in their discipline
- Explain and discuss concepts and ideas pertaining to their discipline
- Demonstrate a broad understanding of their discipline
- Demonstrate communication skills to present a clear, coherent and independent exposition
- of knowledge and ideas Demonstrate understanding of the interconnections of knowledge within and across
- disciplines Apply knowledge, theories, methods, and practices in their chosen field of study to address
- real-world challenges and opportunities Demonstrate proficiency in experimental techniques and methods of analysis appropriate
- for their area of specialisation Generate and analyse data using appropriate quantitative tools
- Construct and test hypothese Demonstrate cognitive and technical skills to synthesise knowledge in interrelated
- disciplines Demonstrate critical thinking and judgement in identifying and solving problems with
- intellectual independence Demonstrate the skills needed to be able to function successfully in their field
- Show responsibility and understanding of local and global issues
- Demonstrate through their actions and speech that they are agents of social justice and

- change Practice the discipline's code of ethics in their academic, professional and personal lives
- Practice the values of democracy and principles of human rights
- Show self-awareness and emotional maturity
- Demonstrate career and leadership readiness
- Demonstrate intercultural, interracial, interclass, inter-caste, and ethical competency
- Exhibit the ability to work in teams
- Exhibit a strong sense of professionalism in a range of contexts
- Demonstrate sensitivity and readiness to share their knowledge, experience, and
- capabilities with the marginalised and oppressed in their communities

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UG -- BA/ ENGLISH -I   **NO.OF CEDITS PER WEEK =05**

COURSE OUTCOMES

GENERAL ENGLISH PAPER-I   **SEMESTER –I**

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

- Read, understand and interpret a variety of written texts.
- Undertake guided and extended writing using appropriate vocabulary and correct grammar.
- Listen with comprehension and speak with confidence in both formal and informal contexts with reasonable fluency and acceptable pronunciation.
- Become employable with requisite professional skills, Ethics and values.
- Get exposed to the best examples of prose and poetry in English and realize the beauty and communicative power of English.

GENERAL ENGLISH PAPER-II   **SEMESTER –II**

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

- Read, understand and interpret a variety of written texts.
- Undertake guided and extended writing using appropriate vocabulary and correct grammar.
- Listen with comprehension and speak with confidence in both formal and informal contexts with reasonable fluency and acceptable pronunciation.
- Become employable with requisite professional skills, Ethics and values.
- Get exposed to the best examples of prose and poetry in English and realize the beauty and communicative power of English.

GENERAL ENGLISH PAPER-III   **SEMESTER –III**

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

- Read, understand and interpret a variety of written texts.
- Undertake guided and extended writing using appropriate vocabulary and correct grammar.
- Listen with comprehension and speak with confidence in both formal and informal contexts with reasonable fluency and acceptable pronunciation.
- Become employable with requisite professional skills, Ethics and values.
- Get exposed to the best examples of prose and poetry in English and realize the beauty and communicative power of English.

GENERAL ENGLISH PAPER-IV   **SEMESTER –IV**

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

- Read, understand and interpret a variety of written texts.
- Undertake guided and extended writing using appropriate vocabulary and correct grammar.
- Listen with comprehension and speak with confidence in both formal and informal contexts with reasonable fluency and acceptable pronunciation.
- Become employable with requisite professional skills, Ethics and values.
- Get exposed to the best examples of prose and poetry in English and realize the beauty and communicative power of English.

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UG --B.A/ MICRO ECONOMICS   **NO.OF CEDITS PER WEEK =05**

PROGRAMME SPECIFIC OUTCOMES

B.A ECONOMICS

1. The students will be familiarized with the broad contours of Economics and its methodologies, tools and its analysis.

2. Students will be able to analyze the economics and institutional arrangements of specific regions, countries, organizations, localities, industries or firms.

3. Students will develop a scientific approach towards varied branches of economics like modern banking, economic development and planning, micro economics etc.

4. Students will be able to evaluate economic issues and public policy by using economic models or data analysis while identifying underlying assumptions of the model(s) and limitations.

5. Students will be able to formulate informed opinions on policy issues and recognize the validity of opposing viewpoints.

6. Students will be able to effectively communicate and debate economic ideas and policies.

B.A ECONOMICS

MICRO ECONOMICS -I   **SEMESTER –I**

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

- Apply and analyze concepts and theories in micro economics
- Student will develop an ability to attempt questions in competitive examinations
- Students will be able to appraise and assess the theories in micro economics and apply them in real life situations
- Ability to develop an understanding of the subject areas in Economics with its intricacies and imperfections and to be able to construct intellectual dialogue.
- Ability to discuss and debate on the changing structures and theoretical developments in the subject.

MACRO ECONOMICS-II   **SEMESTER –II**

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

- The concepts of macro economics like opportunity cost, economic fluctuations etc.
- Students will be able to explain the concepts of National income, inflation and concepts related to inflation and unemployment, and how they are measured.
- Students will be able to explain the circular flow model and use the concepts of aggregate demand and aggregate supply to analyze the response of the economy to disturbances.
- Students will be able to describe the determinants of the demand for money, the supply of money and interest rates and the role of financial institutions in the economy.
- Students will be able to define fiscal and monetary policies and how these affect the economy

STATISTICS FOR ECONOMICS-III   **SEMESTER –III**

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

- It enhances them to compute and assess the real situation of economy.
- Identifying graphical and numerical methods to calculate amid illustrate descriptive statistics.
- To know about matrices ,averages probability etc

INDIAN ECONOMY –IV   **SEMESTER –IV**

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

- Identify the characteristics of Indian Economy as a Developing Economy
- Describe the Demographic Trends in India
- Write down the role of Industrialization in Indian Economy
- Understand the India's Foreign trade
- Describe the inflationary trends and impact of MNC's in Indian Economy

AGRICULTURE ECONOMICS –V (A)   **SEMESTER –V**

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

- Describe Agriculture and Economic Development
- Understand the Agriculture Labour
- Write down the land reforms
- Describe the various sources of Agriculture Finance
- Write down the Agricultural Price Policy

PUBLIC ECONOMICS –V (B)   SEMESTER –V

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

- Understanding the meaning and functions of public finance
- Judging the progress of financial inclusion Measuring growth volume composition of public finance.

INTERNATIONAL ECONOMICS –VI (A)   SEMESTER –VI

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

- Understand the International Trade
- Describe the Balance of Payments
- Write down the foreign exchange rate
- Describe the International Financial Institutions
- Identify the India's Foreign Trade Policy

DEVELOPMENT ECONOMICS –VI (B)   SEMESTER –VI

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

- Understanding the concept and aspect of development economics
- Knowing the theories of economic growth &development Measuring the concept and issue of economic planning
- Understanding the concept of various developmental techniques
- To study the international financial institutions

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UG – B.A / HISTORY   **NO.OF CEDITS PER WEEK=05**

Programme Specific Outcomes

B.A HISTORY

- History Helps Us To Develop A Better Understanding of The World

- History helps us understanding our self

- Learn to other peoples beyond our cultures

- History teaches a working understanding of a change

- It give us the tools you need to be decent citizens

- Makes us better decisions makers

- It develops a new level of appreciations for just about everything

- Lessons from the past explaining understanding of the present

- Predicting or furcating of the future

- Obtain knowledge and self knowledge

- Critical awareness and thinking skills

- Learn dates and facts in the historical perspective

COURSE OUTCOMES

B.A HISTORY

HISTORY AND CULTURE OF INDIA UP TO 700 CE –I   SEMESTER -I

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

- Indian history and culture study helps us develop a better understanding of Indian culture up to 700 CE
- Socio- Economic conditions of Indian history up to 700 CE reveals to us
- Religious practice and customs and traditions became aware of specific period
- To learn about new religious movement which were stated to arrest the religious unrest
- Evolution of ancient Indian civilisations and its mariposas
- Became aware of development of scientific knowledge during this period particularly in the field of astronomy
- Know above dates and facts and places in the period

HISTORY AND CULTURE OF INDIA 700 – 1526 CE –II   SEMESTER -II

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

- Indian history and culture helps us to develop better understanding of medieval India
- Study of palllavas period comes to know how the develop the art and architecture
- Study of cholavas period we can understand the cholas local self government
- Study of this period we can learn about the new religious movements like shaivanayanars and vishnava alvars
- Study of this period a comes to know the impact of baktti and sufi movements on our Indian society and culture
- Study of kakaktiya period we comes to know about the art and architecture of that period
- Study of kakatiya period we can understand the system of pond technology
- Study of vijayanagara period we can understand how the vijayanagara kings developed the language and literature

HISTORY AND CULTURE OF INDIA 1526 – 1857 CE –III   SEMESTER -III

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

- Study of this period we comes to develop an idea about the political economical cultural and religious conditions of this period
- Study of this period we can understand about the establishment Mogal dynasty
- study of this period we can have an idea about the Mogal art and architecture
- study of this period we can have a n idea about the regional powers like marata and sikks
- study of this period we comes to know about the colonialism markentalisim and free trade policies of British Period
- study of this period we comes to know about the changes in the agrarian economy and peasant conditions in British period
- study of this period we can have a understand about the facts of anty colonial upsure like 1857 revolt

HISTORY AND CULTURE OF INDIA 1857 – 1964 CE –IV   SEMESTER -IV

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

- Study of this period we can have an idea about the western education and its impact Indian society
- Study of this period we can known about the socio- religious reforms like arya samaj brahama samaj
- Study of this period we can have an idea about anty caste movement like Jyothiba pule Narayana guru, Dr.B.R.Ambedkar.
- Study of this period we can have an understand of about factors for the rise of nationalism
- Study of this period we can have a idea about the three phases of freedom struggle
- Study of this period we can have aniead about the revolute movements Gaddar Party, Bhagath sing Chandra shekar Azad and left wing movements
- Study of this period we can have an idea about the Nehru and his policies

WORLD HISTORY 1453 – 1815 CE –V   **SEMESTER -V**

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

- To know the about the dates facts and places during this period
- Emergence of new technologies that leads to geographical discoveries
- Fall of canstantnopil that resulted in discovery of sea root to India and new world
- Factors that caused renaissance and reformation
- Emergence of new national states
- Establishment colonialism in the East Indian and new world
- Causes of French revolution succeeded by other revolution and their impact on the world history
- The reformative measures introduced by Nepolian and their consequence on the world

WORLD HISTORY 1453 – 1815 CE –VI   **SEMESTER -VI**

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

- Study of this period to know the dates facts and places during this period
- Study of this period we comes to know about the revolutions and unifications in Europe
- Study of this period we have an idea about factors of first world war and impact of first world war on our world
- Study of this period we comes to know about the revolution of Russia and its result
- Study of this period we have an idea about Nazism and Fascism and miltrysim
- Study of this period we can have an idea about second world war and establishment of united nationals organisations
- Study of this period we can have an idea about colonisation Asia- India and china

HISTORY OF TELANGANA FROM EARLIST TIMES TO 1724 CE SEMESTER -V

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

- Comes to know about the date facts and places during this period
- We can an idea about the sources of Telangana history
- We can develop special idea about the geographical feature of Telangana state and impact of geographical feature on Telangana history
- Study of this period we can develop an idea about the culture and history of Telangana from earliest time
- Study of this period we can have an idea about the civilisations from ancient period to modern period
- It can helps us to know the about the development of language literature art and architecture in different periods
- We can learn about the specific revolts like summakka and saarakka and sarvaipapanna

HISTORY OF TELANGANA 1724 to 2014   **SEMESTER –VI**

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

- To know the about the date facts and places during this period
- Study of this period we can have an idea about anti Nizam, anti feudal struggle and also peasant armed struggle in telangana
- It can helps to know about the violation of Gentleman Agreement which helps to telangana state
- It can also helps to know factor and regions for the movement of separate telangana
- Study of this period we comes to know about the recommendations of Sri Krishna committee
- It can helps to know about the two phases of separate telangana movement

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UG – BA POLITICAL -I   **NO.OF CEDITS PER WEEK =05**

Programme Specific Outcomes

B.A Political Science

- Political Science organizes guest talk by scholars in the field of Political Science and encourages the students to think critically and gives information about politics and various aspects of public life.

- Political Science department enables the students to participate in various programs conducted by Humanities department as well as forums of college and also avail the students to participate in various activities of the college and outside

B.A Political Science

UNDERSTANDING POLITICAL THEORY-I   SEMESTER –I

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

- To understand the nature and scope of political theory.

- To understand the significance of political THEORY.

- To appreciate the procedure of deferent theoretical ideas in political theory.

- To interpret and assess information regarding a variety of partial theory.

WESTERN POLITICAL THEORY-II   SEMESTER –II

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

- To understand the concept of state nation and civil society.

- To understand the elements and factors of state and nation.

- To learn the origin of the concepts such as law, power, Authority and legitimacy.

- To compare with procedure of various social institutions and Govt institutions.

INDIAN POLITICAL THEORY III   SEMESTER –III

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

- To understand the philosophy of Indian constitutions.

- To identity the causes impact of British colonial rule.

- Create value in young youth regarding the patriotism.

- To know the salient features in making of Indian constitution.

CONSTITUTION & POLITICS OF INDIA –IV   **SEMESTER –IV**

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

- To appreciate the fundamental rights and duties and the directive principles of state policy.

- To identify how electoral funating and consequences of political parties in India.

- Create value in young youth regarding the patriotism.

INTERNATIONAL RELATIONS –V (A)   **SEMESTER –V (A)**

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

- To demonstrate knowledge of key thinkers and concepts.

- To understand the nature methods and significance of political thought.

- To understand the relationship between religion and politics in early modern western political thought.

- To compare with the social contractualists thoughts of Hobbes, Lock and Rousseau and their view regarding state government and general will

GOVERNMENT & POLITICS IN TELANGANA –V (B)   **SEMESTER —V (B)**

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

- To appreciate the concepts of liberty representative government.

- To criticizes the causes for the theory of caste system in India and their Impact

- To understand the concept of power national, regional global and peace security.

- To understand the international political economy.

- To critically analyse the Indians bilateral relations with major power and neighbouring Countries.

- To learn about issues of diversity and internationalism.

GLOBAL POLITICS –VI (A)   SEMESTER –VI (A)

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

- To analyse the history of international relational through the causes and phases of colonialism.

- To know the impact of First World War and Second World War and its causes and consequences.

- To critiazies the various ideologies which lead to the destruction of world.

- To appreciates the post war developments through the emergence of third world.

SOCIAL MOVEMENTS –VI (B)   SEMESTER –VI (B)

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

- To understand the concept of power, nationalism, regional global and peace security.

- To understand the international organization and their modules nation.

- To analyse the international security arms Race, Arms Control and disarmament.

- To identity various issues and challenges towards international relations.

- To learn about issues of diversity and internationalism.

UG – B.Com   **NO.OF CEDITS PER WEEK =05**

Programme Specific Outcomes

The B.com(Gen + Computers) degree programme equip the students with the knowledge and technical skills necessary to understand and participate in the modern business world. The programme allows the students to critically evaluate and improve decision making skills.

It provides foundation for students who aspire to pursuer proffional courses such as CA, ICWA, CMA, ACCA, CFA and MBA. It enables students to equip themselves for careers. It enables them to develop entrepreneurial skills and thus manage their our business effectively. To strengthen their skills and knowledge workshop, seminars, guest lectures , business Quizzes and meek intern views are conducted during the course of study apart from the academics, multiple cultural and social activities such as intra – departmental and inter Collegiate cultural, social and environmental awareness programmes are conducted for holistic development and to create a secure of community.

Programme Specific Outcomes

On successful completion of this programme, students will be able to

- Understand the procedures relating to the preparation of financial statements and to utilize their knowledge and solve particular problems.
- Apply the techniques of management in their day to day managerial activities.
- Understand the methods of ascertaining product cost with practical knowledge on various costing techniques.
- Analyze the business situation using statistical tools.
- Apply the tools and techniques to arrive at rational decisions.
- Perform their personal banking functions.

- Demonstrate understanding about the fundamentals of financial services and players in financial sectors.

- Analyze the scenario in the Indian financial system and its operations and regulations.

- Demonstrate necessary skills to identify various investment alternatives and to take advantage of favorable investment opportunities.

- Present financial reports for forecasting the managerial decision making.

- Use the accounting packages, such as Tally for effective decision making and improved performance.

- Demonstrate and acquaint students with fundamentals of company laws and to expose them to the statutory provisions relating to the formulation and management of a company.

- Demonstrate knowledge of insight into various concepts like capital structure planning, cost of capital, dividend policies and working capital.

- Analyze the concepts and factors affecting human resource planning , recruitment and selection.

- Demonstrate an understanding of the conceptual framework of marketing and its applications in decision making under various environmental constraints.

- Provide an overview of the fundamental concepts of E- Commerce and to understand the web based business models and e-commerce business aplli8cations.

- Demonstrate inter personal communication, business etiquette and business relationship building skills.

- Acquire conceptual knowledge of the fundamentals of corporate accounting and techniques of preparing the financial statements.

- Understand the computation of income taxable under different heads.

- Demonstrate comprehensive knowledge on the various aspects related to entrepreneurial development and to manage new business ventures.

- Understand and evaluate the audit process and procedures.

- Show knowledge of Corporate Social Responsibility (CSR) initiatives.

- Understand the importance of international business and impact of globalization.

- Acquire a wide manage of exposure and gainful insights across various disciplines from the general elective courses offered by other departments.

ENVIRONMENTAL STUDIES   **SEMESTER–I**

On the completion of the course, Students will be able to

- Understand the definition, scope and importance of natural resources and associated problems
- Understand the concept of ecosystem and different types of ecosystem
- Understand biodiversity and its conservation
- Understand causes, effects and control measures of environmental pollution
- Understand the social issues and the various law to protect   environment

FINANCIAL ACCOUNTING - I   **SEMESTER–I**

On the completion of the course, Students will be able to

- Understand the accounting principles, concepts and convention and to identify various subsidiary books in accountancy.
- To record the basic journal entries.
- Analyse what bank reconciliation statement is and understand about rectification of errors and suspense account
- Rectify errors in accounts
- Understand the various methods of calculating depreciation.
- Maintain the final Accounts of Sole trader

BUSINESS ORGANIZATION   **SEMESTER–I**

On the completion of the course, Students will be able to

- Provide understanding about business organization

- Create understanding about different business organisation forms

- Familiarise with Partnership form of organisation and its comparison with sole proprietorship

- Provide understanding about kinds of companies and create awareness about multinational companies

- Get an idea about cooperative societies and Cooperative society movement in India

- Discuss the functions of SEBI and measures taken by SEBI to protect investors.

BUSINESS ECONOMICS   **SEMESTER–I**

On the completion of the course, Students will be able to

- Understand the role of business economics in decision making
- Analyse the demand determinants and measuring price elasticity of demand
- Analyse the peculiarities of factors of production
- Evaluate the supply and cost analysis of Total, Average and marginal curves.
- Identify Equilibrium, price and output decisions in various market forms

INFORMATION TECHNOLOGY   **SEMESTER–I**

On the completion of the course, Students will be able to

- Understand the concept of input and output devices of Computers and how it works.
- Understand the concepts, structure, types and design of operating Systems.
- Understand the concept of Data Communication, its Modes, its Forms and Data Communication Channels.
- Understand evolution of internet, its application and its basic services.

- Recognize when to use each of the Microsoft Office programs to create professional and academic documents.
- Create and design a spreadsheet for general office use.
- Students will have a working knowledge of basic functions and formulas in MS-Excel.

FINANCIAL ACCOUNTING - II   SEMESTER – II

On the completion of the course, Students will be able to
- Analyse the essentials of bill of exchange and its accounting treatment.
- Learn the accounting treatments in consignments, commission, Bad debts, valuation of unsold stock and calculation of normal and abnormal loss.
- Prepare joint venture accounts and methods of maintaining accounts.
- Understand the methods of calculating profits under single entry System.
- Understand the accounts of Non-Trading concerns..

MANAGERIAL ECONOMICS   SEMESTER – II

On the completion of the course, Students will be able to
- Apply marginal analysis to the "firm" under different market conditions;
- Understand the causes and consequences of different market structures;
- Apply economic models to examine current economic issues and evaluate policy options for addressing these issue
- Understand the meaning of marginal revenue and marginal cost and their relevance for firm profitability.
- Understand the basics of national income accounting
- Understand the causes and consequences of business cycles
- Understand the roles of fiscal and monetary policy in fighting recessions and inflation
- Understand factors that contribute to and detract from long-term economic growth
- Apply economic reasoning to understand the operation of an economy
- Apply basic international trade and finance concepts to global pricing issues, including working with exchange rates.

PRINCIPLES OF MANAGEMENT   **SEMESTER – II**

On the completion of the course, Students will be able to

- Develop knowledge about management
- Have a better understanding of planning and decision making
- Give an idea about organisation, departmentation and delegation
- Familiarise with directing, motivation theories, communication process and leadership
- Provide idea about requirements of coordination, control process and MIS

FOREIGN TRADE   **SEMESTER – II**

On the completion of the course, Students will be able to

- Compare at the level of formal analysis, the major models of international trade and be able to distinguish between them in terms of their assumptions and economic implications.
- Employ the principle of comparative advantage and its formal expression and interpretation within different theoretical models.
- Apply partial equilibrium and (where required) general equilibrium models in analysing the economic effects of (a) trade policy instruments such as tariffs, quotas, export subsidies, (b) retaliatory measures such as anti-dumping duties and countervailing duties and (c) the creation of regional trading arrangements such as free trade areas, customs unions and common market.

ADVANCED ACCOUNTING   **SEMESTER – III**

On the completion of the course, Students will be able to

- Learn about the journal entries of issue of shares and issue of debentures.
- To know about the meaning of companies and working style of companies.
- Know about about the final accounts of the companies.

- Learn about the valuation method of shares and goodwill and measurement of performance of companies.
- Work with profit prior to incorporation and post incorporation profits in companies accounts.
- Learn about the concept of sources of redemption of debentures and redemption of preference shares
- Easily examine the dissolution of partnership.
- Easily can prepare the journal entries of amalgamations and sale of partnership firms
- Understand the procedure for preparing capital accounts
- Understand and analyse the preparation of accounts on admission of partners
- Prepare accounts on retirement, death of partners

BUSINESS STATISTICS   SEMESTER – III

On the completion of the course, Students will be able to

- Student will able to apply knowledge to solve simple tasks using computer (MS Excel)
- Student will able to independently calculate basic statistical parameters (mean, measures of dispersion, correlation coefficient, indexes)
- Student will able to interpret the meaning of the calculated statistical indicators
- Student will able to choose a statistical method for solving practical problems
- Explain the primary concepts of statistics, data collection, sampling and tabulation
- Understand the concepts of measures of central tendency and solve problems
- Understand the various measures of dispersion and solve related problems
- Develop the ability to solve problems in correlation

INCOME TAX - I   **SEMESTER – III**

On the completion of the course, Students will be able to

- Understand the meaning of person, assesses, previous year, assessment year, total income
- Identify the residential status and incidence of tax and solve problems
- Compute taxable income from salary
- Compute taxable income from house property
- Understand the meaning of business and profession and compute taxable income

ENTREPRENEURIAL DEVELOPMENT AND BUSINESS ETHICS   SEMESTER – III

On the completion of the course, Students will be able to
- Student will able to understand the basic development of entrepreneurship as a profession.
- Student will have a basic knowledge of human resource management for small business.
- Student will able to identify and implement systems for collecting and analyzing information to monitor the performance of a new firm
- Student will able to understand the differences between an entrepreneurial venture and an ongoing business operation.
- Student will able to understand the critical roles of marketing research, competitive analysis, consumer-value proposition, and market-entry strategy in the development of a business plan.
- Student will able to describe examples of entrepreneurial business and actual practice, both successful and unsuccessful, and explain the role and significance of entrepreneurship as a career, in the firm, and in society.
- Student will able to understand the importance and role of ethical, sustainability, innovation and global issues for strategic decision making.
- Student will evaluate different modes of entering into entrepreneurship

- Student will able to understand the importance and role of ethical, sustainability, innovation and global issues for strategic decision making.

PROGRAMMING WITH C   SEMESTER – III

On the completion of the course, Students will be able to
- Describe the concept of Programming.
- understand the features of Pointer in C
- understand the use of Array in C
- understand the function of Union and Structure
- Understand the concept of Display Methods.

CORPORATE ACCOUNTING   SEMESTER – IV

On the completion of the course, Students will be able to
- Calculate purchase consideration in case of Amalgamation, Absorption and reconstruction.
- Know about the companies all accounts.
- Get the Knowledge of banking system.
- Learn about working format of companies.
- Find out how can liquidation of company

BUSINESS STATISTICS - II   SEMESTER – IV

On the completion of the course, Students will be able to
- Student will able to explain probability theory and probability distributions in relation to general statistical analysis.
- Student will able to Understand and appreciate the need to solve a variety of business- related problems using a systematic approach involving accepted statistical techniques.
- Develop the ability to solve problems in regression analysis
- Calculate the index numbers and understand the concept of time series and their application

INCOME TAX - II   **SEMESTER – IV**

On the completion of the course, Students will be able to

- Identify long term and short term capital gain and calculate taxable capital gain
- Understand income under the head other sources and solve problems
- Compute set-off and carry forward of losses and aggregation of income
- Identify the deductions from Gross Total Income and understand returns, filing of return of income, due date, kinds of assessment and assessment procedure
- Compute income tax liability of individuals

AUDITING   **SEMESTER – IV**

On the completion of the course, Students will be able to

- Gain knowledge about auditing, audit programmes, working papers and preliminaries before audit.
- Analyse about implementing internal check and internal control in concerns.
- Understand the various aspects of vouching.
- Learn how to verify and value various assets and liabilities
- Evaluate the traits of Company Auditor and how to draft Auditors Report.

CONSUMERISM   **SEMESTER – V**

On the completion of the course, Students will be able to

- Gain knowledge about different types of consumers
- Understand the procedure to file a complaint and the steps to handle complaints
- Identify the functions of consumer dispute redressal agencies
- Analyse consumer exploitation and remedial measures to eliminate such exploitation

ORGANIZATIONAL BEHAVIOUR   **SEMESTER – V**

On the completion of the course, Students will be able to

- The Students clearly know the behavior of individuals and groups as part of the social and technical system in the work place.

- Identified the processes used in developing communication and resolving conflicts and explained the group dynamics and demonstrate skills required for working in groups (team building).

- The students may familiarize in various leadership styles and the role of leaders in a decision making process.

- This subject explained organizational culture and describe its dimensions and to examine various organizational designs.

- The students may clearly know the implementation of organizational change.

- On successful completion of the course the students should have to learn the various aspects and concepts in OB and learn OB theories clearly.

COST ACCOUNTING   **SEMESTER – V**

On the completion of the course, Students will be able to

- Understand the importance of costing in companies

- Gain knowledge about losses in process costing

- Define the various components of total cost of a product i.e. direct & indirect cost and fixed & flexible cost.

- Determine various levels of material i.e. reorder level, minimum level, maximum level & EOQ for managing working capital.

- Use methods of time-keeping & time-booking and manage idle & overtime.

- Define the features of overhead or indirect cost of production and basis of allocation and apportionment.

- Use cost-sheet to compute unit cost of product.

- Determine basis for computing tender price of a product.

BUSINESS LAW   **SEMESTER – V**

On the completion of the course, Students will be able to

- Understand the law and procedure of the contracts
- Analyse performance and the remedies
- Get clear idea about the guarantee of the parties under the contract
- Summarize sale of goods and rights and duties of buyer and seller
- Critically evaluate conditions and warranties of sale of goods act.
- Aware about rights to information.
- Aware about Consumer protection act
- Aware about Environment protection act

BANKING THEORY AND PRACTICE   **SEMESTER–V**

On the completion of the course, Students will be able to

- To   provide   knowledge   about commercial banks and its Services.

- To enable them to understand better customer relationship.

- To create awareness about modern banking services like e-banking, m- banking and Internet banking

- Demonstrate a comprehension of the principles of banking law and its relationship to banks and customers.

- Demonstrate an awareness of law and practice in a banking context.

- Engage in critical analysis of the practice of banking law from a range of perspectives.

- Organize information as it relates to the regulation of banking products and services.

COMPUTERIZED ACCOUNTING   **SEMESTER–V**

On the completion of the course, Students will be able to

- Gain the practical knowledge, implementation and operation of business with computer applications
- Work with simple formula for computation of Statement of Accounts.
- Achieve hands-on experience with productivity/application software to enhance business activities
- Accomplish projects utilizing
- Business theories, teamwork, Internet resources and computer technology.

FINANCIAL MANAGEMENT   **SEMESTER–V**

On the completion of the course, Students will be able to

- Understand both the theoretical and practical role of financial management in business concerns.
- Analyze the financial statements of individual corporations both in terms of their performance and capital requirements
- Have a greater apprehension and understanding of the importance of risk within the context of financial decision making
- Access financial information from a wide variety of sources and use this information to research and assess the business concerns.

PRINCIPLES OF MARKETING   **SEMESTER–V**

On the completion of the course, Students will be able to

- Students can identify how consumer behaves differently.
- Understand how a product passesed from different stages.
- Understand the difference between trademark and branding.
- Describe the customer segmentation, target marketing and positioning.
- Understand different methods of sale promotion.

- State and define what marketing is, its role in the organization, whether it is redundant and why it matters.
- Describe the elements of the Marketing Mix, its importance and its application
- List the elements of branding, why it is important and what makes a great brand.
- Describe marketing research, how it is done and how it helps in achieving marketing effectiveness.
- Describe the concept of buyer persona and its importance for constructing effective marketing campaigns.
- Describe how to construct a customer journey from discovery to purchase.
- As the name suggests, digital marketing can be termed as or defined as an approach, a strategy, or a branding and marketing exercise using digital platforms. Digital Marketing is the
- promotion of your brand, product or service online

E- COMMERCE   **SEMESTER–V**

On the completion of the course, Students will be able to

- Logically observed and experienced the main activities of E-Commerce.
- Learned and evaluated about the various components of E-Commerce.
- Conceptually learned the concept of online shopping and models of Electronic market.
- Thoroughly learned the concepts of instant messaging and Electronic Data Exchange. Learned about the implementation of HTTP and Secure Electronic transaction

OBJECT ORIENTED PROGRAMMING IN C++   **SEMESTER–V**

On completing the Course, students will learn:
- Articulate the principles of object-oriented problem solving and programming.
- Outline the essential features and elements of the C++ programming language.
- Explain programming fundamentals, including statement and control flow and recursion.
- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.
- Program with basic data structures using array
- Program using objects and data abstraction, class, and methods in function abstraction.
- Program concepts of constructors and constructor overloading.
- Programming concepts of the Inheritance and its types.
- Usage of Templates.
- Programming Concepts of polymorphism and its types
- Analyze, write, debug, and test basic C++ codes using the approaches introduced in the course.

PREPARATION OF TAX RETURN   **SEMESTER – VI**

On the completion of the course, Students will be able to

- Able to understand amendments made from time to time in Finance Act.
- Differentiate between direct and indirect tax assessment

ADVERTISING   **SEMESTER – VI**

On the completion of the course, Students will be able to

- This Course will help the students to become a good Advertisers and Sales Executives.

- To understand the objectives, types and effective measures for Advertising.

- To familiarize with the Media of Advertising which enable students to choose a proper media for the Advertisement.

- To provide better skill development for a successful Salesman by understanding the way to interact with suppliers and customers

- To understand the effectiveness of Sales organization and to be able to become a successful Sales Manager.

MANAGEMENT ACCOUNTING   SEMESTER – VI

On the completion of the course, Students will be able to

- Understand the objectives and functions of management accounting

- Imparted knowledge on capital budgeting and decision making techniques.

- Provide knowledge about the preparation of various kings of budgets.

- Evaluate the financial position by using ratios

- Define the terms with regard to BEP analysis.

COMPANY LAW   SEMESTER – VI

On the completion of the course, Students will be able to
- Different kind of corporate entities that are permitted to be set up
- Company incorporation and rules and procedures for running a company
- Manner of raising funds and roles and responsibilities of directors
- Rights and obligations of shareholders and other stakeholders including employees and creditors
- Winding up of a company and its procedures Strategies

FINANCIAL INSTITUTIONS AND MARKETS   **SEMESTER – VI**

On the completion of the course, Students will be able to

- Understand the structure and classification of capital market and analyse about Indian securities market.
- Analyse about the Intermediaries in the financial market, methods through which the capital fund has been raised.
- Understand the functions of stock exchange, listing of securities and major stock exchanges.
- Analyse the commodity and financial derivatives and trading mechanisms.
- Discuss the functions of SEBI and measures taken by SEBI to Protect investors.

COMMMERCE LAB   **SEMESTER – VI**

On the completion of the course, Students will be able to

- Understand the use of the memorandum of association and article of association in a company, they also learn from this course.
- Use of prospectus in a company.
- Aware about rights to information.
- Aware about Consumer protection act
- Identify the deductions from Gross Total Income and understand returns, filing of return of income, due date, kinds of assessment and assessment procedure
- Compute income tax liability of individuals
- create awareness about modern banking services like e-banking, m- banking and Internet banking
- The students are given an introduction about the risks and Insurance as a measure to manage risk.
- Detailed explanation regarding the different types of insurance and its modalities are included.
- Students will get knowledge about the usage of insurance in personal and business life.

HUMAN RESOURCE MANAGEMENT   **SEMESTER – VI**

On the completion of the course, Students will be able to

- Learn the qualities of human resource manager in an organization.
- Analysis the importance of different methods of training given to the employees in organization.
- Memorize the difference between on the job training and of the job training.
- familiarize the Students about the concepts of Staffing, Training, Transfer, Promotion, Human factors consideration and Appraisal methods.
- Students would become acquainted with the Human Resource Development, Career Planning and Job Evaluation methods.
- Understand the methods of Performance appraisal

WEB TECHNOLOGIES   SEMESTER – VI

On completion of this course, a student will be able

- Familiar with client server architecture and able to develop a web application using java technologies - The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Formats and languages used in modern web-pages: HTML, XHTML, CSS, XML, XSLT, Javascript, DOM.
- Programming web pages with JAVAscript/DOM (client) Good design, universal design, multi platform web applications
- Students will gain the skills and project-based experience needed for entry into web application and development careers.
- Students are able to develop a dynamic webpage by the use of java script
- Course Outcomes: Students will be able to connect a java program to a DBMS and perform insert,
- Students will be able to write a well formed / valid XML document.

TAX PLANNING & MANAGEMENT   **SEMESTER – VI**

On the completion of the course, Students will be able to

- To expose the students to the latest provisions of Income Tax Act.
- To identify the Tax Planning and Assessment Procedures for Individuals, Firms and Companies.
- Students will get working knowledge regarding legitimate way of tax planning under different financial/ managerial decisions after taking into consideration the impact of Direct Tax Laws.

RELATIONAL DATABASE MANAGEMENT SYSTEMS   **SEMESTER – VI**

At the end of this course, each student should be able to:

- Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models.
- Identify basic database storage structures and access techniques such as file organizations, indexing methods including B-tree, and hashing.
- Learn and apply Structured query language (SQL) for database definition and database manipulation.
- Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
- Understand various transaction processing, concurrency control mechanisms and database protection mechanisms

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UG --B.Sc / Botany   **NO.OF CEDITS PER WEEK =05**

PROGRAMME SPECIFIC OUTCOMES
BSc BOTANY

- Student is able to understand and analyse morphological, anatomical and reproductive behaviour of both non flowering and flowering plants.
- He is able to understand different metabolic processes happening in plant cell
- He can analyse the pattern of inheritance and have the knowledge regarding the molecular basis of inheritance.
- He will have a knowledge regarding the complexity of ecosystem and importance of bio diversity and its conservation.
- He is able to understand the process of vertical gene transfer and process of plant tissue culture, organ culture and micropropagation.

Course out comes
B.Sc Botany

MICROBIAL DIVERSITY AND LOWER PLANTS -I   **SEMESTER –I**

On the completion of the course, Students will be able to

- Student will have knowledge regarding the origin of life and how the evolution has progressed by studying the different earlier life forms.
- By studying the thallus structure and life cycles of non-flowering plants he can understand how the complexity has been increased during the process of evolution.

- He can analyse different plant communities basing on their vegetative and reproductive structures.

GYMNOSPERMS, TAXONOMY OF ANGIOSPERMS AND ECOLOGY –II   SEMESTER –II

On the completion of the course, Students will be able to

- By studying the earlier seed bearing plants Gymnosperms he can understand the process of evolution forming the flowering plants.
- The student can compare the morphological and evolutionary trends among the flowering plants. He can identify and assign the plants to their respective systematic position.
- Student can conceptualize the nature, ecosystem, their behaviour and complexity.

ANOTOMY AND EMBRYOLOGY -III   SEMESTER –III

On the completion of the course, Students will be able to

- He can understand anatomical features of different plant organs microscopically.
- He can ascertain how the environmental conditions and adaptive behaviour of plants led to anatomical changes in plant organs.
- He can be in a position to understand the basic embryological behaviour of Angiosperms like gametogenesis, fertilization and development of embryo in Angiosperms.

CELL BIOLOGY, GENETICS AND PLANT PHYSIOLOGY -IV   SEMESTER –IV

On the completion of the course, Students will be able to

- He will have knowledge regarding the plant cell structure, cell division, and behaviour of chromosomes during cell division.
- He will understand the pattern of inheritance and also have knowledge regarding Mendelian and non Mendlian pattern of inheritance. He will also have an idea regarding the molecular basis of inheritance.
- He will have the knowledge regarding the different physiological processes happening in plant and how various bio chemical molecules interact and function.

CELL BIOLOGY AND GENETICS –V (A)   SEMESTER –V

On the completion of the course, Students will be able to

- He will have knowledge regarding the plant cell structure, cell division, and behaviour of chromosomes during cell division.
- He will understand the pattern of inheritance and also have knowledge regarding Mendelian and non Mendlian pattern of inheritance. He will also have an idea regarding the molecular basis of inheritance.

ECOLOGY AND BIO DIVERSITY –V (B)   SEMESTER –V

On the completion of the course, Students will be able to

- He can understand complexity of nature, components of ecosystem and inter dependence of different components of natural ecosystem

- He will have the knowledge regarding the concept of biodiversity and its importance to humankind. He will also have knowledge regarding the geographical regions of world and India with reference to their biological diversity and ecological sensitivity.
- He will also have knowledge regarding the conservation of bio diversity both in situ and ex situ.

PLANT PHYSIOLOGY –VI (A)   **SEMESTER –VI**

On the completion of the course, Students will be able to

- The student is able to understand the different anabolic and catabolic processes happening in the plant cell.
- He also able to understand enzyme kinetics and the role of phytohormones in different biochemical reactions.
- He will have a knowledge regarding the growth, senescence, photoperiodism and flowering biology.

PLANT TISSUE CULTURE AND BIOTECHNOLOGY –VI (B)   SEMESTER –VI

On the completion of the course, Students will be able to

- He is able to understand the phenomena of totipotecy, plant tissue and organ culture and the process of micropropagation.
- He will have the basic knowledge regarding the rDNA technology and the methods of producing transgenic plants. He will understand the process of vertical gene transfer.

UG – BZC/ZOOLOGY -I **NO.OF CEDITS PER WEEK =04**

Zoology Specific Outcomes

B.Sc Zoology

- A broad understanding of animal diversity, including knowledge of the scientific classification and evolutionary relationship of major groups of animals.

- Recognition of the relationship between structure and functions at different levels of biological organization (Molecules, cells, organs, Organisms, Populations & Species) among the groups of animals.

- Explaining the functions of an organism at different levels-gene,genome,cell,tissue,organ and organ system

- Characterization of the biological, chemical, physical features of environment(terrestrial, fresh water & marine and in the host Parasitism)that animals inhabit

- Explaining the interaction among the animals and with the environment and also the adaptation involved there in (for development,reproduction,behavior and physiological)

- Understanding the applied biological sciences (Scriculture,Africulture,Aquaculture,Vermiculture,Cattle breeding)for career building.

B.Sc Zoology

ANIMAL DIVERSITY: INVERTEBRATES: I   **SEMESTER: I**

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

- Students will learn the basic taxonomy and systematics of non chordates
- They will learn about common protozoan,helminth parasites causing diseases to human beings
- .students will learn not only about biology of few selected non chordates but also about pearl formation ,metamerism in Annelids,economic importance of insects and know the significance of larval forms of Echinoderms

ANIMALDIVERSITY-VERTEBRATES-II   **SEMESTER –II**

After the successful completion of the course the student will be able to

- Students will learn about the taxonomic status of the chordates and the evolution of the group
- They will learn about the comparative and development in chordates.
- They will know about conserve and management strategies of chordate fauna.

ANIMAL PHYSIOLOGY AND ANIMAL BEHAVIOUR-III   **SEMESTER –III**

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

- Provide students with learning experiences that help in still deep interests in learning Digestion , Respiration , circulation , excretory products, Urine formation, muscle contraction mechanism, Conduction of Nerve impulse , Endocrine glands , Enzymes ,biochemistry, and animal Behaviour.

- Develop broad and balanced knowledge and understanding of learning Digestion , Respiration , circulation , excretory products, Urine formation ,muscle contraction mechanism, Conduction of Nerve impulse , Endocrine glands , Enzymes, biochemistry, biomolecules, key biochemical concepts, principles and theories related to biochemistry and Animal Behaviour equip students with appropriate tools of analysis and with theoretical, technical and analytical skills to tackle issues and problems in the field of biochemistry

- Provide students with some work experience, for example a summer internship or a research project in a research laboratory to further boost the career prospects.

- Develop in students the ability to apply the knowledge and skills they have acquired to the solution of specific theoretical and applied problemsin physiology and biochemistry

- Provide students with the knowledge and skill base that would enable them to undertake further studies in physiology and biochemistry and related areas or in multidisciplinary areas that involve biochemistry and help develop a range of generic skills that are relevant to wage employment, self-employment and entrepreneurship.

CLL BIOLOGY, GENETICS & DEVELPOMENT BIOLOGY –IV   SEMESTER –IV

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

- Students will know about the cell and its biology, which will help the students to understand the origins of cells and the generation of cell diversity, as well as the common features of cellular structure and function – how they obtain energy, synthesize new molecules, communicate, proliferate and survive.

- By studying molecular biology students will gain an understanding of the DNA&RNA structure, protein synthesis ,gene expression ,and molecular techniques.

- Students will understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organ

- Students will understand and gain knowledge of developmental biology along with physiology and fundamental processes of fertilization of an egg cell and its step-by-step transformation into the fascinating complexity of a whole organism.

- By studying genetics students will gain an understanding of the sex determination, sex linkage, and chromosomal mutations and in born errors.

PHYSIOLOGY AND BIOCHEMISTRY-V   **SEMESTER – V**

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

- To describe students with learning experiences that help in still deep interests in learning Digestion , Respiration , circulation , excretory products, Urine formation,muscle contraction mechanism, Conduction of Nerve impulse , Endocrine glands , Enzymes,biochemistry.
- To understand knowledge of Digestion , Respiration , circulation , excretory products, Urine formation,muscle contraction mechanism, Conduction of Nerve impulse , Endocrine glands , Enzymes,biochemistry, biomolecules, key biochemical concepts, principles and theories related to biochemistry;and equip students with appropriate tools of analysis and with theoretical, technical and analytical skills to tackle issues and problems in the field of biochemistry
- Provide students with some work experience, for example a summer internship or a research project in a research laboratory to further boost the career prospects.
- Develop in students the ability to apply the knowledge and skills they have acquired to the solution of specific theoretical and applied problemsin physiology and biochemistry

IMMUNOLOGY AND ANILMAL BIOTECHNOLOGY –V (A)   SEMESTER –V

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

- To get insight in Primary and Secondary organs of Immune system, Types of Immunity – Innate and   acquired
- To describe Antigen city and factors affecting it, antibody-antigen interaction, autoimmune diseases. Transgenesis – Methods of Transgenesis, Production of Transgenic animals , Application of Transgenic animals in Biotechnology
- To explain cell mediated immunity, Monoclonal antibody production and Hypersensitivity.
- To understand the steps involved in recombinant DNA technology, Cloning vectors and principles of animal culture, media preparation ,Invitro fertilization and embryo transfer technology
- To get insight in applications or recombinant DNA technology

APPLIED ZOOLOGY- VI   SEMESTER –VI

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

- Learn about aquacultural practices, techniques and methods of fishery industries, cultivalble fishes, shell fishes and fishery by products.
- Culture of different silk worms, disease and pests of Bombyx mori,quality bof sil,silk gland and marketing of silk.
- Bee hive formation,diseases of bees,byproducts.
- Learn about Vermiculture
- Cattle formation.

AQUATIC BIOMES – VI (A)   **SEMESTER –VI**

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

- About different habitats(Fresh water,Estuaries,Intertidal)
- Importance & problems of coral reefs.
- Know about Lakes(Origin & Classification)
- Know the physic chemical properties of fresh water bodies & Nutruent cycles(N_2,P,S)
- Importance of salinity & density
- Aquatic pollution causes,prevention,eutrophication and Seewage treatment ,BOD,COD,importance

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UG – B.SC MATHEMATICS -I   **NO.OF CEDITS PER WEEK =05**

Mathematics Specific Outcomes
B.Sc. MATHEMATICS

- Acquire good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of mathematics and statistics.

- Encourage the students to develop a range of generic skills helpful in employment internship and social activities.

- This program also leads to study of related areas like Computer science, Financial Mathematics, Statistics and many more.

- This program will also help students to students to enhance the for government jobs in banking, incident and investment sector and data analytic job and jobs in various other public and private enterprises.

- B.sc Mathematics is awarded to the students and the basis of Knowledge understanding, skills attitudes, Values and academic achievements sought to be required by learner the end of this program.

- Student undergoing this program learn to logically question assertions, to recognize patterns and distinguish between essential and irrelevant aspects of problems.

COURSE OUTCOMES

B.Sc. MATHEMATICS

DIFFERNTIAL AND INTEGRAL CALCULUS -I   **SEMESTER –I**

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

- Determine the maximum domain for functions of two variables and construct level curve as a tool for visualizing a function graph.
- Student learns how to find higher order derivatives using implicit differentiation.
- Student find radius of curvature of curve at any points.
- Student know how to find the length of curves
- Expression for the volume obtained by revolving about either area.

DIFFERNTIAL Equation-II   **SEMESTER –II**

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

- Student will be able to .find complete solution of a non homogeneous differential equation as a linear combination of the complementary function and a particular solution.
- Student will be able to solve first order differential equations.
- Applies the method of undetermined co efficient to solve the non homogeneous differential equations with constant quotients.
- Express the basic existence theorem for higher order linear differential equations.
- Use the method of variation of parameters to find the solution of higher order liner differential equations with variable coefficient.

ANALYSIS III   **SEMESTER –III**

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

- Determine infinite sequence is bounded or not and also determine if an infinite series is convergent or divergent by using all tests.
- To find derivatives of exponential and logarithmic functions.
- Student will be able to apply limiting properties describe and prove differentiability condition for real and complex functions.
- They will be able to prove important theorem s such as roles and mean value theorem.
- It describes that calculation of area under a curve by using reimansum and explains how this value can convert to the definite integral.

ALGEBRA -IV   **SEMESTER –IV**

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

- Student understand how to use technique and theorems of Group theory analyse the structure of finite groups.
- Student should be able to use definitions and theorems to solve problems in group theory and prove new theorem.
- Students learn how to create cosets from group, sub group and also verify that a given function is homomorphism (Isomorphism).
- To write precise and accurate mathematical object in Ring theory.
- Know how to add and multiply polynomial over arbitrary fileds and able to use this to define polynomial rings

LINEAR ALGEBRA -V   SEMESTER –V

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

- Analyse the solution set of system of linear equations.

- Apply properties of determinants to compute determinants of matrix.

- Construct the characteristic polynomials of a matrix and use it to identify Eigen values and their multiplicities.

- Characterise the long term behaviour of dynamical systems using Eigen value decompositions.

- Explain concept of inner product on vector spaces.

ANALYTICAL SOLID GEOMENTRY –V (A)   SEMESTER –V

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

- Understand relationship between different coordinate system and plot curve in Spherical cylindrical polar coordinate.

- All the students should be able to calculate the curve surface area of a cone using the formula.

- Find the parametric representations of a cylinder a cone and a sphere.

- Obtained standards forms of an ellipsoid,hyperbocoid one sheet and hyperboloid of two sheets.

- Obtain tangent lines and tangent planes at a point to a central conicoid.

VECTOR CALCULUS -VI   SEMESTER –VI

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

- Use a line integral to compute the work done in moving an object along a curve in a vector field.

- Minimize the definition of directional derivative and radiant and illustrate geometric meaning with the aid of sketches.

- Find the parametric representation of a cylinder a cone and a sphere.

- Use the properties of curl and divergent to determine weather a vector field is conservative.
- Recognize irrotational and solenoid vector filed.

NUMERICAL ANALYSIS –VI (A)   SEMESTER –VI

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

- Use the bi-jection method to solve examples of finding rules of a non linear equation.
- To learn the concepts of interpolation.
- Student will be able to investigate the solution of a non linear system of equation.
- Student will be able to research numerical solutions of differential equation of systems.
- Student will be able to perform mathematical operations on numerical analysis.

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UG --B.Sc / Physics   **NO.OF CEDITS PER WEEK =05**

Programme Specific Outcomes

B.Sc Physics

By the end of the course, the students will be able to

- Students are expected to acquire knowledge in physics, including the major premises of classical mechanics, quantum mechanics, electromagnetic theory, electronics, optics, special theory of relativity and modern physics.

- Students are also expected to develop written and oral communication skills in communicating physics-related topics.

- Students should learn how to design and conduct an experiment (or series of experiments) demonstrating their understanding of the scientific method and processes. Not only that they are expected to have an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.

- Students will develop the proficiency in the acquisition of data using a variety of laboratory instruments and in the analysis and interpretation of such data.

- Students will learn the applications of numerical techniques for modeling physical systems for which analytical methods are inappropriate or of limited utility.

- Students will realize and develop an understanding of the impact of physics and science on society.

- Apply conceptual understanding of the physics to general real-world situations.

- Describe the methodology of science and the relationship between observation and theory.

- Learn to minimize contributing variables and recognize the limitations of equipment.

- Discover of physics concepts in other disciplines such as mathematics, computer science, engineering, and chemistry.
- Develop the following experimental tools: Numerically model simple physical systems using Euler's method, curve fitting, and error analysis.
- Analyze physical problems and develop correct solutions using natural laws.

Course Outcomes
B.Sc Physics

MECHANICS -I   **SEMESTER –I**

On the successful completion of the course the student will be able to
- Understand the concept of central forces and vector analysis.
- Study the behaviour of rigid body dynamics
- Understand the negative result of michelson morley experiment, galilean and lorentz transformation Students will be able to investigate Young's modulus and rigidity modulus
- Students are able to understand various properties of liquids i.e. surface tension, refractive index, viscosity

WAVES AND OSCILLATIONS -II   **SEMESTER –II**

On the successful completion of the course the student will be able to
- Understand the concept of fundamentals of vibrations.
- Understand the concept simple harmonic motion, Damped Oscillations and Force oscillations. Understand the concept of vibrating in strings and bars.
- Understand the oscillations in simple, compound pendulum and bifilar suspension.
- Understand the concept laws of stretched strings

THERMODYNAMICS -III   **SEMESTER –III**

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

- Understand the concepts kinetic theory of gases.

- Understand the concept of Low temperature physics and black body radiation

- Understand the concept of Maxwell's Equations

- Understand thermal conductivity of a bad conductor by Lee's method.

- Understand Specific heat of a liquid by applying Newton's law of cooling correction

OPTICS -IV   **SEMESTER –IV**

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

- Overview of Interference, Diffraction and Polarization.

- Details of Aberrations and Fiber Optics

- Understand measurement of wavelength using Newton's Rings method and minimum deviation , Normal method

- Understand Resolving power of telescope, Dispersive power of prism

- Understand the optical rotation.

ELECTROMAGNETISM-V   **SEMESTER –V**

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

- Study the electric field using coulomb's inverse square law in electrostatics of current

- Understand the chemical and heating effect of current

- Understand the relations between b, h and m

- Understand the faradays laws of electromagnetic induction

- Understand the Thevenin Theorem, Norton Theorem, Superposition Theorem and maximum power transfer theorem.
- To determine a small resistance by Carey Foster's bridge.
- To determine the (a) current sensitivity, (b) charge sensitivity, and (c) CDR of a B.G

SOLID STATE PHYSICS -VI   SEMESTER –V

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

- Understand the basic concepts of force between atoms and bonding between molecules
- Analyze the relationship between conductors and insulators and super conductivity
- Understand about types of lasers and its functioning
- Understand the PE Hysteresis loop of a Ferroelectric Crystal, the BH curve of Fe using Solenoid & energy loss from Hysteresis.
- Understand the resistivity of a semiconductor (Ge) with temperature by four-probe method.

MODERN PHYSICS-VII   SEMESTER –VI

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

- Understand Wave Particle Duality de Broglie hypothesis, Experimental confirmation of matter wave, Davisson Germer Experiment, velocity of de Broglie wave.
- Understand Nuclear Physics Size and structure of atomic nucleus and its relation with atomic weight.
- Understand RadioactivityUnderstand Atomic Spectra and Models of classical physics.
- Understand the Thevenin's Theorem, Norton Theorem, Superposition Theorem and maximum power transfer theorem.
- To determine a small resistance by Carey Foster's bridge.

- To determine the (a) current sensitivity, (b) charge sensitivity, and (c) CDR of a B.G

BASIC ELECTRONICS-VII   **SEMESTER –VI**

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

- Understand Network Elements and Network Theorems.
- Understand Band theory of P-N junction, diodes and transistors.
- Understand the importance of Digital Electronics.
- Understand AND, OR, NOT, NAND and NOR gates Truth table
- Understand Characteristics of a Transistor in CE configuration and R.C. coupled amplifier – frequency response.
- Understand De Morgan's Theorem and Zener diode V-I characteristic

UG – B.Sc MPC / BZC CHEMISTRY-I   NO.OF CEDITS PER WEEK=04

Programme Specific Outcomes

B.Sc MPC / BZC CHEMISTRY

On the successful completion of three years of B.Sc Chemistry course the students will be able to

- Have sound knowledge about fundamental and applications of chemical and scientific theories.

- Understand the fact that every branch of science is related to chemistry.

- Easily asses the properties of all elements discovered.

- Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.

- Be familiar with different branches of chemistry like analytical, organic, inorganic, physical, bio chemistry and drug chemistry.

- Understand the causes of environmental pollution and can open up with new methods for control.

- Develop analytical skills and problem solving skills requiring applications of chemical principles.

- Acquire the ability to synthesise, separate and characterize compounds using laboratory and instrumental techniques.

- Provide theoretical background and develop practical skills for analysing materials using modern analytical methods and instruments.

- Become professionally skilled for higher studies.

- Gain in depth knowledge that helps himself/herself to qualify for higher academics and competitive exams.

COURSE OUTCOMES

B.Sc MPC / BZC CHEMISTRY

CHEMISTRY - PAPER-I   **SEMESTER –I**

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

- Understand how the concept of valency can account to predict the formula of the compound.
- Understand general trends in chemistry behind p-Block elements.
- Gain the knowledge of bond polarity , electronic effects of organic compounds.
- Acquire the Knowledge of states of matter , nature of solutions.
- Equipped with concepts of principles theories and practical applications of chemistry
- Demonstrate with the knowledge of special arrangement,properties of stereo isomers.

CHEMISTRY- PAPER-II   **SEMESTER –II**

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

- Develop interest and understanding about the basic concepts of the structures,chemical properties of inorganic molecule entities-P-block,Zero-block,and d-block elements.
- Gain knowledge in classification , nomenclature , nucleophilic substitutions for halogen compounds.
- Learn about Hydroxyl compounds , Carbonyl compounds , Loss of electro chemistry.
- Boost their career and employment oppurtunities with the help of theory of qualitative analysis.
- Understand the CIP rules , R-S Nomenclature , colligative properties and were able to calculate problems based on solution concepts.

CHEMISTRY PAPER-III   **SEMESTER –III**

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

- Learn about fundamental concepts of f-block elements co-ordination compounds.
- Apply knowledge and understand reactions of Metal carbonyls , OMC and applications of RMgX.
- Demonstrate an understanding of various thermodynamic terms , parameters and loss.
- Gain skill and knowledge in evaluation analytical data carbanion applications.
- Learn about Phase rule-Heterogeneous system. Nomenclature and reactivity of Carboxylic acids and Nitrogen compounds.

CHEMISTRY PAPER-IV   **SEMESTER –IV**

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

- Learn the importance of carbohydrates , amino acids their structures synthesis and properties The students can apply their learnt knowledge of Chemical Kinetics Rate of reactions , Rate loss and different order Reactions.
- Learn about essential elements their biological significance and toxicity of heavy metals.
- Gains skill and knowledge for CFT Properties of Complex compounds and pearson concept.
- Gain the knowledge of photo chemistry – laws , Quantum yield – Jablonski diagram.
- Learn about Colloids , Surface chemistry and Isotherms.

CHEMISTRY PAPER – V   **SEMESTER –V**

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

- Have an insight into crystal field splitting , applications of co-ordination compounds & Boranes –Carboranes.
- Have first hand information about Amines ,Heterocyclic Compounds-nomenclature,preparations & properties.
- Discuss the physical chemistry part of chemical kinetics-rate of reaction,rat law,Order of reactions ,characteristics,rate constant ,half life time.
- Work on EMR,molecular spectroscopy,IR,UV-VISIBLE & Rotational spectroscopy.
- Promote themselves for higher studies through the knowledge of Photochemical reactions,laws of photochemistry,Quantum yield,Jablonski diagram.

CHEMISTRY PAPER – VI   **SEMESTER –V**

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

- Understand the fundamental principles of Chromatography,classification,principles – Rf values.
- Understand about Electro Analytical Techniques-Interfacial methods,bulk methods.
- Gain knowledge on general features of Absorption Spectroscopy,colorimetry and Spectrophotometry.

CHEMISTRY PAPER – VI I   **SEMESTER –VI**

.On the successful completion of the course the students will be able to

- Understand and learn about Inorganic Reaction Mechanism-Lability & Inertness ,Trans Effect & biological importance of elements.
- Gain knowledge of Haemoglobin structure ,functions,Chlorophyll structure & its importance.
- Understand core criteria of Pearson Theory –HSAB Concept stability applications.
- Understand the basic idea of Biomolecules –Carbohydrates,Amino acids-proteins structure,classification ,preparations & properties.
- Demonstrate an understanding of various thermodynamic functions,parameters,laws,carnot theorm,Entropy & Gibbs Function.
- Gain basic idea on Proton Magnetic Resonance spectroscopy and Mass Spectroscopy.

CHEMISTRY PAPER – VIII   **SEMESTER –VI**

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

- Get the basic idea of medicinal chemistry, ADME for drugs. Introduction and terminology on diseases and drug metabolism.
- Understand the concept of enzymes and receptors Which will be helpful for drug action receptor theory.
- Get the basic idea of structure- activity relations of drug molecules.
- Learn about synthesis and therapeutic activity of drugs, chemo therapeutics, metabolic disorders.

- Familiarise himself/herself with knowledge of molecular messengers and health promoting drug concepts.

UG – B.Sc MPCS / COMPUTERS-I   **NO.OF CEDITS PER WEEK=05**

Programme Specific Outcomes (PSOs)

B.Sc (MPCs)

- Students develop problem solving skills and methods and develop logical tools and models used to solve various real life problems.
- Students acquire knowledge of traditional and modern techniques of solving algebraic, transcendental equations, differential and integral equations, which have applications in many disciplines.
- The students attain sound knowledge in the areas of Mechanics, Thermal Physics, Waves and oscillations, optics, electromagnetism, modern physics, solid-state physics for pursing higher education and research.
- Ability to design and develop software applications to address real time problems using Programming languages, Databases, Operating Systems, and Computer Network Concepts.

COURSE OUTCOMES

B.Sc MPCS

PROGRAMMING IN C I   SEMESTER I

After the completion of this course, the students will be able to develop applications.

- Students will acquire knowledge about: Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.
- Demonstrate an understanding of computer programming language concepts. To be able to develop C programs on Linux platform.

- Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.

- Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures. Student must be able to define union and enumeration user defined data types.

- Develop confidence for self education and ability for lifelong learning needed for the computer language.

Programming in C++   I   SEMESTER II

After completing the Course, students will learn:

- Articulate the principles of object-oriented problem solving and programming.
- Outline the essential features and elements of the C++ programming language.
- Explain programming fundamentals, including statement and control flow and recursion.
- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.
- Program with basic data structures using array
- Program using objects and data abstraction, class, and methods in function abstraction.
- Program concepts of constructors and constructor overloading.
- Programming concepts of the Inheritance and its types.
- Usage of Templates.
- Programming Concepts of polymorphism and its types
- Analyze, write, debug, and test basic C++ codes using the approaches introduced in the course.

Database Management Systems II   SEMESTER III

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

- Understand database concepts and structures and query language
- Understand the E R model and relational model

- To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modelling, designing, and implementing a DBMS.

- Understand Functional Dependency and Functional Decomposition.

- Apply various Normalization techniques

- Perform PL/SQL programming using concept of Cursor Management, Error Handling, Package and Triggers

- Execute various advance SQL queries related to Transaction Processing & Locking using concept of Concurrency control.

- Understand query processing and techniques involved in query optimization.

- Understand the principles of storage structure and recovery management.

Design and Analysis of Algorithms II   SEMESTER IV

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

- Ability to analyze the performance of algorithms.

- Ability to choose appropriate algorithm design techniques for solving problems.

- Ability to understand how the choice of data structures and the algorithm design

- Apply different designing methods for development of algorithms realistic problems, such as divide and conquer greedy method and etc.

- Methods impact the performance of programs.

- To clear up troubles the usage of set of rules design methods including the grasping approach, divide and overcome, dynamic programming, backtracking and department and certain.

- To understand the variations among tractable and intractable problems.

- To introduce p and np classes

JAVA-III   SEMESTER V (A)

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

- Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.

- Read and make elementary modifications to Java programs that solve real-world problems.

- Validate input in a Java program.

- Identify and fix defects and common security issues in code.

- Document a Java program using Javadoc.

- Use a version control system to track source code in a project.

Computer Networks - III   SEMESTER V (B)

Upon successful completion, students will have the knowledge and skills to:

- Understand and describe the layered protocol model.

- Describe, analyse and evaluate a number of data link, network, and transport layer protocols.

- Program network communication services for client/server and other application layouts.

- Describe, analyse and evaluate various related technical, administrative and social aspects of specific computer network protocols from standards documents and other primary materials found through research.

- Design, analyse, and evaluate networks and services for homes, data centres, IoT /IoE, LANs and WANs

OPERATING SYSTEM III   SEMESTER V (A)

After successful completion of this course, student will be able to

- Identify basic components of operating system.
- Understand and simulate activities of various operating system components.
- Correlate basic concepts of operating system with an existing operating system.
- describe the general architecture of computers
- describe, contrast and compare differing structures for operating systems
- understand and analyse theory and implementation of: processes, resource control (concurrency etc.), physical and virtual memory, scheduling, I/O and files
- Understand the basics of operating systems like kernel, shell, types and views of operating systems
- Describe the various CPU scheduling algorithms and remove deadlocks.

- Use disk management and disk scheduling algorithms for better utilization of external memory.
- Recognize file system interface, protection and security mechanisms.

ELEMENTS OF JAVASCRIPT III   SEMESTER V (B)

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

- use JavaScript as an interactive tool for web development
- hand code a number of interactive processes
- implement interactive responses in your web pages
- modify CSS styles and presentation properties with JavaScript
- control images as interactive objects
- understand the Document Object Model (DOM)
- use JavaScript for specific tasks effectively and have the confidence to explore it further.
- Design and implement Object classes using class diagrams, constructors, encapsulation, inheritance, and polymorphism.
- Create anonymous functions and closures, and use them to store and access local data.
- Create event listeners and call backs to respond to user-interface and network events.
- Test and debug JavaScript web applications.

GOVERNMENT DEGREE COLLEGEBHADRACHALAM
BHADRADRI KOTHAGUDEM DISTRICT
TELANGANA STATE
AFFILIATED TO KAKATIYA UNIVERSITY –WARANGAL

UG – B.COM COMPUTERS-I   **NO.OF CEDITS PER WEEK=05**

Programme Specific Outcomes

B.COM (Computers)

- Students gain ample knowledge in Information technology and develop programming skills

- Students are enabled with skills required for developing software applications.

- Develops entrepreneurial skills to make them innovative leaders and entrepreneurs.

- Cater to the manpower needs of companies in the field of Accounting, Finance, Taxation, Business Law, Auditing and Management

- Graduates can pursue higher education and other career oriented programs globally.

- Graduates have wider scope of employment opportunities in the field of Finance, Banking, Insurance, Accounting, Taxation and Research etc.

- Graduates develop competencies in computer applications by designing, developing and apply the software in the Era of Digitalization.

- Graduates should be able to start their own business enterprise or demonstrate their entrepreneurial skills for their organizations in supportive and leadership roles.

Fundamentals of information Technology I   **SEMESTER I**

After completing this course, students will be able to:

- Learn about the components of a Computer System.
- Learn about the software and its classification
- Understand basic concepts and terminology of information technology.
- Have a basic understanding of personal computers and their operations.
- Be able to identify issues related to information security.

PROGRAMMING WITH C & C++ II   SEMESTER II

After the completion of this course, the students will be able to develop applications.

- Students will acquire knowledge about: Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.
- Demonstrate an understanding of computer programming language concepts. To be able to develop C programs on Linux platform.
- Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.
- Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures. Student must be able to define union and enumeration user defined data types.
- Develop confidence for self education and ability for lifelong learning needed for the computer language.
- Articulate the principles of object-oriented problem solving and programming.
- Outline the essential features and elements of the C++ programming language.
- Explain programming fundamentals, including statement and control flow and recursion.
- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.

PROGRAMMING IN C II   SEMESTER III

After the completion of this course, the students will be able to develop applications.

- Students will acquire knowledge about: Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.

- Demonstrate an understanding of computer programming language concepts. To be able to develop C programs on Linux platform.

- Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.

- Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures. Student must be able to define union and enumeration user defined data types.

- Develop confidence for self education and ability for lifelong learning needed for the computer language.

E- COMMERCE III   SEMESTER V (A)

: After Completion of the subject student should able to

- Analyze the impact of E-commerce on business models and strategy.
- Describe the major types of E-commerce.
- Explain the process that should be followed in building an E-commerce presence.
- Identify the key security threats in the E-commerce environment.
- Describe how procurement and supply chains relate to B2B E-commerce
- Develop solutions for implementing an ecommerce site.
- .Create a marketing plan and promotional plan for an ecommerce site
- Evaluate a payment system for a site.
- . Define and differentiate various types of Ecommerce.
- Payment systems for E - commerce.
- Process of Selling and Marketing on web.
- E-business and its Models.

. Discuss various E-Business Strategies

Programming with C++   III   SEMESTER V(B)

After completing the Course, students will learn:
- Articulate the principles of object-oriented problem solving and programming.
- Outline the essential features and elements of the C++ programming language.
- Explain programming fundamentals, including statement and control flow and recursion.
- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.
- Program with basic data structures using array
- Program using objects and data abstraction, class, and methods in function abstraction.
- Program concepts of constructors and constructor overloading.
- Programming concepts of the Inheritance and its types.
- Usage of Templates.
- Programming Concepts of polymorphism and its types

Relational Database Management Systems III   SEMESTER VI(A)

At the end of this course, each student should be able to:
- Describe DBMS architecture, physical and logical database designs, database modelling, relational, and hierarchical and network models.
- Identify basic database storage structures and access techniques such as file organizations, indexing methods including B-tree, and hashing.
- Learn and apply structured query language (SQL) for database definition and database manipulation.
- Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
- Understand various transaction processing, concurrency control mechanisms and database protection mechanisms

WEB TECHNOLOGIES III   **SEMESTER VI (B)**

On completion of this course, a student will be able

- Familiar with client server architecture and able to develop a web application using java technologies - The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Formats and languages used in modern web-pages: HTML, XHTML, CSS, XML, XSLT, JavaScript, DOM.
- Programming web pages with JavaScript/DOM (client) Good design, universal design, multi platform web applications
- Students will gain the skills and project-based experience needed for entry into web application and development careers.
- Students are able to develop a dynamic webpage by the use of java script

GOVERNMENT DEGREE COLLEGEBHADRACHALAM

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Programme Specific Outcomes

B.A/ BZCA

- Students develop problem solving skills and methods and develop logical tools and models used to solve various real life problems.

- Students acquire knowledge of traditional and modern techniques of solving algebraic, transcendental equations, differential and integral equations, which have applications in many disciplines.

- The students attain sound knowledge in the areas of Mechanics, Thermal Physics, Waves and oscillations, optics, electromagnetism, modern physics, solid-state physics for pursing higher education and research.

- Ability to design and develop software applications to address real time problems using Programming languages, Databases, Operating Systems, and Computer Network Concepts.

B.A(CA)

PROGRAMMING IN C I   SEMESTER I

After the completion of this course, the students will be able to develop applications.

- Students will acquire knowledge about: Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.

- Demonstrate an understanding of computer programming language concepts. To be able to develop C programs on Linux platform.

- Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.

- Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures. Student must be able to define union and enumeration user defined data types.

- Develop confidence for self education and ability for lifelong learning needed for the computer language.

Programming in C++   I   SEMESTER II

After completing the Course, students will learn:

- Articulate the principles of object-oriented problem solving and programming.

- Outline the essential features and elements of the C++ programming language.

- Explain programming fundamentals, including statement and control flow and recursion.

- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.

- Program with basic data structures using array

- Program using objects and data abstraction, class, and methods in function abstraction.

- Program concepts of constructors and constructor overloading.

- Programming concepts of the Inheritance and its types.

- Usage of Templates.

- Programming Concepts of polymorphism and its types

- Analyze, write, debug, and test basic C++ codes using the approaches introduced in the course.

Database Management System II   SEMESTER III

Upon successful completion of this course, students should be able to:

- Describe the fundamental elements of relational database management systems

- Basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.

- Design ER-models to represent simple database application scenarios

- Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.

- Improve the database design by normalization.

- Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing.

INTERNET TECHNOLOGIES II   SEMESTER IV

On completion of this course, a student will be able

- Familiar with client server architecture and able to develop a web application using java technologies - The client-server architecture of the World Wide Web and its communication protocol HTTP/HTTPS.
- Formats and languages used in modern web-pages: HTML, XHTML, CSS, XML, XSLT, JavaScript, DOM.
- Programming   web   pages   with   JavaScript/DOM   (client) Good design, universal design, multi platform web applications
- Students will gain the skills and project-based experience needed for entry into web application and development careers.
- Students are able to develop a dynamic webpage by the use of java script
- Course Outcomes: Students will be able to connect a java program to a DBMS and perform insert,
- Student will be able to write a well formed / valid XML document

Programming with C++   III   **SEMESTER V (A)**

After completing the Course, students will learn:

- Articulate the principles of object-oriented problem solving and programming.
- Outline the essential features and elements of the C++ programming language.
- Explain programming fundamentals, including statement and control flow and recursion.
- Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.
- Program with basic data structures using array
- Program using objects and data abstraction, class, and methods in function abstraction.
- Program concepts of constructors and constructor overloading.
- Programming concepts of the Inheritance and its types.
- Usage of Templates.
- Programming Concepts of polymorphism and its types
- Analyze, write, debug, and test basic C++ codes using the approaches introduced in the course.

Multimedia III   **SEMESTER V (B)**

After successfully completed course, students will be able to:

- Describe the types of media and define multimedia system.
- Describe the process of digitizing (quantization) of different analog signals (text, graphics, sound and video).
- Use and apply tools for image processing, video, sound and animation.
- Apply methodology to develop a multimedia system.
- Apply acquired knowledge in the field of multimedia in practice and independently continue to expand knowledge in this fiel

Visual Basic III   **SEMESTER VI (A)**

After successfully completed course, students will be able to:

- Students list the **visual programming** concepts.
- Explain **basic** concepts and definitions.
- Express constants and arithmetic operations.
- Distinguish variable and data types.
- Students **code visual** programs by using **Visual Basic** work environment.
- Distinguish and compose events and methods.

Software Engineering III   **SEMESTER VI (B)**

After successfully completed course, students will be able to:

- Ability to identify the minimum requirements for the development of application.
- Ability to develop, maintain, efficient, reliable and cost effective software solutions
- Ability to critically thinking and evaluate assumptions and arguments

ప్రభుత్వ డిగ్రీ & పిజి కళాశాల, భద్రాచలం.

తెలుగు శాఖ

అభ్యాసన ప్రయోజనాలు

➤ వివిధ విషయాల ఆధారంగా వివిధ రకాలైన రచనలు చదివి చర్చిస్తారు.

➤ తెలుగు భాషలో లభించే నానా రకాల పఠన సామగ్రిని అర్థం చేసుకుని చదవడం, దాని యొక్క సారాంశం రాయడం, సలహాలు చెప్పడం ముగింపు, మొదలైన వాటిని మౌఖికంగా / లిఖితంగా సాంకేతిక భాషలో వ్యక్తపరిచే గలరు.

➤ చదివిన సామగ్రి పై ఆలోచించి అర్థం చేసుకుని ప్రశ్నలు అడుగుతారు, కుటుంబ సభ్యులతో చర్చిస్తారు ప్రశ్నిస్తారు.

➤ వివిధ రకాలైన పఠన సామగ్రి వ్యాసం, కార్యక్రమ నివేదిక, కథానికలు, వ్యంగ్యం, మొదలైనవి చదివి, సామగ్రి లో ఉన్నటువంటి సూక్ష్మాలను గ్రహించి, వాటిని గురించి ఊహించి విశ్లేషిస్తారు, కీలకాంశాలను గుర్తిస్తారు.

➤ ఏదైనా పాఠ్య పుస్తకం చదివే సందర్భంలో అర్థం చేసుకోవడానికి నిఘంటువు /చిత్రాలు /ఇంటర్నెట్ /రిఫరెన్స్ పుస్తకాలను ఉపయోగిస్తారు. ప్రభావ వంతంగా రాత పూర్వకంగా వ్యక్తపరుస్తారు.

➤ భాషలో ఉన్న సూక్ష్మ అంశాలను రచనలో ఉపయోగిస్తారు. ఉదాహరణకు: కవిత యొక్క పదాల అర్థాలు తెలుసుకుని ప్రాసను అర్థం చేసుకుంటారు.

➤ విద్యార్థులు అనుభవాలను తమ సొంత భాష శైలిలో రాస్తారు అనుభవాలను రాయటం కథ, కవిత, వ్యాసం మొదలైనవి.

➤ వివిధ కళలు ఉపయోగించిన భాష యొక్క సృజనాత్మకతను తెలుసుకుంటారు.

➤ తమ జీవితాల్లోని వేరే సంఘటనను స్థితులను విభిన్న పద్ధతుల్లో సృజనాత్మకంగా రాస్తారు. ఉదాహరణ: సోషల్ మీడియాలో/ కంప్యూటర్లలో మొబైల్లలో /సంపాదకునికి లేఖ.

➤ సొంత అనుభవాలను తమ సొంత భాషలో వ్యక్త పరుస్తారు. చిహ్నలు మరియు వ్యాకరణ సూత్రాలను ఉపయోగిస్తారు.

➤ పత్రికలు గోడ పత్రికలు మొదలైన వాటి కోసం రకరకాల పఠణ సామాగ్రి సమకూర్చుకొని రాస్తారు, మరియు వాటిని సంకలనం చేసి దానికి సంపాదకీయం రాస్తారు.

➤ భాషలోని వ్యాకరణ పరమైన అంశాలు విభక్తులు క్రియలు కాలాలు గుర్తించడం మరియు వాటి పట్ల జాగరూకులై రాయగలరు.

➤ విభిన్నమైన ఎటువంటి సున్నితమైన అంశాలు విషయాలు ఉదాహరణ: జాతి/మత/వర్ణ/లింగ/ఆచారవ్యవహారాలు మొదలగు వాటి గురించి మిత్రులతో ఉపాధ్యాయులతో లేదా కుటుంబ సభ్యులతో చర్చిస్తారు, ప్రశ్నిస్తారు.

➤ రచన యొక్క ఉద్దేశాన్ని చదివి పాఠకుని దృష్టిలో ఉంచుకొని తాము చెప్పదలుచుకున్న అంశాన్ని ప్రభావవంతంగా రాతపూర్వకంగా వ్యక్తపరుస్తారు.

➤ రచనలోని వివిధ పద్ధతులు శైలిని ఉపయోగించడం నేర్చుకుంటారు. ఉదాహరణకు విభిన్న పద్ధతుల్లో తమ అనుభవాలను రాయడం కథ కవిత వ్యాసం రూపంలో..

➤ వివిధ కళలు ఉదాహరణ హస్తకళ,వాస్తుకళ,నృత్యకళ,మొదలైనవి, వివిధ వృత్తులు ఉదాహరణ: వ్యవసాయము, మొదలగు వాటిలో ఉపయోగించిన భాష యొక్క సృజనాత్మకతను తెలుసుకుంటారు.

➤ విభిన్న విషయాలు మరియు ఉద్దేశాలకు అనుగుణంగా పదాలు, వాక్యాలు, జాతీయాలు, సామెతలు, విరామ-చిహ్నలు, మరియు వ్యాకరణ సూత్రాలను ఉపయోగిస్తారు.