

Course I (Inorganic & Physical Chemistry)

At the end of the course, the student will be able to;

- Understand the basic concepts of p-block elements.
- Explain the difference between solid, liquid and gases in terms of inter molecular interactions.
- Apply the concepts of gas equations, pH and electrolytes while studying other chemistry courses.

Course II – (Organic & General Chemistry)

At the end of the course, the student will be able to;

- Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt.
- Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved.
- Learn and identify many organic reaction mechanisms including Free Radical Substitution, Electrophilic Addition and Electrophilic Aromatic Substitution.
- Correlate and describe the stereo chemical properties of organic compounds and reactions

Course III – (Inorganic & Organic Chemistry)

At the end of the course, the student will be able to;

- Understand preparation, properties and reactions of haloalkanes, haloarenes and oxygen containing functional groups.
- Use the synthetic chemistry learnt in this course to do functional group transformations.
- To propose plausible mechanisms for any relevant reaction

Course IV – (Spectroscopy & Physical Chemistry)

At the end of the course, the student will be able to;

- learn about the laws of absorption of light energy by molecules and the subsequent photochemical reactions
- understand the concept of quantum efficiency and mechanisms of photochemical reactions.

Course V – (Inorganic, Organic & Physical Chemistry)

At the end of the course, the student will be able to;

- Understand concepts Of boundary conditions and quantization, probability distribution, most probable values, uncertainty and expectation values
- Application of quantization to spectroscopy.

- Various types of spectra and its use in structure determination.

Course VI – (Inorganic, Organic & Physical Chemistry)

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- Various types of spectra and its use in structure determination.
- Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt.

Course VII Elective – (Analytical Methods in Chemistry)

At the end of the course, the student will be able to;

- Compare qualitative and quantitative analysis
- expresses the quantitative analysis methods.
- evaluate the analytical data in terms of statistics
- evaluates the effects of systematic errors on analytical results
- interpret the sources of random errors and effects of random errors on analytical results.

- define the general properties of volumetry
- identifies the solubility by the systematic method.

Course VIII Cluster 1 – (Organic Spectroscopic Techniques)

At the end of the course, the student will be able to;

- Recognize spectroscopy in microwave, Rotational spectra of rigid diatomic molecules, selection rules, interaction of spectral lines
- Study of Vibrating diatomic molecule, energy levels of a diatomic molecule, simple harmonic and anharmonic oscillator, Scattering of light and Raman Spectrum. rotational and vibrational Raman Spectra
- Learn Electronic spectra of diatomic molecules Born-oppenheimer approximation
- Make Students aware of the fine structure of ESR absorption, Hyperfine structure, Double resonance in ESR, Techniques of ESR spectroscopy.
- Understand Principles and Applications of Mossbauer spectroscopy
- Understand concepts of Nuclear and Radiation Chemistry. Applications of Radioisotopes

Course VIII Cluster 2 – (Organic Advanced Reactions)

- Acquire applicative knowledge of new techniques and concepts in organic synthesis

Course VIII Cluster 3 – (Pharmaceutical and Medicinal Chemistry)

- The Discuss drug discovery and design with respect to the lead molecules and its Optimization.
- To impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs. Understand the chemistry of drugs with respect to their pharmacological activity
- The subject emphasizes on structure activity relationships of drugs, importance of physicochemical properties, absorption, distribution, metabolism and Pharmacodynamics of drugs.
- To know the mechanism of chiral drug action, the synthesis and pharmacological activity of some selective chiral drugs .
Applicative knowledge of synthetic medicinal products in development of newer drugs and importance of Pharmacokinetics & pharmacodynamics of drugs.

SEMESTER - I

Course 1A FUNDAMENTALS OF ACCOUNTING

At the end of the course, the student will able to

- To make the students acquire the conceptual knowledge of Accounting
- To equip the students with the knowledge of accounting process and preparation of Final Accounts
- To develop the skills of recording financial transactions and preparation of reports using Computers

Course 1B BUSINESS ORGANIZATION AND M

ANAGEMENT

At the end of the course, the student will be able to

- Students can acquire business knowledge and can implement this in practice
- They can understand various forms of business organisations
- They can become good leaders

Course 1C BUSINESS ENVIRONMENT

At the end of the course, the student will able to

- To understand about internal and external business environmental factors affecting business decisions.
- To examine the recent developments in business environmental factors.

I B.COM II SEMESTER

Course 2A FINANCIAL ACCOUNTING

At the end of the course the student will able to;

- To understand the depreciation calculation methods
- To know about the accounting treatment in case of Consignment, Joint Venture and Non Trading Concerns.

Course 2B BUSINESS ECONOMICS

At the end of the course, the student will able to;

- To understand Demand and Production theories
- To know about National Income and Trade Cycles

Course 2C BANKING THEORY AND PRACTICE

At the end of the course, the student will able to;

- Understand the role of banks in the economy.
- Discuss and explain about rural banking, development banking and innovations in banking.

II B.COM III SEMESTER

Course DSC 1C CORPORATE ACCOUNTING

At the end of the course, the student will able to;

- To understand about types of shares and debentures
- To gain knowledge about valuation of goodwill and valuation of shares
- To prepare company final accounts as per Companies Act, 2013

Course DSC 2C BUSINESS STATISTICS

At the end of the course, the student will able to;

- Students will be able to understand and apply basic techniques of Statistics
- They will be able to prepare and interpret tables and charts
- They can make simple analysis on the worked out results

II B.COM IV SEMESTER

Course DSC 1D ACCOUNTING FOR SERVICE ORGANISATIONS

At the end of the course, the student will able to;

- To make the students familiar with Electricity Companies Accounts
- To learn the accounting practices of Banks and Insurance Companies

Course DSC 2D BUSINESS LAWS

At the end of the course, the student will able to;

- To gain knowledge on Contracts and essentials for a valid contract
- To educate the students about Consumer Protection Act 1986, Information Technology Act 2000 and the Company Law.

Course DSC 3D INCOME TAX

At the end of the course, the student will able to;

- Learn the fundamental concepts of income tax.
- Know about tax procedure and calculation of taxable Income.

III B.COM V SEMESTER

Course DSC 1 E COST ACCOUNTING

At the end of the course, the student will able to;

- To know the preparation of cost sheet
- To learn about job costing, batch costing. Process costing
- To understand various cost accounting techniques

Course DSC 2 E GST – FUNDAMENTALS

At the end of the course, the student will able to;

- To know about GST fundamentals
- To calculate taxable amount of GST

Course DSC 3 E COMMERCIAL GEOGRAPHY

At the end of the course, the student will able to;

- To impart the knowledge of the Earth, India Agriculture and Forestry
- To impart the knowledge of the minerals and mining & water resources and rivers in India

Elective - DSC 1F - 5.5 CENTRAL BANKING

At the end of the course, the student will able to;

- To learn about functions and Credit control techniques of RBI
- To know about causes and effects of Inflation

Elective - DSC 1F - 5.6 RURAL AND FARM CREDIT

At the end of the course, the student will able to;

- Impart the knowledge of rural loans and rural credit agencies
- Impart the knowledge of rural credit, agricultural finance sources and its analysis

Elective - DSC 1F - 5.7 PROJECT WORK

At the end of the course, the student will able to;

- Impart the knowledge of doing project work on Rural Credit and finance
- Gain the skill of Research methodology, Review of literature and Analysis of the topic

III B.COM VI SEMESTER DSC 1 G MARKETING

At the end of the course, the student will able to;

- Understand key terms, topics and concepts in marketing.
- Understand and apply marketing concepts to real life situations from consumer and managerial perspectives

DSC 2 G AUDITING

At the end of the course, the student will able to;

- Understand the importance of Auditing and role of Auditor
- Know the vouching process
- Prepare Audit programme and Audit report

DSC 2 G MANAGEMENT ACCOUNTING

At the end of the course, the student will able to;

- To understand the fundamentals of Management Accounting
- To analyse the financial statements
- To understand the role of management accounting

Elective - DSC 1H - 6.5 FINANCIAL SERVICES

At the end of the course, the student will be able to;

- To know about the framework of various financial services
- To understand the importance of financial services in the economy

Elective - DSC 1H - 6.6 MARKETING OF FINANCIAL SERVICES

At the end of the course, the student will be able to;

- To apply marketing principles in financial services
- To know about various retail credit services

Elective - DSC 1H - 6.7 PROJECT WORK

At the end of the course, the student will be able to;

- To impart the knowledge of doing project work on Financial Services
- To gain the skill of Research methodology, Review of literature and Analysis of the topic

ECONOMICS

Course 1 (Micro Economics – Consumer Behaviour)

- Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
- Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.
- Grasp the importance of planning undertaken by the government of India, have knowledge on the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government.
- Understand agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole.
- Not only be aware of the economy as a whole, they would understand the basic features of Mizoram's economy, sources of revenue, how the state government finance its program and projects.

Course 2 (Micro Economics – Production and Price Theory)

- Demonstrate marginal productivity theory of distribution, theory of wages, identify different types of rent, and illustrate different theories of interest and profits.

- Understand how factor market works, identify the various determinants of firm's demand for factor services, bilateral monopoly, demonstrate monopsony in factor market and factor market equilibrium
- Understand how factor market works, illustrate basic tools in welfare economics, and illustrate the concept of social welfare functions and compensation principles. CO4. Identify the various types of investment function analysis and understand the elements of social cost benefit analysis.
- Understand international and inter regional trade, identify and understand various trade theories, analyze the various types of restrictions of international trade.

Course 3 (Macro Economics – National Income, Employment & Money)

- Demonstrate the meaning and function of money, high powered money, monetary and paper system, illustrate various version of quantity theory of money.
- Identify types of banks, explain the meaning and function of commercial banks, illustrate how banks create credit, and suggest the instruments to control credit.
- Analyze different phases of trade cycle, demonstrate various trade cycle theories, understand the impact of cyclical fluctuation on the growth of business, and lay policies to control trade cycle.
- Illustrate the meaning of inflation, deflation, stagflation and reflation, identify different kinds of inflation, causes and effects of inflation on different sectors of the economy, describe different measures to control inflation.
- Explain economic growth and development, illustrate Harrod-Domar and Solow's growth model, distinguish between economic growth and technical progress.

Course 4 (Banking and International Trade)

- Remembers and states in a systematic way (knowledge) Various concepts, definitions, laws and principles of macroeconomic theory with reference to income, employment, money, banking and finance
- Explains (understanding)
 - a. the difference between various concepts and components of national income with illustrations and methods of measuring national income
 - b. various terms, concepts, laws and principles, theories relating to income, employment, consumption, investment, money, price-level and phases of trade cycles
 - c. functions of commercial banks and central bank, creation and control of credit

- Critically examines using data and figures (analysis and evaluation)
 - a. in order to understand the interrelationship between various components of national income
 - b. the theories of macroeconomics with reference to their assumptions, implications and applicability
 - c. Empirical evidences of Consumption and Investment Functions and factors influencing them
- Draws critical formulae, diagrams and graphs.
 - a. consumption and investment functions; concepts of multiplier and accelerator
 - b. price indices, inflation and trade cycles

Course 5 (Contemporary Indian Economy)

- Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
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Course 6 (Public Finance)

- Understand the sources of finance both public and private, demonstrate the role of government to correct market failures and possible advantage of public financing.
- Attain the advantages and knowledge of public investments and other government expenditures. Understand the causes of growing public expenditures for various programmes and policies within and outside the country.
- Understand the possible burden, benefits and distribution of various types of taxes among various classes of people, know the general trend and impact on general welfare and arouse them to suggest good and bad tax system.
- Understand the needs of public borrowing from all possible sources to meet necessary public investment/expenditures. Also be alerted to find sources for repayment.
- Deliver effectively the preparation of budget and how they are passed in the house. Understand the changes in size and flexibility of state and central budget along with the role played by Finance

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Course I: Differential Equations & Differential Equations Problem Solving Sessions

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

- Solve linear differential equations
- Convert non exact homogeneous equations to exact differential equations by using integrating factors.
- Know the methods of finding solutions of differential equations of the first order but not of the first degree.
- Solve higher-order linear differential equations, both homogeneous and non homogeneous, with constant coefficients.
- Understand the concept and apply appropriate methods for solving differential equations.

Course II :Three Dimensional Analytical Solid Geometry

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

- get the knowledge of planes.
- basic idea of lines, sphere and cones.
- understand the properties of planes, lines, spheres and cones.
- express the problems geometrically and then to get the solution.

Course IV :Real Analysis

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

- get clear idea about the real numbers and real valued functions.
- obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
- test the continuity and differentiability and Riemann integration of a function.
- know the geometrical interpretation of mean value theorems

Course V: Ring Theory & Vector Calculus

- Learning of basic concepts in RINGS and FIELDS
- Critical Assessment of mathematical proofs
- Explanation of curve fitting by simple examples

Course VI :Linear Algebra

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

- understand the concepts of vector spaces, subspaces, bases, dimension and their properties
- understand the concepts of linear transformations and their properties
- apply Cayley- Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine methods
- learn the properties of inner product spaces and determine orthogonality in inner product spaces.

Course VII Elective: Numerical Analysis

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

- Ability to find solutions for algebraic equations, ordinary differential equations
- Calculating the errors and approximations in numerical methods Analysis of finite differences

Course VIII Cluster 1: Integral Transforms

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

- Able to gain wide range of applications of integral methods
- Be able to understand the applications of complex variable theory.
- Be able to get the knowledge of applications of integral transforms in solving various differential equations

Course VIII Cluster 2 : Advanced Numerical Analysis

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

- Ability to find solutions for algebraic equations, ordinary differential equations
- Calculating the errors and approximations in numerical methods Analysis of finite differences

Course VIII Cluster 3 : Graph Theory

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

- The student will be able to create mathematical proofs
- To be able to analyze the graphs in technical way
- The student will be able to gain strong knowledge and application of graph theory

Physics

Course I: Mechanics, Waves & Oscillations

- Understand Newton's laws of motion and motion of variable mass system and its application to rocket motion and the concepts of impact parameter, scattering cross section.
- Apply the rotational kinematic relations, the principle and working of gyroscope and its applications and the precessional motion of a freely rotating symmetric top.
- Comprehend the general characteristics of central forces and the application of Kepler's laws to describe the motion of planets and satellite in circular orbit through the study of law of Gravitation.
- Understand postulates of Special theory of relativity and its consequences such as length contraction, time dilation, relativistic mass and mass-energy equivalence.
- Examine phenomena of simple harmonic motion and the distinction between undamped, damped and forced oscillations and the concepts of resonance and quality factor with reference to damped harmonic oscillator.
- Appreciate the formulation of the problem of coupled oscillations and solve them to obtain normal modes of oscillation and their frequencies in simple mechanical systems.
- Figure out the formation of harmonics and overtones in a stretched string and acquire the knowledge on Ultrasonic waves, their production and detection and their applications in different fields

Practical Course 1: Mechanics, Waves and Oscillations

On successful completion of this practical course, the student will be able to;

- Perform experiments on Properties of matter such as the determination of moduli of elasticity viz., Young's modulus, Rigidity modulus of certain materials; Surface tension of water, Coefficient of viscosity of a liquid, Moment of inertia of some regular bodies by different methods and compare the experimental values with the standard values.
- Know how to determine the acceleration due to gravity at a place using Compound pendulum and Simple pendulum.
- Notice the difference between flat resonance and sharp resonance in case of volume resonator and sonometer experiments respectively.

- Verify the laws of transverse vibrations in a stretched string using sonometer and comment on the relation between frequency, length and tension of a stretched string under vibration.
- Demonstrate the formation of stationary waves on a string in Melde's string experiment.
- Observe the motion of coupled oscillators and normal mode

Course II: Wave Optics

- Understand the phenomenon of interference of light and its formation in (i) Lloyd's single mirror due to division of wave front and (ii) Thin films, Newton's rings and Michelson interferometer due to division of amplitude.
- Distinguish between Fresnel's diffraction and Fraunhofer diffraction and observe the diffraction patterns in the case of single slit and the diffraction grating.
- Describe the construction and working of zone plate and make the comparison of zone plate with convex lens.
- Explain the various methods of production of plane, circularly and polarized light and their detection and the concept of optical activity..
- Comprehend the basic principle of laser, the working of He-Ne laser and Ruby lasers and their applications in different fields.
- Explain about the different aberrations in lenses and discuss the methods of minimizing them.
- Understand the basic principles of fibre optic communication and explore the field of Holography and Nonlinear optics and their applications.

Practical Course 2: Wave Optics

On successful completion of this practical course the student will be able to,

- Gain hands-on experience of using various optical instruments like spectrometer, polarimeter and making finer measurements of wavelength of light using Newton Rings experiment, diffraction grating etc.
- Understand the principle of working of polarimeter and the measurement of specific rotatory power of sugar solution
- Know the techniques involved in measuring the resolving power of telescope and dispersive power of the material of the prism.
- Be familiar with the determination of refractive index of liquid by Boy's method and the determination of thickness of a thin wire by wedge method.

Course 3: Heat & Thermodynamics

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

- Understand the basic aspects of kinetic theory of gases, Maxwell-Boltzmann distribution law, equipartition of energies, mean free path of molecular collisions and the transport phenomenon in ideal gases
- Gain knowledge on the basic concepts of thermodynamics, the first and the second law of thermodynamics, the basic principles of refrigeration, the concept of entropy, the thermodynamic potentials and their physical interpretations.
- Understand the working of Carnot's ideal heat engine, Carnot cycle and its efficiency
- Develop critical understanding of concept of Thermodynamic potentials, the formulation of Maxwell's equations and its applications.
- Differentiate between principles and methods to produce low temperature and liquefy air and also understand the practical applications of substances at low temperatures.
- Examine the nature of black body radiations and the basic theories.

Practical Course-3: Heat and Thermodynamics

On successful completion of this practical course, the student will be able to;

- Perform some basic experiments in thermal Physics, viz., determinations of Stefan's constant, coefficient of thermal conductivity, variation of thermo-emf of a thermocouple with temperature difference at its two junctions, calibration of a thermocouple and Specific heat of a liquid.

Course-IV: ELECTRICITY, MAGNETISM AND ELECTRONICS

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

- Understand the Gauss law and its application to obtain electric field in different cases and formulate the relationship between electric displacement vector, electric polarization, Susceptibility, Permittivity and Dielectric constant.
- Distinguish between the magnetic effect of electric current and electromagnetic induction and apply the related laws in appropriate circumstances.
- Understand Biot and Savart's law and Ampere's circuital law to describe and explain the generation of magnetic fields by electrical currents.
- Develop an understanding on the unification of electric and magnetic fields and Maxwell's equations governing electromagnetic waves.
- Phenomenon of resonance in LCR AC-circuits, sharpness of resonance, Q- factor, Power factor and the comparative study of series and parallel resonant circuits.
- Describe the operation of p-n junction diodes, zener diodes, light emitting diodes and transistors
- Understand the operation of basic logic gates and universal gates and their truth tables.

Course-IV: ELECTRICITY, MAGNETISM AND ELECTRONICS

On successful completion of this practical course the student will be able to;

- Measure the current sensitivity and figure of merit of a moving coil galvanometer.
- Observe the resonance condition in LCR series and parallel circuit
- Learn how a sonometer can be used to determine the frequency of AC-supply.
- Observe the variation of magnetic field along the axis of a circular coil carrying current using Stewart and Gee's apparatus.
- Understand the operation of PN junction diode, Zener diode and a transistor and their V-I characteristics.
- Construct the basic logic gates, half adder and full adder and verify their truth tables.

Further, the student will understand how NAND and NOR gates can be used as universal building blocks.

Course-V: MODERN PHYSICS

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

- Develop an understanding on the concepts of Atomic and Modern Physics, basic elementary quantum mechanics and nuclear physics.
- Develop critical understanding of concept of Matter waves and Uncertainty principle.
- Get familiarized with the principles of quantum mechanics and the formulation of Schrodinger wave equation and its applications.
- Examine the basic properties of nuclei, characteristics of Nuclear forces, salient features of Nuclear models and different nuclear radiation detectors.
- Classify Elementary particles based on their mass, charge, spin, half life and interaction.
- Get familiarized with the nano materials, their unique properties and applications.
- Increase the awareness and appreciation of superconductors and their practical applications.

Practical Course-V: MODERN PHYSICS

On successful completion of this practical course, the student will be able to;

- Measure charge of an electron and e/m value of an electron by Thomson method.
- Understand how the Planck's constant can be determined using Photocell and LEDs.
- Study the absorption of α -rays and β -rays, Range of β -particles and the characteristics of GM counter
- Determine the Energy gap of a semiconductor using thermistor and junction diode.

Elective Paper –VII-C: Renewable Energy

On successful completion of the course, the students will be able to attain CO:

- Understand the need of energy conversion and the various methods of energy storage

- Explain the field applications of solar energy
- Identify Winds energy as alternate form of energy and to know how it can be tapped
- Explain bio gas generation and its impact on environment
- Understand the Geothermal & Tidal energy, its mechanism of production and its applications
- Illustrate the concepts of Direct Energy Conversion systems & their applications.

Elective Paper –VIII-C-1: Solar Thermal and Photovoltaic Aspects

After studying this course, you should be able to:

- explain the principles that underlie the ability of various natural phenomena to deliver solar energy
- outline the technologies that are used to harness the power of solar energy
- discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment.

Cluster Elective Paper –VIII-C-2: Wind, Hydro and Ocean Energies

On completion of this course, the students will be able to exhibit

- Conceptual knowledge of the technology, economics and regulation related issues associated with wind and alternative sources of energy
- Ability to analyse the viability of wind and alternative energy projects
- Capability to integrate various options and assess the business and policy environment regarding wind and alternative energy projects
- Advocacy of strategic and policy recommendations on usage of wind and alternative energy

Cluster Elective Paper –VIII-C-3: Project work on renewable Energies

- You have a good understanding of renewable energy systems, its components and interactions between the components. This includes all renewable energy technologies, different storage technologies, distribution grid, smart grid including sensors. Regulation and control, and both “stand alone” systems and large integrated distribution systems.
- You have a good understanding of national and international regulations and framework conditions for renewable energy systems. This also includes different price models and actions.
- You have profound knowledge in a special field such as solar energy, storage, smart grid.
- You have approximately specialized knowledge in a field of renewable energy systems achieved through the work on a master thesis.

Political Science

Course-1: INTRODUCTION TO POLITICAL SCIENCE

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

- Recall the previous knowledge about Political Science and understand the nature and scope, traditional and modern approaches of Political Science.
- Understand concepts intrinsic to the study of Political Science.
- Have solid theoretical understanding of Rights and its theories along with the basic aspects of certain political ideologies.
- Apply the knowledge to observe the field level phenomena

Course-2: BASIC ORGANS OF THE GOVERNMENT

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

- Understand the Origin and Evolution of the concept of Constitutionalism and classification of Constitutions.
- Acquaint themselves with different theories of origin of State.
- Understand and analyses organs and forms of Governments along with a deep insight into the various agents involved in the political process.
- Apply the knowledge to analyse and evaluate the existing systems

Course-3: INDIAN CONSTITUTION

- Understand the emergence and evolution of Indian Constitution.
- Understand the structure and composition of Indian Constitution
- Understand and analyse federalism in the Indian context.
- Analyse Panchayathi Raj institutions as a medium of decentralization

Course-4 INDIAN POLITICAL PROCESSES

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

- Know and understand the federal system of the country and some of the vital contemporary emerging issues.
- Evaluate the electoral system of the country and to identify the areas of electoral reforms.
- Know the constitutional base and functioning of local governments with special emphasis on 73rd & 74th Constitutional Amendment Acts.
- Understand the dynamics of Indian politics, challenges faced and gain a sensitive comprehension to the contributing factors.
- Apply the knowledge and critically comprehend the functioning of some of the regulatory and governance institutions.
- Propose theoretical outline alternate models

Course-5 INDIAN POLITICAL THOUGHT

Course-6

WESTERN POLITICAL THOUGHTS

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

- Understand the fundamental contours classical, western political philosophy, basic features of medieval political thought and shift from medieval to modern era.
- Understand the Social Contract Theory and appreciate its implications on the perception of State in terms of its purposes and role.
- Acquaint with the Liberal and Marxist philosophy and analyze some trends in Western Political Thought.
- Critically analyse the evolution of western political thought

Course-7

PRINCIPLES OF PUBLIC ADMINISTRATION

To understand the nature and scope of Public Administration;

- To appreciate the methodological pluralism and synthesizing nature of knowledge in Public Administration;
- To comprehend the changing paradigms of Public Administration;
- To acquaint with the theories, approaches, concepts and principles of Public Administration;
- To understand the administrative theories and concepts to make sense of administrative practices.
- To Understand public administration theory and concepts from multiple perspectives;

B.SC (COMPUTER APPLICATIONS)

OBJECT ORIENTED PROGRAMMING USING JAVA

Course Outcomes

At the end of this course student will:

1. Understand the concept and underlying principles of Object-Oriented Programming
2. Understand how object-oriented concepts are incorporated into the Java programming language
3. Develop problem-solving and programming skills using OOP concept
4. Understand the benefits of a well structured program
5. Develop the ability to solve real-world problems through software development in high-level programming language like Java

6. Develop efficient Java applets and applications using OOP concept
7. Become familiar with the fundamentals and acquire programming skills in the Java language.

DATA STRUCTURES

Course Outcomes

1. Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms
2. Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs.
3. Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs
4. Demonstrate different methods for traversing trees
5. Compare alternative implementations of data structures with respect to performance
6. Compare and contrast the benefits of dynamic and static data structures implementations
7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack
8. Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.

DATA BASE MANAGEMENT SYSTEM

Course Outcomes

On completing the subject, students will be able to:

1. Design and model of data in database.
2. Store, Retrieve data in database.

SOFTWARE ENGINEERING

Course outcomes

1. Ability to gather and specify requirements of the software projects
2. Ability to analyze software requirements with existing tools
3. Able to differentiate different testing methodologies
4. Able to understand and apply the basic project management practices in real life projects

5. Ability to work in a team as well as independently on software projects

WEB TECHNOLOGIES

Course Outcome

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design interactive web pages using HTML and Style sheets.
4. To study the framework and building blocks of .NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems.

B.SC (DATA SCIENCE)

DATA MINING AND DATA ANALYSIS

Course Outcome

Students who complete this course will be able to

- Compare various conceptions of data mining as evidenced in both research and application.
- Characterize the various kinds of patterns that can be discovered by association rule mining.
- Evaluate mathematical methods underlying the effective application of data mining.

MULTIVARIATE TECHNIQUE FOR DATA ANALYSIS

Course Outcomes

- Data characteristics and form of Distribution of the Data Structures.
- Understanding the usage of multivariate techniques for the problem under the
- consideration. For drawing valid inferences and to plan for future investigation.

B.COM (COMPUTER APPLICATIONS)

OFFICE AUTOMATION TOOLS

Course Outcome

By learning the course, the students will be able

- to perform documentation
- to perform accounting operations
- to perform presentation skills

BUSINESS ANALYTICS

Course Outcome

Enable all participants to recognise, understand and apply the language, theory and models of the field of business analytics

Foster an ability to critically analyse, synthesise and solve complex unstructured business problems

Encourage an aptitude for business improvement, innovation and entrepreneurial action

Encourage the sharing of experiences to enhance the benefits of collaborative learning

Instil a sense of ethical decision-making and a commitment to the long-run welfare of both organisations and the communities they serve

DATA BASE MANAGEMENT SYSTEM

Course Outcomes

On completing the subject, students will be able to:

1. Design and model of data in database.
2. Store, Retrieve data in database.

SOFTWARE ENGINEERING

Course outcomes

1. Ability to gather and specify requirements of the software projects

2. Ability to analyze software requirements with existing tools
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PROGRAMMING WITH C & C++

Course Outcome

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

B. REMEMBERS AND STATES IN A SYSTEMATIC WAY (KNOWLEDGE*)

12. Develop programming skills
13. Declaration of variables and constants use of operators and expressions
14. learn the syntax and semantics of programming language
15. Be familiar with programming environment of C and C++
16. Ability to work with textual information (characters and strings) & arrays

C. EXPLAINS (UNDERSTANDING*)

17. Understanding a functional hierarchical code organization
18. Understanding a concept of object thinking within the framework of functional model
19. Write program on a computer, edit, compile, debug, correct, recompile and run it

D. CRITICALLY EXAMINES, USING DATA AND FIGURES (ANALYSIS AND EVALUATION)**

20. Choose the right data representation formats based on the requirements of the problem
21. Analyze how C++ improves C with object-oriented features
22. Evaluate comparisons and limitations of the various programming constructs and choose correct one for the task in hand.

E. Working in 'Outside Syllabus Area' under a Co-curricular Activity(Creativity) Planning of structure and content, writing, updating and modifying computer programs for user solutions

F. Exploring C programming and Design C++ classes for code reuse (Practical skills***)

WEB TECHNOLOGIES

Course Outcome

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design interactive web pages using HTML and Style sheets.
4. To study the framework and building blocks of .NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems.

PHP

Course Outcome

After studying this course, you should be able to:

- PHP scripts to handle HTML forms.
- regular expressions including modifiers, operators, and metacharacters.
- PHP programs that use various PHP library functions, and that manipulate files and directories.
- Analyze and solve various database tasks using the PHP language.
- common Web application tasks by writing PH

E COMMERCE

Course Outcome

After studying this course, you should be able to:

- detail what is meant by the term 'e-commerce'
- examine some typical distributed applications
- detail some of the problems that are encountered when developing distributed applications
- describe briefly some of the technologies that are used to support distributed applications
- show how some of the technologies detailed in the course are used in concert to realise a typical commercial system.

TALLY

Course Outcome

The course covers the main features and components of Tally.

It teaches the students to maintain accounts with and without inventory.

The multilingual feature of Tally helps in maintaining accounts in the different languages that are supported by Tally.

Students are familiarized with the statutory features of Tally like VAT, CST, TCS, TDS, FBT, and Service Tax.

Students are also familiarized with the Point of Sale and Payroll features of Tally.

B.A (COMPUTER APPLICATIONS)

OFFICE AUTOMATION TOOLS

Course Outcome

By learning the course, the students will be able

- to perform documentation
- to perform accounting operations
- to perform presentation skills

TALLY

Course Outcome

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- It teaches the students to maintain accounts with and without inventory.
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Government Degree College, Avanigadda-521121

Program Outcome of all Program offered by the College

B.A

- The B.A. graduates will be familiar with the social, economical, historical, political thinking and literature of Telugu and English.
- The students acquire knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough. Understand the world, their country,
- Democracy and its functioning, its economics, their society, as well as themselves and have awareness of ethical problems, social rights, Rights and Duties of the citizens, values and responsibility to the self and to others.
- Develop knowledge of theories, concepts, and research methods in humanities, history, social sciences and political philosophies of ancient, medieval and modern thinkers
- With human values framing the base to deal with various problems in life with courage and humanity.
- The students will be ignited enough to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.
- Realize the importance of literature in terms aesthetics, mental, moral intellectual.
- To enable the students to familiarize with the Modern Governments in Legal and Philosophical framework.
- Think critically, follow innovations and developments in technology

B.Com

- Students would gain a thorough foundation in the fundamentals of Commerce and Finance
- The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business
- Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals.
- Students will be able to demonstrate knowledge in setting up a computerized set of accounting books

- The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.
- Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals.
- Learners will be able to recognize features and roles of businessmen, entrepreneur, managers, consultant.
- Develop various real time applications using latest technologies and programming languages.

B.Sc

- Bachelor of Science offers theoretical as well as practical knowledge about different subject areas.
- This course forms the basis of science for coherent understanding of the academic field to pursue multi and inter-disciplinary science careers in future. These subject areas include Physics, Chemistry, Mathematics, Computer Science, Acqua culture and Zoology.
- Able to plan and execute experiments or investigations, analyze and interpret data information collected using appropriate methods
- It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace through research.

Programme Specific Outcome

History

- Students can avail good opportunities to work in the field of History, education and research
- Develops youth force as trained& disciplined leadership.
- Enhancement of skills and patriotic values among youth.
- Understand background of our religion, customs institutions, administration and so on.
- Understand the present existing social, political, religious and economic conditions of the people.

- Analyze relationship between the past and the present is lively presented in the history.
- Develop practical skills helpful in the study and understanding of historical events. They:
 - (a) Draw historical maps, charts, diagrams etc.
 - (b) Prepare historical models, tools etc.
- Develop interests in the study of history and activities relating to history. They:
 - (a) Collect ancient arts, old coins and other historical materials;
 - (b) Participate in historical drama and historical occasions;
 - (c) Visit places of historical interests, archaeological sites, museums and archives;
 - (d) Read historical documents, maps, charts etc.
 - (e) Play active roles in activities of the historical organizations and associations; and
 - (f) Write articles on historical topics.
- The study of history helps to impart moral education.
- History installs the feeling of patriotism in the hearts of the pupils.

Political Science

- Students will understand the need for a constitution and explain the role of constitution in a democratic society.
- For the welfare of the society students can demonstrate an understanding of the concepts & central themes of the political ideologies examined
- Students will be able to explain the Governmental mechanism from Gram panchayat to Parliament and can suggest solutions over various issues in its functioning and implementation.
- Students will use various political concepts and ideology to analyze new situations.
- Students can work as political analyst, political party adviser, as a research scholar or can be a free lance political thinker and writer.
- The programme provides the students with the capacity to identify issues and problems relating to the realization of human rights.

- Students will be able to understand the composition and functions of Election Commission of India and other state election commissions and can work as an observer.
- Students will be able to understand the meaning, nature and scope of the International Relations

Economics

- Students will understand the role finance institution, finance management, Banking E – Banking, money and Capital markets.
- Students will understand the concepts GNP, NNP, GDP, NDP, PCI, Disposable Income. Students will understand various aspects and features of Indian economy.
- Student will know about Consumer's behaviour, Demand analysis, cardinal and ordinal utility. It may also provide the information to the student for elasticity of demand, price and income and cross elasticity of demand. Students will learn about the concepts of statistical methods.
- Students will know the concepts of supply of money and demand for money, types of money, classical and modern theory of interest, Trade cycle Theory.
- Students will know demographic features, size, sex ratio, growth rate, migration, Industrial development, Industrial policy, FERA, FEMA, Act. and the Concept of LPG.
- The students will understand various concepts of Agricultural Economics and they can be well familiar with rural Economy.
- Students can work efficiently in the field of banking, finance, industry, farming, consumer rights, production, research and trade.

Commerce

- The students would be able to acquire basic and fundamental knowledge and skills for doing business and commercial activities of their choice.
- The program also empowers the students to choose a profession of their choice such as CA, CS, ICWA, MBA, M.Com etc.
- The program enables the students to acquire the accounting knowledge, management principles, retail trading, banking and insurance transactions, business economics and financial management.
- The students also acquire knowledge in the field of management accounting, corporate accounting, statistical and mathematical techniques and knowledge relating to corporate law and business laws.

- Thus the students become capable of doing a business of their choice or choosing a profession or can become employees having basic knowledge and skill required for such activities.

Mathematics

- Students can apply induction principle
- Students can find LUB, GLB apply the definition of limit and continuity.
- Students can learn integration through infinite sum.
- They can solve improper integral of any kind using the known methods
- Students can know the definition of the limit of a sequence; evaluate the limits of a wide class of real sequences.
- Students can understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations.
- Students can Apply discrete probability distributions.

Physics

On completion of the Program student able to:

- Understanding of core knowledge on various papers of Physics. Clear the concepts which help them in understanding physical phenomenon in nature.
- Demonstrate skills and competencies to conduct scientific experiments related to Physics.
- Identify their area of interest and further specialize in the Physics.
- Possess advanced knowledge and skills in job market for various technical industries.
- Relate their knowledge and skills in carrying out independent work.
- Analyze situations, search for truth and extract information, formulate and solve problems in a systematic and logical manner.
- Discuss debate and communicate in a clear and logical way, with graduates in Physics and other fields.

Chemistry

- Students followed and understood general laboratory practice guidelines, including safety.
- They are able to handle instruments for basic and modern chemical analysis.

- They are able to secure profitable employment in industry or in government sector. Chemistry produced graduate and post graduate Chemist with thorough knowledge of qualitative and quantitative analysis, chemical synthesis, spectroscopic, chromatographic and thermal techniques.
- To make students capable of studying Chemistry in academic and industrial courses.
- To expose the students to promising frontiers of Chemistry to apprise them with ubiquitous of these subjects in their future studies and their applications in a range of spheres of Chemical Sciences.
- To build up problem solving skills in students.
- To expose the students to different processes used in industries and their applications.
- To develop the ability to attain the knowledge of terms, facts, techniques, concepts, processes and principles of subjects.
- To develop abilities to apply the knowledge of contents of principles of Chemistry.
- To develop proper attitude towards the subject.
- To develop skills required in Chemistry such as the proper handling of apparatus, chemicals and sophisticated instruments.

Computer Science

- Be able to analyses a problem, construct alternate approaches to its solution and evaluate the merits and demerits of each.
- Be aware of the history of the discipline of Computer Science and understand the conceptual underpinnings of the subject.
- Understand the nature of the software development process, including the need to provide appropriate documentation.
- Be able to program fluently in one or two programming languages.
- Understand the major programming paradigms and be able to learn a new programming language in a fairly short time.
- Understand standard techniques for solving a problem on a computer, including programming techniques and techniques for the representation of information.
- Understand the basic theory of computer architectures, including computer hardware and networking.
- Understand the importance and the nature of operating systems and compilers.

- Understand how information technology affects society, business and the individual, both from a technical and from an ethical and legal point of view.
- Be able to effectively communicate with persons who are not technically versed in the subject
- Be able to communicate effectively, both orally and in writing.
- Recognize the need for life-long learning and development.
- Be able to work in teams

Zoology

- The students are expected to acquire the knowledge of animal science, natural phenomenon, and manipulation of nature and environment by man.
- Understanding the scientific terms, concepts, facts, phenomenon and their interrelationship
- Applications of the knowledge develop skills in practical work, experiments and laboratory materials,
- Students followed and understood general laboratory practice guidelines, including safety.
- They are able to handle instruments for basic and modern analysis.
- To develop scientific attitude which is the major objective this makes the students open minded, critical observations, curiosity, thinking etc.
- Abilities to apply scientific methods, collection of scientific data, problem solving.

Commerce

- To understand the nature, scope and concepts of Accounting, Business Environment.
- To imbibe the managerial skills in the students
- To analyse the relationship between Accounting, Auditing and Taxation
- To know about the role of financial services in economy
- To understand the nature, scope and concepts of Accounting, Business Environment.
- To imbibe the managerial skills in the students

- To gain knowledge in computing skills and using computers in accounting field
- To acquire the skills required to get employment as an accountant using Tally, filing GST returns.