ECONOMICS

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO 1: Impart in-depth knowledge of Economics to the students and make them comprehend its relevance in day-to-day life.

PEO 2: Explain Economic theories and highlight its correlation with human behavioural
science.

PEO 3: To understand core economic principles and their application to a wide range of realworld issues.

PEO 4: To master the theoretical and applied tools required to both understand and analyze economic research at a global level.

PEO 5: To learn how to bring out pragmatic, principles-based policies aiming to enhance economic well-being and promote social justice.

PROGRAMME OUTCOMES (PO) FOR UNDER GRADUATE DEGREE IN ECONOMICS

PO1: A sound understanding of the science of Economics and its application through the aid of Mathematics, Statistic, Accounting and Computer Application.

PO2: Application of economic theories in handling real-life situations.

PO3: Students equipped with the knowledge and skills required to fit into Industrial, Agricultural and Service sectors, which will make them industry ready and employable immediately after graduation.

PO 4: Gaining broad idea of Macro Economic policies being adopted in the Indian economy

PO 5: Students reaped the advantage of a comprehensive curriculum including Economics along with Mathematics, Accountancy, History and Statistics will motivate graduates to apply for Indian Economic Service examination.

PO 6: The ability to collect process and interpret data including statistical inferences and create hypotheses and sets of economic variables.

PO 7: Creation of knowledge to evaluate the solutions available for complex economic issues and train them in problem solving.

PO 8: An awareness of global, historical and institutional forces that shape the Indian Economy.

SUBJECT	OUTCOMES
MICRO ECONOMICS I	1. After studied unit-1, the student will be able to understand the concept of Micro Economics, Definitions of Economics, Inductive and Deductive methods and Positive and Normative Economics. 2. After studied unit-2, the student will be able to acquire Knowledge of the law of Diminishing Marginal utility Law of Demand and Elasticity of Demand. 3. After studied unit-3, the student will be able to understand the Indifference curve analysis, Consumers equilibrium and consumer surplus. 4. After studied unit-4, the student will be able to gain knowledge of the theories of Production Function and producer equilibrium. 5. After studied unit-5, the student will be able to gain knowledge of types of cost and Revenue
STATISTICS FOR ECONOMICS –1	1. After studied unit-1, the student will be able to understand the concept of statistics with its functions. 2. After studied unit-2, the student will be able to acquire the Knowledge ofmethods of collecting primary data. 3. After studied unit-3, the student will be able to gain knowledge of calculating mean, mode and median. 4. After studied unit-4, the student will be able to gain knowledge on measures of dispersion.

	5. After studied unit-5, the student will be able to gain knowledge of skewness and kurtosis
2. AGRICULTURAL ECONOMICS	1. After studied unit-1, the student will be able to understand the nature and importance of Agriculture 2.After studied unit-2, the student will be able to gain knowledge of Agricultural productivity 3. After studied unit-3, the student will be able to understand the size of Land holdings 4. After studied unit-4, the student will be able to gain knowledge of sources of Agricultural Credits. 5. After studied unit-5, the student will be able to understand the scope and types of Agricultural markets
SEMESTER II	
MICRO ECONOMICS –II	1. After studied unit-1, the student will be able to understand the concept of market competition and how price and output determined in a perfect competition 2. After studied unit-2, the student will be able to acquire Knowledge of the Imperfect market, price and output determination in the short run and long run. 3. After studied unit-3, the student will be able to understand the Marginal productivity theory of distribution and the theories based on which the rent is fixed 4. After studied unit-4, the student will be able to gain knowledge of the theories of wages and the importance of Trade unions. 5. After studied unit-5, the student will be able to gain knowledge of the theories of Interest and profit.

STATISTICS FOR ECONOMICS –II	1. After studied unit-1, the student will be able to understand the calculation of coefficient of correlation and rank correlation. 2. After studied unit-2, the student will be able to acquire Knowledge of importance and calculation regression analysis. 3. After studied unit-3, the student will be able to acquire knowledge on the components of time series. 4. After studied unit-4, the student will be able to gain in depth knowledge of methods of constructing index numbers. 5. After studied unit-5, the student will be able to understand probability theorem
2. AGRICULTURAL MARKETING	1. After studied unit-1, the student will be able understand to basic concepts of marketing. 2. After studied unit-2, the student will be able to acquire knowledge of marketing functions. 3. After studied unit-3, the student will be able to understand the structure of market 4. After studied unit-4, the student will be able to acquire knowledge of channels of marketing. 5. After studied unit-5, the student will be able to know the regulations of market

ENGLISH

SUBJECT	OUTCOMES
SEMESTER I INDIAN WRITING IN ENGLISH	**UNIT-I** Students will be able to examine the concepts of Indian English Poetry. Students will be able to comment on the humor in A Very Indian Poem in English. Students will be able to understand the life of fishermen community. Students will be able to grasp the in-depth ideas about the poem Home Coming. Students will be able to know about Autobiographical Poem.
	UNIT-II Students will be able to appreciate the poem Of Mother, among other Things. Students will be able to identify different images of the Mother. The students will be able to understand the sense of loss of identity in immigrants Students will be able to analyze the reality of a beggar Old Woman. Students will be able to understand the style of Indian Poetry.

	UNIT-III Students will be able to scrutinize the writing style adopted by Kushwant Singh. Students will be able to understand Tagore as a short story writer. Students will be able to identify the writing style of BhabiniBhatachariya . Students will be able to inculcate the moral ideas of Swami Vivekananda. Students will be able to evaluateBhabiniBhatachariya as an essayist.
	UNIT-IV Students will be able to analyze the plot Nagamandala. Students will be able to know about the writing style of GirishKarnad. Students will be able to understand the superstitious beliefs in Indian culture . Students will be able to know about the significance of marital relationship . Students will become familiar with popular myth.

	UNIT-V Students will be able to understand the concept of globalization. Students will be able to absorb the importance of family. Students will be made aware of corruption in India
ADVANCED ENGLISH GRAMMAR	**UNIT-I** Students will be able to get distinct ideas on all the parts of speech. Students will be able to understand Parts of Speech and their types. Students will be able to use Parts of Speech with relevant Examples. Students will be able to examine the usage of Parts of Speech in various contexts. Students will be able to identify the different ways to adopt Parts of Speech.
	UNIT-II Students will be able to know about the Types of sentences. Students will be able to understand Statement sentence with illustrations. Students will be able to know Interrogative sentence with illustrations. Students will be able to identify Imperative sentence with illustrations. Students will be able to understand Exclamatory sentence with illustrations.

	UNIT-III Students will be able to know about Sentence Pattern and its types. Students will be able to recognize the different types of Sentence Pattern. Students will be able to identify the different ways to adopt Sentence Pattern. Students will be able to examine the correct usage of Sentence Pattern. Students will be able to distinguish the Sentence Pattern with the help of illustrations.
	UNIT-IV Students will be able to know about Tense and its kinds. Students will be able to understand and use Tenses in day to day life. Students will be able to know about Subject and its Usage. Students will be able to be familiar with Concord. Students will be made aware of Verb and its Kind.
	UNIT-V Students will be able to understand Phrases. Students will be able to absorb noun, verb, adjectival and prepositional phrases. Students will be made aware of Definitions of Clauses and its types. Students will be able to comprehend Clauses with illustrations. Students will be able to distinguish Clauses with the help of illustrations

LITERARY FORMS AND TERMS	**UNIT-I** Students will be able to understand how poetry requires a different writing style. Students will be able to get,in-depth ideas of Poetry. Students will be able to understand the traits of Lyric, Ode, and Sonnet. Students will be able to examine Elegy and Epic. Students will be able to scrutinize different kinds of Poetry.
	UNIT-II Students will be able to understand prose aswriting with distinct style. Students will be able to know the characteristics of Short Story. Students will be able to understand the ideas behind Essay. Students will be able to understand the basic traits of Biography. Students will be able to know about Autobiography in detail.
	UNIT-III Students will be able to understand Drama as a genre with distinct style. Students will be able to distinguish Tragedy and Comedy as a separate genre. Students will be able to understand Tragi - Comedy. Students will be able to examine characteristics of One Act Play. Students will be able to absorb the principles of the Absurd Drama .

	UNIT-IV Students will be able to understand novel'scharacteristics. Students will be able to know about Historical Novel. Students will be able to be familiar with Picaresque Novel. Students will be made aware of The Stream of Consciousness Novel. Students will be able to absorb the characteristics of various types of Novels
	UNIT-V Students will be able to understand few important Literary Terms. Students will be able to absorb the basic ideas of Plot, Melodrama and Irony. Students will be made aware of Euphemism, Expressionism and Satire. Students will be able to comprehend Allegory, Comic Relief and Dramatic Monologue. Students will be able to identify the usages of Literary Terms.
SEMESTER II	
BRITISH LITERATURE I	**UNIT-I** The students will be able to 1. Identify the characteristic features of metaphysical poetry 2. Critically appreciate the poem, "Hymn to God, the Father" 3. Analyse the theme of "Song for St. Cecilia's Day" 4. Identify the neoclassical elements found in the prescribed poems 5. Understand Dryden as a neoclassical poet

	UNIT II The students will be able to 1. Understand Milton's greatness as a poet 2. Understand how one has to wait for the right time to accomplish great works 3. Appreciate the grand style of Milton 4. Understand Pope as the representative poet of neoclassicism 5. Appreciate the value of simple life
	UNIT-III The students will be able to 1. Understand the three fruits of friendship 2. Know the purpose of studying 3. Understand the advantages of studying 4. Understand the greatness of books 5. Appreciate the style of Bacon
	UNIT-IV The students will be able to 1. Understand the social life of 17th century England 2.Critically appreciate the play, The Shoemaker's Holiday" 3. Analyse the characters of the Play . 4. Know how war leads to disability of persons 5. Understand the class system of English People

	UNIT-V The students will be able to 1. Understand Pilgrims Progress as an Allegory 2. Appreciate the theme of salvation. 3. Understand that the road to Heaven is not easy, the cost is great, 4. Know that the true Christian must be willing to pay the cost no matter what. 5. Know that man is full of sin, but this does not keep him from attaining glory
AMERICAN LITERATURE	**UNIT-1** 1. the student will be able to grasp the lyrical richness embedded in American Poetry 2. the student will be able to understand the modern American writer like Merwin and his thoughts related to Environment 3. the student will come to know the great American Poets like Frost, Lowell and Sandburg and their works. 4. the student will be able to develop a taste of American poetry and thus he or she further reads and understands 5. the student will search in web, related poems written by these great poets to develop further knowledge on poetry

	UNIT-2 1. the student will be able to admire and try to emulate the literary expertise of Walt Whitman, Emily Dickinson, Edgar Allan Poe and Wallace Stevens 2. the student will come to know the literary terms available in the American poetry 3. the student will get inspiration from Walt Whitman and his knowledge about India 4. the student will read further about these great poets 5. the student will develop a taste to study the lifestyle of American people
	UNIT-3 1. the student will be able to judge the supremacy of American output 2. the student will come to know the great prose writers of American Literature Emerson, Thoreau and Martin Luther King 3. the student will understand the real thoughts of the American writers 4. the student will get inspiration through these works and it will kindle him or her to read more 5. the student will understand the philosophy of these writers.

	UNIT-4 1. the student will be able to judge the supremacy of American drama 2. the student will come to know the great dramatist of American Literature Arthur Miller 15 3. the student will understand the real thoughts of the American dramatists in general 4. the student will get inspiration through this drama and it will kindle him or her to read more dramas of American Literature 5. the student will understand the usage of language in the drama
THE SOCIAL HISTORY OF ENGLAND	To provide a profound background to the UG programme: B A English Literature. Literature being a mirror of life with an extensive knowledge of English social life, English literature could be appreciated, relished and enjoyed. So, with this view this paper is designed and it focuses on the major trends which have moulded the English society.

BUSINESS ADMINISTRATION

SUBJECT	OUTCOEMES
SEMESTER	
PRINCIPLES OF MANAGEMENT	1. After studied unit-1, the student will be able to understand the concept of management. 2. After studied unit-2, the student will be able to plan and make decisions.

	3. After studied unit-3, the student will be able to differentiate organisation structure and know the functioning 4. After studied unit-4, the student will be able to delegate work, differentiate between power and authority 5. After studied unit-5, the student will be able to coordinate activities in an organisation.
BUSINESS MATHEMATICS AND STATISTICS – II	After studied this course the students will be able - 1. To apply basic terms of statistical data solving practical problems field of as of business. 2. To explain basic methods of Measure of central tendency 3. To solve problems in the areas of simple and compound interest account, use of compound interest. 4. To discuss effects of various types and methods of interest account. 5. Connect acquired knowledge and skills with practical problems
SEMESTER II	
BUSINESS ENVIRONMENT	After studying **unit-1**, the student will be able to learn factors that affect the business environment - Its nature and significance - Brief overview of political - Cultural - Legal - Economic and social environments and their impact on business and strategic decisions.

	After studying **unit-2**, the student will be able to understand how Political Environment - Government and Business relationship in India - Provisions of Indian constitution pertaining to business have an influence on any organization.
	After studying **unit-3**, the student will be able to understand how influences from the society, cultural heritage, social attitudes, foreign culture, castes and communities, joint family systems, linguistic and religious groups and types of social organizations impact organizations.
	After studying **unit-4,** the student will be able to know how Economic Environment - Economic Systems influence organizations. To understand the impact from Macro-Economic Parameters - GDP - Growth Rate - Population - Urbanization - Fiscal deficit - Plan investment and Per capita Income
	After studying **unit-5,** the student will be able to know how Financial Environment - Financial System - Commercial banks - RBI - IDBI - Non-Banking Financial Companies NBFC's influence organizations.
BUSINESS MATHEMATICS AND STATISTICS II	**After studied this subject the student will be able to :** 1. Identify statistical tools needed to solve various business problems. 2. Solving Simultaneous Equation using matrix Method. 3. Able to find out the Correlation & regression. 4. Develop Time Series Component of time Series Secular trend Seasonal Variation Cyclical Variation, Irregular Variation

	5. Students can Use Index Number , Weighted and UN weighted Index Numbers in practical application .

B.COM

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO 1: To excel with the much needed business education, to ensure that students to be more competitive for employment and higher education.

PEO 2: To develop a broad range of business skills and knowledge, development of general and specific capabilities to meet the current and future expectation of business, industries and economy at the national and global level.

PROGRAMME OUTCOMES (POs)

PO 1: To have comprehensive knowledge of finance, accounting, taxation, economics and business laws

PO 2: To equip with professional, inter-personal and entrepreneurial skills for economic and social growth

PO 3: To gear up with updated knowledge in implementing business practices

PO 4: To acquire effective skills like communication, decision making, problem solving in business activities

PO 5: To blend knowledge, skill and attitude that will sustain an environment of learning and creativity.

PO 6: To impart value based and job oriented education, which ensures that the students are trained into up-to-date.

SUBJECT	OUTCOMES	
SEMESTER I		
FINANCIAL ACCOUNTING I	After studied unit-1, the student will be able to U	Understand the basic fundamentals of Double Entry System Accounting

	Unit2 After studied unit-2, the student will 5 be able to	Prepare Final Accounts
	Unit3 After studied unit-3, the student will be able to	Understand the depreciation accounting
	Unit4 After studied unit-4, the student will be able to	Prepare the accounts in Single Entry system
	Unit 5 After studied unit-5, the student will be able to	Understand the importance of Tally Accounting
BUSINESS ORGANIZATION	Unit1 After studied unit-1, the student will be able to	Knowledge about Business and Profession
	Unit2 After studied unit-2, the student will be able to	Understand the different Forms of Business Organization.
	Unit3 After studied unit-3, the student will be able to	Explore the theories of Plant Location and characteristics of Layout
	Unit4 After studied unit-4, the student will be able to	Know the concept of Business Combinations and functions of Chamber of commerce, Trade Association.
	Unit 5 After studied unit-5, the student will be able to	Understand the basic Concepts of MNCs
1. INDIAN ECONOMY - I	1. After studied unit-1, the student will be able to understand the various indicators of economic development. 2. After studied unit-2, the student will be able to understand the importance, causes and impact of population growth. 3. After studied unit-3, the student will be able to gain knowledge about the role of agriculture in economic development	

	4. After studied unit-4, the student will be able to gain knowledge about the role of agriculture labour problems and remedies .	
	5. After studied unit-5, the student will be able to understand the industrial development during plan periods.	
SEMESTER II		
FINANCIAL ACCOUNTING II	Unit1 After studied unit-1, the student will be able to	Understand the basic fundamentals of branch accounting
	Unit2 After studied unit-2, the student will be able to	Understand the basic fundamentals of Departmental accounting
	Unit3 After studied unit-3, the student will be able to	Understand the Hire purchase and Installment System of accounting
	Unit4 After studied unit-4, the student will be able to	Prepare the accounts partnership
	Unit 5 After studied unit-5, the student will be able to	Understand the basics of Tally Accounting
OFFICE MANAGEMENT	Unit1 After studied unit-1, the student will be able to	To gain knowledge about nature and scope of organization
	Unit2 After studied unit-2, the student will be able to	To gain effective knowledge about 18 be able to Administrative arrangements and
	Unit3 After studied unit-3, the student will be able to	To gain a knowledge of Office equipments and Office System
	Unit4 After studied unit-4, the student will be able to	To know about Office Correspondence

	Unit 5 After studied unit-5, the student will be able to	To learn about Office Supervisor
1. INDIAN ECONOMY - II	1. After studied unit-1, the student will be able to understand the formation of National Income.	
	2. After studied unit-2, the student will be able to acquire knowledge about the planning in India	
	3. After studied unit-3, the student will be able to clarify the economic reforms and LPG policy.	
	4. After studied unit-4, the student will be able to understand the transport system and policy in India	
	5. After studied unit-5, the student will be able to understand the information technology in India	
2. MERCHANT BANKING	Unit1 After studied unit-1, the student will be able to	To gain knowledge about Merchant Banking .
	Unit2 After studied unit-2, the student will be able to	To impart effective knowledge about Public Issue Management
	Unit3 After studied unit-3, the student will be able to	To learn about Post Issue Management.
	Unit4 After studied unit-4, the student will be able to	To gain knowledge about Capital Market Instruments.
	Unit 5 After studied unit-5, the student will be able to	To learn about Port Folio Management

SOCIAL WORK

SUBJECT	OUTCOMES
SEMESTER- I	
INTRODUCTION TO SOCIAL WORK	1. The student will be able to know the basics of social work profession and the fields of social work.
	2. The student will be able to understand social work as a profession. 3. The student will be able to understand various ideologies of social work 4. The student will be able to demonstrate awareness of values and ethics of the social work profession. 5. The student will be able to understand the various historical development for bringing social work as a profession in India and in other countries.
INDIAN SOCIAL PROBLEMS	1. After studies the student will be able to learn the various problems in India 2. After studies the student will be able to know the impact of problems in the society 3. The student will be equipped to enable the students to reduce the problems in the society as social workers 4. After studying this paper, the student should be able to: brief how certain social issues become dominant for the development of the country.

	5. The student will be able to understand the issues and how it effects the society.
SOCIOLOGY FOR SOCIAL WORK PRACTICE	1. The student will be able to understand the various functions and structure of society 2. The student will know about in depth causes of social change. 3. The student will have the ability to demonstrate knowledge of some of the key substantive areas within the field of sociology 4. The student will be able to demonstrate knowledge of core sociological concepts. 5. The student will develop the knowledge, skills, and attitudes necessary to be engaged members of the community.
SEMESTER- II	
PSYCHOLOGY FOR SOCIAL WORK /;PRACTICE	1. Students will gain knowledge in fundamental concepts in psychology. 2. Students will understand various stages of development 3. Students will gain knowledge in various psychological theories of human development. 4. Students will understand various aspects of human behaviour. 5. Students will understand various aspects of adjustment and maladjustment
SOCIAL WORK WITH INDIVIDUALS	1. The student will be able to demonstrate familiarity with Casework processes, tools and techniques and their application in Professional Social Work Practice.

	2. The student will be able to develop skills of Observation, Listening, Interviewing and Home Visits, Rapport Building, Resource Mobilization and Recording. 3. The student will understand the social case work in various settings.
	4. The student will be able to understand the various treatment process involved on social case work. 5. The student will be able to understand social diagnosis and practice case work in various settings
FUNDAMENTALS OF NUTRITION	1. Students will understand the basic concepts in nutrition 2. Students will discuss the relationship between food, health and diseases 3. Students will gain knowledge in the various types of vitamins and their functional values 4. Students will assess the diseases caused by deficiency of vitamins and minerals 5. students will practice dietary habits that contribute to health life style

MATHS

SUBJECT	OUTCOMES
SEMESTER I	
ALGEBRA	At the end of the course the student will be able to [1] know the relationship between roots and coefficients. [2] identify the nature of the roots of the given equation . [3] evaluate sum to infinity of the given binomial, exponential and logarithmic series [4] identify the types of matrices and calculate the Eigen values of a given square matrix [5] know the number theory concepts
TRIGONOMETRY	At the end of the course the student will be able to [1] know the expansions of cosnθ, sinnθ in powers of cosθ and sinθ [2] expand powers of sines and cosines of θ in terms of functions of multiples of θ [3] know the concept of hyperbolic functions [4] know the logarithm of complex quantities [5] find the summation of trigonometric series
SEMESTER II	
CALCULUS	At the end of the course the student will be able to 1] determine extreme values of the given function [2] know the concept of Cartesian and polar coordinates [3] gain the knowledge of curvature, evolutes and envelope concepts [4] solve integration problems

	[5] evaluate double and triple integrals.
ANALYTICAL GEOMETRY OF THREE DIMENSIONS	At the end of the course the student will be able to [1] know the equation of the plane and its applications [2] gain the knowledge of straight line and its applications [3] solve sphere related problems [4] know the concepts of cone, right circular cone and enveloping cone [5] know the concepts related to cylinder.
MATHEMATICAL STATISTICS - I	
MATHEMATICAL STATISTICS II	
ALLIED PRACTICAL MATHEMATICAL STATISTICS	
NUMERICAL METHODS - I	
NUMERICAL METHODS II	
PHYSICS	After studied unit-1, the student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension.
	2. After studied unit-2, the student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.

	3. After studied unit-3, the student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position
	4. After studied unit-4, the student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains.
	5. After studied unit-5, the student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication
CHEMISTRY – II	
ALLIED PRACTICAL CHEMISTRY	

STATISTICS

SUBJECT	OUTCOMES
SEMESTER I	
DESCRIPTIVE STATISTICS	1. After studied unit-1, the student will be able to know methods of data collection 2. After studied unit-2, the student will be able to know various techniques of presentation of data 3. After studied unit-3, the student will be able to know measures of location and dispersion 4. After studied unit-4, the student will be able to know correlation and regression 5. After studied unit-5, the student will be able to know association of attributes
MATHEMATICS I	
SEMESTER II	
PROBABILITY AND RANDOM VARIABLES	1. After studied unit-1, the student will be able to know the concept of probability 2. After studied unit-2, the student will be able to know Bayesian formula and its applications 3. After studied unit-3, the student will be able to know random variables and its properties 4. After studied unit-4, the student will be able to know moment generating function and computation of moments

	5. After studied unit-5, the student will be able to know bivariate distributions and related features
STATISTICAL PRACTICAL-I	
MATHEMATICS II	

PHYSICS

SUBJECT	OUTCOMES
SEMESTER I	
MECHANICS	1. After studied unit-1, the student will be able to know fundamentals of vectors and able to formulate the expression for projectiles
	2. After studied unit-2, the student will be able to study the dynamics of rigid bodies in terms of moment inertia and also able to find the moment of inertia of different systems.
	3. After studied unit-3, the student will be able to define work, energy and also able to understand the oblique impact between smooth spheres.
	4. After studied unit-4, the student will be able to learn the elastic property of the solid materials and also derive the relation between elastic moduli
	5. After studied unit-5, the student will be able to explain the concept of gravitation and able to know the principles of rocket and satellite
SEMESTER II	
HEAT AND THERMODYNAMICS	1. After studied unit-1, the student will be able to know fundamentals specific heat capacity and able to explain the kinetic theory of gases.
	2. After studied unit-2, the student will be able to describe the conduction and radiation of heat and also able to study the Joule-Kelvin effect based on the low temperature phenomena and its applications.
	3. After studied unit-3, the student will be able to cite the laws of thermodynamics and their applications

	4. After studied unit-4, the student will be able to explore the equations governing second law of thermodynamics and entropy.
	5. After studied unit-5, the student will be able to explain Phase-space, micro and macrostates and able to distinguish MB,FD and BE statistics.

CHEMISTRY

SUBJECT	OUTCOMES
SEMESTER I	
GENERAL CHEMISTRY – I	Upon completion of this course, the students will be able to 1) Recollect the Chemistry of Quantum Numbers 2) Review and apply periodicity of properties. 3) Discuss various types of bonding through VB & MO theories. 4) Name simple Aliphatic and Aromatic Compounds. 5) Illustrate and apply electron displacement effects and reaction mechanisms. 6) Elaborate the basic concepts of solid, liquid and gaseous states 7) Apply the principles of Volumetric Analysis.
1. PHYSICS I	1. After studied unit-1, the student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension

	2. After studied unit-2, the student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.
	3. After studied unit-3, the student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position. 4. After studied unit-4, the student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains. 5. After studied unit-5, the student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication
MATHEMATICS – I	
SEMESTER II	
GENERAL CHEMISTRY - II	
1. PHYSICS II	1. After studied unit-1, the student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity. 2. After studied unit-2, the student will be able to describe the different atomic models and Stern and Gerlach Experiment.

	3. After studied unit-3, the student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.
	4. After studied unit-4, the student will be able to know the conversion of number systems from one to other and also will be able to design universal gates using NAND and NOR gates.
	5. After studied unit-5, the student will be able to understanding the basics of nanomaterial, synthesis and its applications
5. MATHEMATICS - II	

BOTANY

SUBJECT	OUTCOMES
SEMESTER I	
PHYCOLOGY AND MYCOLOGY	1. To learn about the general characters of algae 2. To impact knowledge on various major groups of algae 3. To understand the life history of various groups of algae 4. To differentiate the various groups of fungi 5. To know the knowledge of general distribution of fungi
ZOOLOGY I	1. The students will be able to understand the life – cycle to and adaptations of protozoa, poriferacoelenterata and platy helminthes. 2. The student will be able to understand the functional morphology of Annelids, Arthropods , Molluscs and Echinoderms 3. The student will be able acquire knowledge about the functional morphology of chordata, prochordatas and pisces 4. The student will be able have a thorough knowledge about Frog and Calotes. 5. The student will be able to understand the functional morphology of Aves and Mammals.

SEMESTER: II	
MICROBIOLOGY, LICHENOLOGY, BRYOLOGY AND PLANT PATHOLOGY	1. To understand the diversity of microorganisms, their importance and basics of microscopes. 2. To know about bacteria and viruses and how they are classified 3. To know about symbionts in botany. 4. To know about bryophytes, the non vascular plants 5. To understand the concept of plant diseases and protective measures.
PHYCOLOGY, MYCOLOGY, MICROBIOLOGY, LICHENOLOGY, BRYOLOGY AND PLANT PATHOLOGY	
ZOOLOGY II	1. The student will acquire knowledge about cell structure, gene function and Genetic engineering. 2. The student will be able to understand the cleavage pattern and gastrulation in Amphioxus 3. The students will have a thorough knowledge about the diseases of circulatory systems and urine formation. 4. The student will be have an awareness about the environment. 5. The student will understand the basic concepts of evolution

ZOOLOGY

SUBJECT	OUTCOMES
SEMESTER I	
INVERTEBRATA	To understand the principle of taxonomy To learn the general characters, classification of Invertebrates and their phylum To understand the morphology and their systems of various groups of Invertebrates. To study the economic importance of invertebrates To study the affinities and adaptations of Invertebrates
SEMESTER II	
CHORDATA	On completion of the unit the students will able to describe the salient features of phylum Chordata After completion of this unit the students will able to Observe the diversity in class pisces and their classification It provides the way of identifying different orders of Amphibians. Students will able to list out the unique characters of Aves. To know the classification of class Mammalia up to orders.
INVERTEBRATA AND CHORDATA	

MICROBIOLOGY

SUBJECT	OUTCOMES
FUNDAMENTALS OF MICROBIOLOGY	At the end of the course, the student will be able to 1. Understand the scope and relevance of Microbiology as a scientific discipline. 2. Decide on the correct type of microscopy and staining. 3. Gain knowledge on the various classification of microorganisms. 4. Study the morphology and structure of microorganism. 5. Get acquainted with various sterilization techniques.
BIOCHEMISTRY I	
MICROBIAL PHYSIOLOG	At the end of the course, the student will be able to 1. Outline on the nutritional requirement and nutritional types of bacteria. 2. Demonstrate various techniques employed in the cultivation of microorganisms 3. Discuss on the different phases of microbial growth. 4. Explain the basic concepts of microbial metabolism. 5. Elaborate on the biosynthesis of bacterial cell wall and mechanism of photosynthesis
EXPERIMENTS IN BASIC MICROBIOLOGY	
BIOCHEMISTRY II	

PRACTICAL I BIOCHEMISTRY I & II	

COMPUTER SCIENCE

SUBJECT	OUTCOMES
PROGRAMMING IN C	The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions The Student will be able to understand the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping. The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions. The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C. The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods
Programming in C - Lab	Enhance the analyzing and problem solving skills and use the same for writing programs in C. Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards. Learn to debug a given program and execute the C program. To have enough practice the use of conditional and looping statements. To implement arrays, functions and

	pointers

VISUVAL COMMUNICATION

SUBJECT	OUTCOMES
SEMESTER I	
FUNDAMENTALS OF COMMUNICATION	Co1: Would know about factors influencing communication process Co2: Would understand the elements and signs of communication Co3: Understand Communication models and theories Co4: Would establish concepts of communication for development Co5: Effectuate the creative thinking process
Writing for Media	CO1: CREATE the foundations of good writing skills with a steady grasp of grammatical aspects as well as the process of writin CO2: GAIN knowledge and skills relating to writing techniques for various types of assignments related to print media. CO3: UNDERSTAND and BUILD the skills required to writing for the ears so as to be able to produce written scripts for various types of radio programmes.

	CO4: DEVELOP the skills to write for visual medium by learning to write scripts in various formats for different types of programmes for television and for films
	CO4: ENHANCE the skills required to write various types of content required in the realm of New Media.
Semester II	
Introduction to Visual Communication	CO1 Unit 1: Gain understanding of the concept of Communication CO2 Unit 2: Would know the Evolution of Communication CO3 Unit 3: Imbibe an overview of communication discipline CO4 Unit 4: Render analytical capability of the elements of visual communication CO5 Unit 5: Skilled in conceptual thinking and creativity
DRAWING	CO1 Unit 1:Understand the formal language of drawing and the fundamentals of artistic expression. Understand the basic principles of linear perspectives CO2 Unit 2:Demonstrate a basic understanding of the principles of composition, proportion & texture. Understand the effect of light on three-dimensional forms as it applies to drawing

	CO3 Unit3:Realistically render subjects from direct observation. Demonstrate skills of visual perception, spatial concepts, and critical thinking.
	CO4 Unit 4:Demonstrate an understanding of classification of the different types with their names and character, mode, weight, orientation, position & sizes. Understand scale and ratio of letter forms. Present phonetic expressions in visual forms. Depict monograms using text and sound. Demonstrate ability to use calligraphy to draw objects – apply calligraphy techniques CO5 Unit 5:Show basic proficiency in use of Application Software. Demonstrate ability to transition hand drawing to digitized design, Modify, compose and present hand-illustrated art as digital images.
Photography	CO1 Unit 1: Get conversant with the concept of photography as a language of light and the basic knowledge about the functioning of a camera CO2Unit2: Understand the various situations during which different cameras/lenses could be used by applying the knowledge about their features. CO3 Unit 3: Analyse and understand the significance of lights & lighting in photography.

	CO4 Unit 4: Illustrate the various genres of photographs with their key features. CO3 Unit 5: Evaluate the merits and limitations of digital photography in comparison to traditional photography.
Practical Photography	CO1 Unit 1: Gain knowledge regarding lighting, aperture, shutter speed etc., while taking pictures of objects and the same for taking portraits.
	CO2Unit 2: Comprehend the different lighting techniques so that they can take photographs with various effects and capture human expressions especially children. CO3 Unit 3: Apply the lighting techniques to advertise products and fashion shows. CO4 Unit 4:Demonstrate the significance of environment and the role of photographs in creating environmental awareness and sustainable development CO5 Unit 5:Create photo stories using elements of human interest.

COMPUTER APPLICATION

SUBJECT	OUTCOMES
SEMESTER I	
CORE THEORY PAPER -1	• The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions • The Student will be able to understand the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping. • The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions. • The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C. • The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods
Programming in C – Lab	CO1 - Enhance the analyzing and problem solving skills and use the same for writing programs in C. CO2 - Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards. CO3 - Learn to debug a given program and execute the C program. CO4 - To have enough practice the use of conditional and looping statements. CO5 - To implement arrays, functions and pointers.
MATHEMATICAL FOUNDATIONS - I	

SEMESTER II	
C++ & DATA STRUCTURES	• The Student will be able to understand the concepts of object oriented programming Apply structure and inline functions. • The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time problems Apply the OOPs concepts class and object. Understand Explain the file concept and exception handlings in C++ • The Student will be able to understand the concepts of Stacks and Queue using array and pointers. • The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs. • The Student will be able to understand the concepts of Sorting and Searching Algorithms
C++ & DATA STRUCTURES LAB	• Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors. • Demonstrate the Polymorphism Concepts and Operator Overloading. • Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion. • Apply Algorithm for solving problems like Sorting and Searching. • Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems
MATHEMATICAL FOUNDATIONS II	

M.A ENGLISH

PROGRAMME OBJECTIVES

The Programme aims to develop the ability of the student to critically examine and restate his/her understanding of literary texts, employing individual linguistic skills, engendering literary concepts and critical approaches to arrive at the core and essence of narratives. The learning process would also lead to a larger comprehension of global, national, social issues and thereby facilitate the students to address the issues proactivity and gain a reasonable command of the language.

COURSE OUTCOMES

- On completion of the programme the student will be able to:

•nterpret his/her understanding of form, structure, narrative technique, devices and style.

- Analyze and apply various literary concepts and critical approaches.
- Appreciate the importance of English as an international language, to benefit from the achievements of other cultures in accordance with various life situations.
- Organize and integrate the acquired knowledge towards individualistic compositions.
- Present, appraise and defend arguments with conviction and confidence

SUBJECT	COURSE OUTCOMES
SEMESTER-I	
BRITISH POETRY (CHAUCER TO 20th CENTURY)	¬ The student will learn about the metaphysical poets and their style of writings. ¬ The student will know about the love and lust towards opposite gender

	¬ The student will be able to differentiate the various types of sonnets ¬ The student will enjoy the beauty of the nature and imagination ¬ The student will understand the romantic life of the poets ¬ The student will differentiate the changes of language and style.
AMERICAN LITERATURE	¬ The student will come to know the prominent women writers ¬ The student will able to distinguish the variousthinking of American society ¬ The student will understand transcendentalists and naturalists ¬ The student will receive the seclusion temper And patriarchal society ¬ The student will learn the reality of working Classes and middle classes living in cities
INDIAN LITERATURE IN ENGLISH	¬ The student will be able to know the importance of translation in various works ¬ The student will know the sufferings and submissive conditions of people ¬ The student will know the childhood sufferings And search for identity through short stories ¬ The student will learn the myths and ethics of Indians ¬ The student will know how to write the script ¬ The student will be inspired by various motivational writings
INDIAN WRITING IN TRANSLATION	¬ To demonstrate the understanding of the social and artistic movements that have shaped theatre and dance as we know it today. ¬ Apply discipline to specific skills in

	learning creative performance. Analyze and interpret texts and performances both in spoken and writtenform. ¬ This encourages economy of setting, concise narrative and the omission of a complex plot: character is disclosed in action and dramatic encounter but is seldom fully developed. ¬ Despite its relatively limited scope a short storyis often judged by its ability to provide "a Complex" or justifying treatment. ¬ We can demonstrate knowledge and comprehension of major texts and traditions of anguage and literature written in English as well as their social, cultural, theoretical andistorical contexts
LITERATURE FOR SOCIAL TRANSFORMATION	¬ The student will come to know the conditions of pre- independent India ¬ The student will realize the contemporary situation in society ¬ The student will know how the materialistic world dominates humanism ¬ The student will able to know the nature of knowledge and what is essential for students to learn ¬ The student will be able to know how to write the satirical tone of prose ¬ The student will be able to understand theconditions and sufferings of the working classes
SEMESTER II	
BRITISH DRAMA	¬ Apply discipline – specific skills to the creation of performance ¬ Draw connections between theatrical practices and social contexts in both modern and pre-modern periods. ¬ They will demonstrate proficiency in specific Skills like: acting, directing,

	choreography,play-writingor dramaturgy. ¬ They will be able to analyze, interpret and evaluate the dramatic literature and theatrical productions.
TRANSLATION THEORY AND PRACTICE	¬ The learner knows about the history of translation and its practice. ¬ Interpretation of SL and TL can be done ¬ Reproduction of the translation and the process and product can be understood. ¬ Problem and solution of the translation and the equivalence of the translation can be learned. ¬ Translation is done in practice.
CONTEMPORARY LITERARY THEORY - I	¬ It reinforces the student's literary competence. ¬ The students will develop an independent critical persona. ¬ The students can understand the various types of theories ¬ Theories after the 20th century is learned
COMPARATIVE LITERATURE	¬ The student will know about the definition and Origin of the Comparative Literature. ¬ Influence and Imitation of the subject is taught. ¬ The link between Comparative Literature and the literary History is exposed ¬ The Comparison between the genres is taught to the learners. ¬ The comparison of Themes were taught to the students.
TECHNICAL WRITING	¬ Demonstrate an understanding of styles and methods in Technical Writing Locate, evaluate and use online packages and appliances effectively. ¬ Display skills required for a technical

	communicator, use visuals effectively, integrate the components of accuracy, brevity and Objectivity in Technical Writing

M.A. HISTORY

SUBJECT	COURSE OUTCOMES
SEMESTER-I	
SOCIAL AND CULTURAL HISTORY OF TAMILNADU	**Unit 1** : The students were enabled to understand the Physical features of Tamilnadu **Unit II :** The students realized the dark age of Tamil Nadu - The students will know about the style of Art and Architecture and the contribution of Pallavas in various fields **Unit** **III :** The study enhances the students the growth of Tamil Nadu in the middle ages **Unit IV :** The students were given an insight of reestablishment of Pandiyan Empire **Unit V :** The overall growth of Tamil Nadu which attracted the Muslim invasion from the Northern India and the establishment of Madurai Sultanate and the Vijayanagar Empire
SOCIAL AND CULTURAL HISTORY OF INDIA	**Unit I :** The students will be enlightened about the Indian culture and history and the foundation of new religious philosophy **Unit II :**Mauryas were the first dynasty almost the entire subcontinent and the propagation of Buddhist philosophy in the Oriental countries. New techniques of art and architecture **Unit III:** The revival of Hinduism and it is recorded as the Golden period in Indian History

	Unit IV: The students will know how the Muslim rule in Delhi was governed 6 **Unit V :** The revival of Hinduism in South India and Sikhism in Punjab; Muslim reform movement in North India – The rule of Vijayanagar empire in South India.
SOCIAL AND CULTURAL HISTORY OF INDIA FROM C.E. 1526 TO C.E.1773	**Unit I :** Elaborates the insight of the Mughals regarding their contribution **Unit II :** Students will be enlightened about the rich contribution of the Mughals **Unit III :** How the Marathas established their power during the Imperial Mughal period **Unit IV :** Students will be given to understand the contribution of religious leaders **Unit V:** The advent of Europeans changed the course of Indian History and the contributions of Christian Missionaries in the field education, literature and health
INDIA AND HER NEIGHBOURS SINCE C.E.1947	**Unit I :** The students will be taught on why and how the partition made enmity. **Unit II :** The students were given an insight about the two great nations in the world and their relationship **Unit III:** Students will be taught how India helped Bangladesh to attain freedom and the contribution of Indra Gandhi. The relationship between Bhutan and Burma. **Unit IV:** The ethnic problem in Srilanka and the India's drive for peace in Srilanka and the relationship between India and Maldives

	Unit V: Regional organizations towards peace and prosperity
INTELLECTUAL HISTORY OF INDIA	**Unit I :** It enhances the ideologies of the Indian political thinkers **Unit II :** This unit enables the students about the contribution of the great social thinkers in India **Unit III :** The students will be given an insight of the various religious thinkers and their ideas about the religion **Unit IV:** The students will be enabled to the new political ideologies during the later 19th and 20th Centuries **Unit V:** The contributions of great souls whose contributions towards literature
CONTEMPORARY HISTORY OF TAMIL NADU FROM C.E.1947 TO C.E.2001	**Unit I :** The students were elaborated their insight regarding the Congress rule in Tamilnadu **Unit II :** The emergence of DMK and its ideology will be taught in this unit **Unit III** : This unit taught the students how the matinee idols came to power in Tamilnadu 18 **Unit IV:** This unit taught how the media popularizes the conditions of Tamilnadu and take it to the general public **Unit V:** This unit taught the students about the overall growth the conditions of womenfolk and higher education and Industry in Tamilnadu
SEMESTER II	
SOCIAL AND CULTURAL HISTORY OF TAMIL NADU	**Unit I :** This unit bring to light the contributions of Nayaks to economy, culture and fine arts

	Unit II : The contributions of Christian missionaries towards the development Tamil literature **Unit III :** This unit gives an insight Tamilnadu during the 19th and 20th centuries and the growth of trade union movement **Unit IV :** This unit narrates the emergence of reservation policies and the Dravidian movement 24 **Unit V :** This unit brings the student the overall growth of Tamilnadu and womenfolk.
SOCIAL AND CULTURAL HISTORY OF INDIA FROM C.E.1773 TO C.E. 2000	**Unit I :** This unit brings to light the efforts of British towards the development of Education in India and the Indian Government's contribution in the field of education. **Unit II :** This unit explains how religious and social reform movements took place in India **Unit III :** This unit teaches the student about the Agrarian movement in India **Unit IV :** This unit gives an insight of the trade union movements in India **Unit V :** This unit elaborated the development of fine arts in India
GENERAL STUDIES FOR COMPETITIVE EXAMINATIONS	**Unit I :** This unit will enable the students to understand the physical geography of India **Unit II :** This unit covers how the economy of India is distributed **Unit III :** This unit gives an insight how the Union and State government were governed and also understand the Parliamentary democracy

	Unit IV : This unit narrates the modern day technology and the growth of Science **Unit V :** This unit teaches the meanings of our national flag, water savings, contributions of sports personalities and some of the major events in India and the world
ADMINISTRATIVE HISTORY OF INDIA	**Unit I** : This unit teaches the students about administrative efficiency of Indian rulers **Unit II :** This unit covers various measures taken for better governance **Unit III :** This unit teaches us how we are governed **Unit IV :** This unit teaches the administrative functionaries in independent India **Unit V :** This unit elaborates the functions of State governments in India
THE INDIAN NATIONAL MOVEMENT	**Unit I :** For the non- major students this unit will explain the struggle for freedom **Unit II :** This unit covers the first war of Indian Independence in 1857 **Unit III :** The role of Congress towards achieving oneness is described in this unit. **Unit IV :** The new phase of operation, ahimsa, is described **Unit V:** This unit elucidates the role of national leaders

M.A. ECONOMICS

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO 1: Creating strong subject knowledge in Economics to develop and to uplift the society.

PEO 2: Applying Economic theories and make the students to understand the practical knowledge on present Economic system

PEO 3: To expand the scope of economic rational in every walk of life.

PEO 4: Emphasizing to synergize individual economic aspirations with the larger national economic aspirations

PEO 5: Creation of continuous improvement in their professional career through life long learning appreciating human values and ethics.

PROGRAMME OUTCOMES (PO) FOR POST GRADUATE DEGREE IN ECONOMICS

PO 1: Students are expected to be able to apply economic analysis to everyday problems in real world situations.

PO 2: Students are expected to understand how to use empirical evidence to evaluate the validity of an economic argument, use statistical methodology, interpret statistical results and conduct appropriate statistical analysis of data.

PO 3: Creation of knowledge in fundamentals of Economics, application of Economics with the help of Mathematics, Statistics and Computer Applications is a strong foundation for PG Students.

PO 4: Decision making and evaluate the solutions for useful complex economic issues and train the students to meet the specified needs to resolve complex economic issues.

PO 5: Train the students in Industrial, Agricultural and Service sector economics. This will be helpful for them to get into the concern sector for their Job Oriented goals.

PO 6: Create knowledge and select the issues to adopt the techniques to understand resource allocation and Macro Economic policies in Indian Economy.

PO 7: By way of getting complete knowledge in Economics may helpful for them to commit for the professional Ethics and responsibilities taken by them in their professional Career.

PO 8: Students of post graduate in Economics are practiced for Basic knowledge in Economics, Mathematics, Statistics and Accountancy. This type of getting knowledge may helpful to students to clear any kind of basic Competitive Examinations.

PO 9: Knowledge in Economics and creation of domain knowledge will be effectively served to the students to understand the Society, Societal complex problems and for the attainment of Comprehensive solutions.

PO 10: To impart value based and job-oriented education, which ensures that the students are trained into up-to-date

Subject	**Course outcomes**
SEMESTER-I	
MICROECONOMICS I	1. After studied unit-1, the student will be able to understand the basic theoretical foundation of microeconomics. 2. After studied unit-2, the student will be able to analyse consumer behavior based especially on market purchases. 3. After studied unit-3, the student will be able to analyse consumer equilibrium through the techniques of indifference curve and budget line. 4. After studied unit-4, the student will be able to compare the cost for the purchase of disclosing and reporting on condition subject to improvement.

	5. After studied unit-5, the student will be able to learn the nature of different market structure based on the characteristics of market.
MACROECONOMICS I	1. After studied Unit-1, the student will be able to get awareness on National Income components. 2. After studied Unit-2, the student will be able to know about the classical theory of Employment and Unemployment. 3. After studied Unit-3, the student will be able to know about the theories of Consumption Function. 4. After studied Unit-4, the student will be able to know about the Investment function and its empirical evidences. 5. After studied Unit-5, the student will be able to understand the General Equilibrium models.
STATISTICS FOR ECONOMICS I	
INDIAN ECONOMIC DEVELOPMENT	1. After studied unit-1, the student will be able to understand the workforce participation in different sectors. 2. After studied unit-2, the student will be able to understand theimportance of agriculture in economic development. 3. After studied unit-3, the student will be able to analyze the achievements of all the five year plans and present NITI Aayog's functions. 4. After studied unit-4, the student will be able to understand the economic infrastructure and its role in economic

	development. 5. After studied unit-5, the student will be able to gain knowledge on new economic policy and its implications in India
AGRICULTURAL ECONOMICS	1. After studied unit-1, the student will be in a position to understand the overview of agricultural economics and basic knowledge of production function. 2. After studied unit-2, the student acquires knowledge on knowing various models on agriculture and its development. 3. After studied unit-3, the student will be able to understand the agricultural marketing and its operations. 4. After studied unit-4, the student will be able to understand different sources of agricultural finance. 5. After studied unit-5, the student will be able to understand the government pricing policies on agriculture and allied industries
BASIC ECONOMICS	1.The Students will be able to know the basic ideas of micro economics to the non-economic students 2. The students will be able to understand the basic knowledge about the consumption, demand and supply 3. The students will be able to know about the factors of production and their features 4. The students will be able to understand various market condition and their pricing
SEMESTER-II	

MICROECONOMICS II	1. After studied unit-1, the student will be able to understand the theories of firm. 2. After studied unit-2, the student will be able to acquire knowledge on theories of distribution. 3. After studied unit-3, the student will be able to get awareness on the contribution of economist towards welfare economics model. 4. After studied unit-4, the student will be able to understand the general equilibrium through various models. 5. After studied unit-5, the student will be able to acquire knowledge on modern utility analysis.
MACROECONOMICS II	1. After studied Unit-1, the student will be able to know about the macroeconomic policies and its implications. 2. After studied Unit-2, the student will be able to understand the concept of multiplier and accelerator. 3. After studied Unit-3, the student will be able to gain knowledge on various theories of inflation and deflation 4. After studied Unit-4, the student will be able to acquire knowledge on different phases of business cycle and its theories. 5. After studied Unit-3, the student will be able toanalyse the application of monetary and fiscal policy to attain the price stability.
STATISTICS FOR ECONOMICS II	1. After studying Unit-1, the student will be able to understand the various probability theorems.

	2. After studying Unit-2, the student will be able to identify the Statistical tools in probability distributions. 3. After studying Unit-3, the student will be able to understand the Sampling distribution. 4. After studying Unit-4, the student will be able to use testing of hypothesis in research. 5 After studying Unit-5, the student will be able to gain knowledge on analysis of variance.
ECONOMICS OF SOCIAL ISSUES	1. After studied unit-1, the student will be able to understand economic value and cultural heritage. 2. After studied unit-2, the student will be able toget awareness on various social issues. 3. After studied unit-3, the student will be able to know the functioning of IPL. 4. After studied unit-4, the student will be able to understand the conceptual framework of the economics of discrimination. 5. After studied unit-5, the student will be able study the impact of IT on business and culture.
AGRICULTURAL ECONOMY OF INDIA	1.The students will be able to understand the structure of the agricultural sector of the Indian economy. 2. The students will be able to understand role and impact of institutional support to

	agricultural sector. 3. The students will be able to be able to demonstrate an awareness of various agricultural market structures. 4. The students will be able to understand the marketing of agricultural products.

M.A. POLITICAL SCIENCE

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO1: To induce the thirst of knowledge in the field of Political Affairs

PEO2: To make students community to be thorough with the theoretical and Practical Knowledge

PEO3: To gain interdisciplinary knowledge

PEO4: To make comprehensive understanding of the entire world system

PEO5: To utilize the knowledge of the discipline to proceed further in the Activity

PROGRAMME OUTCOMES (PO)FORPOSTGRADUATEDEGREEINPOLITICAL SCIENCE

PO1: Students are expected to get broader understanding of theoretical knowledge of Politics

PO2: Students are expected to grasp the national, Local and International Political Affairs

PO3: Students will be able to imbibe with the administrative system in India

PO4: Have conglomerate understanding about politics and other discipline PO5: Inculcate with foreign policy of India and other nations as well

PO6: Students will be introduced with peace-activisms and conflict

PO7: Students will be able toponder over the interdisciplinary approach

PO8: Kindle analytical attitude and scientific inquiry of disciplines

PO9: Students are expected to raise research aptitude and dialogic methodology

PO10: Impart the knowledge about the current World Politics.

M.A. PUBLIC ADMINISTRATION

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO1: To induce the thirst of knowledge in the field of Public Administration

PEO2: To Equip the students to write the civil service Examinations in the Public Administration discipline.

PEO3: To gain interdisciplinary knowledge

PEO4: To make comprehensive understanding of the administration at different levels of governance

PEO5: To utilize the knowledge of the discipline to proceed further in the Activity

PROGRAMME OUTCOMES (PO) FOR POST GRADUATE DEGREE IN PUBLIC ADMINISTRATION

PO1: Students are expected to get broader understanding of theoretical knowledge of Public Administration

PO2: Students are expected to grasp the functioning of national level, state level and local level governments.

PO3: Students will be able to imbibe with the administrative system in India

PO4: Students will come to know the issues and challenges in the Personnel and Financial administrations.

PO5: Students will Gain knowledge on the Constitution of India

PO6: Students will obtain the knowledge on the basic principles of Public Administration

PO7: Students will come to know the contribution of various administrative thinkers and their contribution to the growth of the discipline.

PO8: Students will gain knowledge on the Indian Administrative System

PO9: Students will come to know the various administrative systems of the world and also the strength and weakness of each system.

PO10: Students will get clear idea on International Organizations and their functioning.

MASTER OF COMMERCE

SUBJECT	COURSE OUTCOMES
SEMESTER-I	
ADVANCED FINANCIAL MANAGEMENT	1. After studied Unit-1, the student will be able to understand the functions of finance Management. 2. After studied Unit-2, the student will be able to know about the long term sources of funds and environment of working capital. 3. After studied Unit-3, the student will be able to gain information about capital structure and leverage 4. After studied Unit-4, the student will be able to gain knowledge about capital investment decision 5. After studied Unit-5, the student will be able to be acquainted with on the subject of working capital Management.

ACCOUNTING FOR MANAGERIAL DECISION	1. After studied Unit-1, the student will be able to understand the concept of Accounting for Decision making 2. After studied Unit-2, the student will be able to understand the Ratio Analysis Leverage analysis-Budgeting and budgetary control 3. After studied Unit-3, the student will be able to understand the analysis of Fund flow and cash flow statements 4. After studied Unit-4, the student will be aware of the Marginal Costing, Applications and its technique 5. After studied Unit-5, the student will be able to know Financial decisions Making
MARKETING MANAGEMENT	1. The students will able to know the core market and their functions. 2. The students will able to know the various kinds of Pricing and various stages in product life cycle, new product development. 3. The students will gain knowledge about the marketing channel and distribution. 4. The students will learn about the kinds of advertisement and qualities of good salesman. 5. The Student will know about the recent trend in modern marketing and digital marketing
ADVANCED BUSINESS STATISTICS	1. After Studied Unit-1, The Student Will Be Able To Know Partial And Multiple Correlations. 2. After Studied Unit-2, The Student Will Be Able To Know Probability And Binomial Distribution.

	3. After Studied Unit-3, The Students will know the Issues Surrounding Sampling, Hypothesis, Z Test and T Test. 4. After Studied Unit-4, The Student Will Be Able To Have The Awareness About Application Of Chi- Square Distribution. 5. After Studied Unit-5, The Student Will Be Able To Know About Analysis Of Variance And F Test.
MANAGERIAL ECONOMICS	1. After studied Unit-1, the student will be able understand the theories of managerial economics and factors. 2. After studied Unit-2, the student will be able to develop an idea about Demand analysis and Forecasting. 3. After studied Unit-3, the student will be able to provide an idea regarding law of variable proportions, product function and cost function. 4. After studied Unit-4, the student will be able to make them aware about the Economics of size and capacity Utilization and market structure pricing. 5. After studied Unit-5, the student will be able to acquire the knowledge about be Business cycle and Policies
PRINCIPLES OF MARKETING	1. After studied Unit-1, the student will be able to understand the evolution of Marketing across ages through varying views on Marketing concept 2. After studied Unit-2, the student will be able to know the Bases of Market Segmentation and factors determining consumer behaviour 3. After studied Unit-3, the student will be able to know the Significance of Elements

	of Marketing Mix and Factors affecting price decision 4. After studied Unit-4, the student will be able to know about kinds of Pricing and types of Channels of Distribution 5. After studied Unit-5, the student will be able to know the recent trends in Marketing.
SEMESTER II	
CORPORATE LAWS	1. Define Corporate Personality, Corporate Governance, E-Governance and describe the Corporate Governance Code in Companies Act. 2. Discuss the prohibitions of certain Agreements, Abuse of Dominant Position and Regulation of Combinations under The Competition Act. 3. Enumerate the Powers and Functions of SEBI. 4. Describe the provisions related to listing of Securities, Public Offerings and discuss the prohibition of Insider Trading in various regulations of SEBI 5. Discuss the provisions related to Regulation and Management of Foreign Exchange, Related Offences, Penalties and Appeals Procedure under FEMA, 1999. 6. Elucidate the Corporate Insolvency Resolution Process and Liquidation Process under Insolvency and Bankruptcy Code, 2016.
HUMAN RESOURCE MANAGEMENT	1. After studied Unit-1, the student will be able to understand the concepts of Human Resource Management 26 2. After studied Unit-2, the student will be

	able to understand Recruitment and Selection Procedure 3. After studied Unit-3, the student will be able to know the various ways of solving the employee grievances procedure. 4. After studied Unit-4, the student will be able to know the evaluation the methods of Performance Appraisal 5. After studied Unit-5, the student will be able to evaluate the Different Techniques of Training
ADVANCED CORPORATE ACCOUNTING	1. After studied Unit-1, the student will be able to make them aware about the accounts of banking companies. 2. After studied Unit-2, the students will gain knowledge on preparation of accounts of insurance companies. 3. After studied Unit-3, the students will be able to know develop knowledge of holding company concept & preparation of consolidated balance sheet. 4. After studied Unit-4, the student will be able to know about Inflation accounting and CPP method 5. After studied Unit-5, the student will be able to know about Human Resource Accounting in India.
GLOBAL MARKETING	1. After studied Unit-1, the students will be able to understand the concepts of Global marketing and Marketing information system. 2. After studied Unit-2, the students will be able to get full information about global market entry strategies and direct investment. 3. After studied Unit-3, the students will be

	able to understand the global product policy and pricing for international market 4. After studied Unit-4, the students will be able to learn important Global Marketing Channels and Physical Distribution 5. After studied Unit-5, the students will be able to know about international marketing, promotional strategies and International Marketing communication.
PRINCIPLES OF MANAGEMENT	1. After Studied Unit-1, Students will be able to understand the principles & Functions of Management 2. After Studied Unit-2, Students will be able to understand the Planning and its importance 3. After studied unit-3, Students will be able to understand the Organization and its importance 4. After Studied Unit-4, Students will be able to understand the Authority, Responsibility & Delegation. 5. After Studied Unit-5, the student will be able to understand the Need for Co-ordination and importance of Control

MASTER OF SOCIAL WORK

SUBJECTS	COURSE OUTCOMES
SEMESTER I	
Social Work practice with Individual	Unit I: The students will gain knowledge about the primary method of social work practice with individuals Unit II: The students understand the case work process Unit III: The students develop skills in professional relationship Unit IV: The students will become aware of the various models of professional practices and its applications Unit V: The students gain insight into various settings
Social Work Practice with Groups	1. Students will gain knowledge about the social group and social group work 2. Students will understand the group process and group dynamics 3. Students will recognize the importance of group work process 4. Students will develop programme planning skills 5. Students will acquire the skill in recording in group work and techniques of recording
Concurrent Field Work-I	
Sociology for Social Work Practice	1. Students will gain knowledge about the society and its dynamism 2. Students will understand the

	socialization process and its agents 3. Students will understand the process of social change 4. Students will gain knowledge about various social movements in India 5 Students will realize various social problems existing in the society
Social Development : Theories and Perspective	1. Students will understand the link concept, process and strategies of social development. 2. Students will identify the key development challenges confronting the society 3. Students will understand the role of social development in addressing inequality in society 4. Students will develop ability to link experiences around them with social development issues 5. Students will develop skills and competencies necessary for development interventions and inculcatevalues of social justice and equality
Civil Society and Governanc	1. Student will develop insight into basic political and Economic concepts and political environments and how do national and international, economic and political forces shape the lives and future of citizens, ,business and civil society 2. Students will gain understanding of the rich terrain of contemporary issues in the context of politics and will develop as informed citizens. 3. Students will understand the relationship between ‘politics’ and ‘the economy’

	4. Students Will get acquainted to the social dimension of key political challenges by exploring issues such as social inequalities, marginalization,and political principles of the statecraft 5. Students will become critical analysts and innovative designers by linking, theory and action in the domain of statecraft, grassroots governance and political participation
SEMESTER II	
SOCIAL WORK PRACTICE WITH COMMUNITIES	1. Students will develop an understanding of the concepts related to working with communities and the processes involved in it. 2. Students will understand the use and practice of community organization in various fields of social work. 3. Students will gain knowledge about the role of social worker in social change and social development. 4. Students will familiarize the emerging trends and experiments in community organization. 5. Students will judge and apply various aspects of social action.
Social Work Research and Statistics	1. Students will understand major research strategies, meaning, scope, and importance of social work research. 2. Students will develop an ability to see the linkage between the practice, research, theory, and to adopt suitable design 3. Students will study the various facets of data collection and scaling techniques 4. Students will hone the skills in

	undertaking research and in writing about the same. 5. Students will understand statistics and its application in social work
Social welfare administration	1. Students will gain knowledge of polices in India and planning process in India 2. Students will know about the concept of welfare state 3. Students will gain knowledge about social welfare administration of service organizations. 4. Students will understand welfare administration process and gain essential skills 5. Students will acquire the skill of establishing a human service organization.
Psychology for Social Work Practice	1. Students will gain basic knowledge on psychology and its relevance in social work 2. Students will understand the behavior of human beings 3. Students will understand the nature and development of human behaviour in sociocultural context. 4. Students will develop a critical perspective of the theories of human behaviour. 5. Students will acquire the skill of using psychological testing tools in dealing with individuals.
Personal and Professional Development	

M.Sc. Mathematics

SUBJECT	COURSE OUTCOMES
SEMESTER I	
Algebra-1	After the successful completion of this course, the students will be able to: • demonstrate ability to think group actions critically by Cayley's theorem and apply the Sylow's theorems to describe the structure of certain finite abelian groups • know the internal and external direct product of groups. Also, apply the structure theorem on abelian groups to find the non-isomorphic abelian groups of certain orders. • check the irreducibility of a given polynomial • know about module and difference between the algebraic structures, Group, Ring and Module. • know the Linear transformation in canonical forms. Also, the matrix form of linear transformation and its properties
Real Analysis I	After the successful completion of this course, the students will be able to: • understand the concept of functions of bounded variation. • Discuss the Riemann integration and to solve its related problems. •Analyse the sequences and series of function and their limits

	• Acquire the knowledge of Infinite Series and Infinite products • have knowledge of uniform convergence of sequence and series
Ordinary Differential Equations	After the successful completion of this course, the students will be able to: • solve Second order linear differential equations. • solve n thorderdifferentialequations. •solve differential equations with variablecoefficients. • solve differential equations with regular singularpoints. • examine the existence and uniqueness of solutions of differentialequations. • apply ODE problems for real timeapplications
Graph Theory	After the successful completion of this course, the students will be able to: • grasp features and properties of special graphs • check the given graph is Eulerian or not. Also able to find the Eulerian circuit and Hamiltonian paths of the given graph. • find the matching/perfect matching, connectivity of given graphs • find independent sets and chromatic number of a given graph • apply coloring and planarity of graphs in real life problems.
Basic Mathematics Credits	After the successful completion of this course, the students will be able to:

	• Acquire the knowledge ofexponentialand logarithmic series • understanding about matrices and its applications • formulate and solve the partial differential equations • apply the results on Laplace transform • learn the techniques on Fourier series
Semester : II	
Algebra – II	After the successful completion of this course, the students will be able to: • demonstrate ability to find the extension field of polynomials. Also, gets the clear understanding of algebraic extensions and algebraic closures. • work with the consequences of Galois Theory such as insolubility of certain classes of equations. • work with finite fields and certain important theorems related to Finite division ring • use of Frobenius integral quaternions and the Four square theorem.
Real Analysis – II	After the successful completion of this course, the students will be able to: • understand the concept of Fouier series and Fourier integrals •analysethe functions of several variables. • discuss the inverse function theorem and implicit function theorem • acquire the knowledge of Lebesgue measure

	•analyse the concept of inner and outer measure
Partial Differential Equations Credits	After the successful completion of this course, the students will be able to: • formulate and solve Partial Differential Equations (PDE) and apply PDE problems for real timeapplications. • solve partial differential equations of first and second order. • classify the partial differential equations • identify the canonical forms of the partial differentialequations. •analyse the solution of Laplace, Diffusion and Wave equationsin Cylindrical and polar coordinates • discuss the existence and uniqueness of solutions and Duhamel's principle
Mathematical Statistics	After the successful completion of this course, the students will be able to: • know the basic notions of sample, population, sample moments and their functions. • comprehend the parametric and non-parametric tests for small and large samples. • understand the various measures of estimation theory. • acquire the concepts of ANOVA test and hypothesis testing. • procure the strong background about the sequential analysis and its consequences.

Fundamentals of InsuranceCredits:3	After the successful completion of this course, the students will be able to: • understand the principles and regulations of Insurance •analyse the benefits of life insurance policies • discuss the marine insurance and its benefits • discuss the fire insurance and its benefits •analyse the various insurance sector • understand the duties of an agent and procedure to get license.

M.SC. STATISTICS

SUBJECT	COURSE OUTCOMES
SEMESTER I	
Mathematical Analysis	1. After studying unit-1, the student will be able to understand concepts of metric spaces, properties related to functions and discontinuities 2. After studying unit-2, the student will be able to understand concepts of Riemann integral and its properties, method of optimizing functions and concepts of derivatives. 3. After studying unit-3, the student will be able to understand various properties of matrices. 4. After studying unit-4, the student will be able to understand the methods of reducing and decomposing matrices. 5. After studying unit-5, the student will be able to understand matrix inversion, quadratic forms and its applications.
Measure and Probability Theory	1. After studying unit-1, the student will be able to understand concepts of class, field and measurable space. 2. After studying unit-2, the student will be able to understand concepts of measure integrals and convergence. 3. After studying unit-3, the student will be able to understand various approaches for finding probability, concept of random variables and

	moments, results related to various inequalities. 4. After studying unit-4, the student will be able to understand the concept of independence, characteristic function and convergence of random variables. 5. After studying unit-5, the student will be able to understand various limit theorems and laws of large numbers
Distribution Theory	1. After studying unit-1, the student will be able to understand concepts and applications of univariate distributions. 2. After studying unit-2, the student will be able to understand concepts of and applications of bivariate, truncated and convoluted distributions. 3. After studying unit-3, the student will be able to understand various sampling distributions and their properties. 4. After studying unit-4, the student will be able to understand the concept of order statistics and their distributions. 5. After studying unit-5, the student will be able to understand life distributions and its applications.
Programming in R	1. After studying unit-1, the student will be able to perform operations on matrices, lists and data frames. 2. After studying unit-2, the student will be able to plot diagrams and

	graphs in R. 3. After studying unit-3, the student will be able to perform statistical analysis in R. 4. After studying unit-4, the student will be able to perform matrix operations and manipulations in R. 5. After studying unit-5, the student will be able to fit linear models in R
SEMESTER II	
Sampling Theory	1. After studying unit-1, the student will be able to understand concepts related to census, sampling schemes and surveys. 2. After studying unit-2, the student will be able to understand concepts of simple random sampling scheme and its associated results. 3. After studying unit-3, the student will be able to understand stratified random sampling scheme and its associated results. 4. After studying unit-4, the student will be able to understand different systematic sampling schemes and its associated results. 5. After studying unit-5, the student will be able to understand different probability sampling schemes, ratio and regression estimators and their properties
Estimation Theory	1. After studying unit-1, the student will be able to understand properties of estimators and concept of sufficient statistic and different ways of

	obtaining sufficient statistic. 2. After studying unit-2, the student will be able to understand concepts results pertaining to unbiased estimators and minimum variance unbiased estimators. 3. After studying unit-3, the student will be able to understand inequalities related to variance of unbiased estimators. 4. After studying unit-4, the student will be able to understand the methods of moment and maximum likelihood estimation and its associated properties. 5. After studying unit-5, the student will be able to understand the method of performing interval estimation and Bayes estimation.
Statistical Practical-1	
Statistical Software Practical-1(Using R)	
Official Statistics	1. After studied unit-1, the student will be able to know Different organizations 2. After studied unit-2, the student will be able to know Methods of Data Collection 3. After studied unit-3, the student will be able to know Crop forecasting 4. After studied unit-4, the student will be able to know Index numbers 5. After studied unit-5, the student will be able to know measures of national income.
Operations Research	1. After studied unit-1, the student

	will be able to know solving graphical and simplex programming problems 2. After studied unit-2, the student will be able to know solving transportation and assignment problems 3. After studied unit-3, the student will be able to know solving network models 4. After studied unit-4, the student will be able to know solving various queueing models. 5. After studied unit-5, the student will be able to know decision theory and games.

M.Sc. Physics

SUBJECT	COURSE OUTCOMES
Semester: I	
Mathematical Physics-I	1. After studied unit-1, the student will be able to explain linear vector spaces and matrices and can solve the problems. 2. After studied unit-2, the student will be able to describe tensors in detail. 3. After studied unit-3, the student will be able to solve the differential equations. 4. After studied unit-4, the student will be able to formulate the differential equations for special functions. 5. After studied unit-5, the student will be able to understand Dirac-Delta function, Introduction on Green functions and Green's function for one dimensional and three dimensional cases.
Classical and Statistical Mechanics	1.After studying unit-1, the student will have depth knowledge about Lagrangian and solve problems in mechanical systems using Lagrangian formulation. Understand conservation theorems and its relevance in classical formulation. Learn Hamiltonian formulations and solve problems using Hamiltonian formulation. 9 2. After studying unit-2, the student will be able to Apply Hamilton's characteristic function to solve problems

	Understand Action Angle variables and solve one degree of freedom and Kepler's problem Acquire knowledge about oscillatory motion and stability of oscillatory motion 3. After studying unit-3, the student will have knowledge about fundamentals of rigid body motion. Explain Moment of inertia tensor. Derive and solve Euler's angles Euler's equations of motion. Able to solve problems on force free motion of a rigid body and symmetrical top. 4. After studying unit-4, the student will be able to Explain different statistical ensembles, their distribution functions, ranges of applicability and the corresponding thermodynamic potentials. Calculate basic thermo dynamical quantities in classical and quantum statistical models. Understand and solve problems on partition and translational partition function. 5. After studying unit-5, the student will be able to Apply quantum distribution laws and solve Bose-Einstein condensation of gases and Photon gas. Signify the results of Planck's law of radiation and its limitation. Explain Thermionic emission and Pauli's theory of Para magnetism.
Quantum Mechanics-1	1. The interpretation of wave function of quantum particle and quantum theory formulation is introduced through

	Schrodinger equation, student gets exposed to the behaviour of quantum particle encountering a i) barrier, ii) potential well. 2. Understand the general formulation of quantum mechanics which deal with the abstract object such as kets, bras, and operators. 3. Acquire knowledge about unitary transformation and able to analyse Schrodinger and Heisenberg interaction pictures. 4. Gain the knowledge of solving non-relativistic hydrogen atom, expectation value and density matrix. 5. Gain the knowledge about spin, angular momentum states, addition rules and identical particles.
COREELECTIVEPAPER- 1	1.After studying unit-I, the students will be able to: understand the characteristics and significance of logic families Identify different types of logic families describe fundamental and applied aspects of optoelectronic device physics and its applications to the design and operation of laser diodes, light-emitting diodes, and photo detectors 2. After studying unit-II, the students will be able to: understand the significance of Op-amps and their importance understand various linear/non-linear applications to solve simultaneous equations and second order differential equations

	3. After studying unit-III, the students will be able to: understand about the 555 timer and applications explain the working of multivibrators using IC 555 Illustrate the function of application of PLL and its applications 4. After studying unit-IV, the students will be able to: Know the principle and working of transducers explaindifferent types of transducers 5. After studying unit-V, the students will be able to: able to compare different modulation schemes with their advantages, disadvantages and applications.
Energy Physics	1. After studied unit-1, the student will be able to explain thermal conversion 2. After studied unit-2, the student will be able to describe performance of flat-plate collectors 3. After studied unit-3, the student will be able to design the thermal energy storage devices 4. After studied unit-4, the student will be able to understand the principles of photovoltaic conversion 5. After studied unit-5, the student will be able to know other forms of renewable energy sources.
Semester: II	
Mathematical Physics-II	1. After studied unit-1, the student will be able to learn analytic functions, derive an equation forCauchy-Riemann Differential equations in different forms about Taylor, Laurent's series and Cauchy Residue

	theorem 2. After studied unit-2, the student will be able to obtain the solution for Laplace's Equations in Cartesian coordinates and also fortwo and three dimensional heat flow 3. After studied unit-3, the student will be able to study the Fourier and Laplace's Integral Transforms in detail 4. After studied unit-4, the student will be able to describe group theory and construct the character table for different point groups 5. After studied unit-5, the student will be able to acquire theory of probability and different theoretical distributions.
Electro Magnetic Theory	1. After studying Unit-1, the students will be able to have a depth knowledge of electrostaticsand clearly understand dielectric polarization. 2. After studying Unit-2, the students will be able to know the fundamental laws to find the magnetic field of a source. have depth knowledge of magnetic potential. apply the magnetic scalar and vector potentials to find the magnetic field due to localized source. 3. After studying Unit-3, the students will be able to use Maxwell's equations for a system of charge and electromagnetic field. Obtain homogeneous equations for a charged system. Students will be able to understand clearly Gauge transformation and gauge invariance.

	4. After studying Unit-4, the students will be able to Understand about the oscillating dipole. Know how the power radiated from a linear antenna. Understand clearly antenna arrays. 5. After studying Unit-5, the students will be able to Know the propagation of electromagnetic waves in free space, dielectric medium and Conductingmedium. Have a depth knowledge of kinematic and dynamic properties of electromagnetic waves. Understand the wave propagation principle in the case of wave guide.
Quantum Mechanics-II	1. Understand the concept of perturbation theory to solve problems in quantum mechanics. 2. Acquire the knowledge of variation methods and able to solve harmonic perturbation step by step using mathematical methods. 3. Formulates ideas on born approximation transformation and concepts of scattering theory. 4. Understand the Dirac matrices and gained knowledge about spin and magnetic movement of electron. 5. Able to understand the creation and annihilation operator and gain the knowledge about anti particle.
Nanoscience	1. After studied unit-1, the student will be able to understand the nanoscale and nanomaterial.

	2. After studied unit-2, the student will be able to learn how to synthesis the nanostructured materials 3. After studied unit-3, the student will be able to distinguish between nanoparticles and quantum dots 4. After studied unit-4, the student will be able to describe the different tools will be used for characterization of the nanomaterial. 5. After studied unit-5, the student will be able explain the different applications of nanotechnology
Physics for competitive Exams	1. After studied unit-1, the student will be able to understand the concept of mechanics and to study the different properties of matter 2. After studied unit-2, the student will be able to learn about First and second law of thermodynamics and also provided basics of entropy 3. After studied unit-3, the student will be able to study the magnetism and magnetic materials 4. After studied unit-4, the student will be able to explain the phenomenon of interference, diffraction and polarization and also to describe the fundamentals of laser 5. After studied unit-5, the student will be able to demonstrate the atomic structure using Bohr's theory and also derive

	Einstein’s Mass-Energy relation. Also they acquired knowledge on fundamentals of semiconductors.

M.Sc. Botany

Subject	Course outcomes
SEMESTER-I	
PHOCOLOGY AND BRYOLOGY	Students will understand the morphology and organization of the thallus and their role in medicine, industrial and food. Students will understand the interrelationship of algae, bryophytes.
CORE PAPER:MYCOLOGY, LICHENOLOGY, BACTERIOLOGY, VIROLOGY AND PLANT PATHOLOGY	Students will understand the morphology and organization of the thallus and their role in industrial, medicine and food. Students will understand the interrelationship of amycology, lichenology, bacteriology, virology and plant pathology
PTERIDOPHYTES, GYMNOSPERMS AND PALAEOBOTANY	After successfully completing this course, the student will be able to recognize morphological, anatomical and reproductive characteristics of extinct and extant Pteridophytes, Gymnosperms and Paleo-Botany. The student will understand the evolutionary history of plant kingdom.
MICROBIOLOGY	Student Learning Outcomes. Upon graduation, Microbiology majors should have a thorough knowledge and understanding of the core concepts in the discipline of Microbiology. Microbiology students will be able to: Describe how microorganisms are used as model systems to study basic biology, genetics, metabolism and ecology .
SEMESTER II	

ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS	The students will be able to recognize the anatomical differences between monocotyledons and dicotyledons of roots, stems, leaves, bark and wood. In addition, they will clearly understand the seed-to-seed developmental aspects of angiosperms
CELL AND MOLECULAR BIOLOGY	Students will gain knowledge about the basic and fundamental organization of life and genetic material and their applications in molecular aspects.
GENETICS, PLANT BREEDING AND EVOLUTION	Students will know the principle of genetics value and the importance on improving the molecular genetics. On the successful completion of the course, the student will be able to: Comprehensive, detailed understanding of the basis of heredity. Understanding the role of genetic mechanisms in evolution. The ability to evaluate conclusions that are based on genetic data. Understanding the role of genetic technologies in industries related to biotechnology, pharmaceuticals, energy, and other fields.
TECHNIQUES IN BOTANY	
TECHNIQUES IN BOTANY	The students are able to clarify scope of Industrial and Pharmaceutical Microbiology. Industrial microbiology may be defined as the study of the large-scale and profit motivated production of microorganisms or their products for direct use, or as inputs in the manufacture of other goods.Know various Culture media and their applications and also understand various physical andchemical means of sterilization. Know General bacteriology

	and microbial techniques for isolation of pure cultures of bacteria, fungiandalgae. Master aseptic techniques and be able to perform routine culture handling tasks safely andeffectively
ORGANIC FORMING	The Students are able to appreciating in Organic farming is a farming method that involves growing and nurturing crops without the use of synthetic based fertilizers and pesticides.Organic farming uses method like green manure and composting which replaces nutrients taken from the soil from the previous crops, organic farming relies on natural breakdown of organic matter and hence allows the production of nutrients in the soil. It improves soil fertility and feeds nutrients to the soil to feed the plant. Organic farming is one of the effective methods for soil management.Organic Farming also controls other organisms with the help of methods such as biological pest control and Integrated Pest Management.

M.Sc. ZOOLOGY

Subjects	Course outcomes
SEMESTER I	
LIFE AND DIVERSITY OF INVERTEBRATES	1.After studied unit-1, the student will be able to understand • Basic Concepts of Species •Hierarchial taxonomy • Importance of Parasitic Protozoan • Economic importance of Protozoan and Porifera • Systematic position and Affinities of sponges 2. After studied unit-2, the student will be able to understand • Origin and evolution of Coelenterata. • Corals and Coral reefs. • Systematic position of Ctenophora. • Helminthes in human diseases. • Life cycle of Wuchereriabancrofti. 3. After studied unit-3, the student will be able to understand • Origin and Evolution of Annelida • Evolutionary significance of Trochophore Larva • Adaptive radiation in Annelida • Origin and Evolutionary significance of Crustacean • Economic importance of insects 4. After studied unit-4, the student will be able to

	understand • Torsion and Detorsion in Gastropoda • Economic importance of Mollusca • Pearls production. • Water vascular system • evolutionary significance of Echinoderm larva 5. After studied unit-5, the student will be able to understand • Structural peculiarities and affinities of Acanthocephala • Structural peculiarities and affinities of Nematomorpha, Brachiopoda • Structural peculiarities and affinities of Chaetognatha and Echiuroidea • Invertebrate fossils: Trilobites, Brachiopoda • Invertebrate fossils: Mollusca and Echinodermata.
LIFE AND DIVERSITY OF CHORDATES	1.After studied unit-1, the student will be able to ….. • Understand the principles of taxonomy • Acquire knowledge on nomenclature • Realize the importance of suffix used in taxonomy • Know the trends in taxonomy • Understanding the different taxonomical keys used for identifying the species 2. After studied unit-2, the student will be able to ….. • Know the primitive forms of chordates • Understand the systematic position of the

	primitive forms • Acquire knowledge on Silurian and Devonian Chordates • Realize the importance evolutionary significance • Understanding the origin of Jaw and structural peculiarities of the species 3. After studied unit-3, the student will be able to ….. • Understand the fossil history of Chondrichthyes • Know the tendencies of elasmobranch evolution • Acquire knowledge on origin and evolution of Actinopterygii • Understand the adaptive radiation and evolution of bony fishes • Know the origin and evolution of Amphibia 4. After studied unit-4, the student will be able to ….. • Acquire knowledge of evolution of Reptilia and adaptive radiations and the evolution of Saurischian and Ornithischian Dinosaurs • Know the fossil history of birds and why it is called as glorified reptiles?. • Understand the adaptive radiation of birds and palate in birds • Acquire knowledge on evolution of Mammals • Grasping the structural peculiarities of Prototheria, Metatheria and Eutheria 5. After studied unit-5, the student will be able to …..

	• Acquire knowledge on Comparative anatomy of vertebrates • Understand the origin and evolution of vertebrate integuments • Know the evolution of paired fins and limbs • Acquire knowledge on the evolution of heart and aortic arches • Grasping the development of brain in vertebrates
CELL AND MOLECULAR BIOLOG	1.After studied unit-1, the student will be able to • Explain the structure of membrane and intercellular components and related to the function. • Summarizing the energy transduction in cells. 2. After studied unit-2, the student will be • Exhibiting knowledge in structure and function of Nuclear membrane. • Understanding the properties of polytene chromosome. • To study the structure and function of Nucleolus. 3. After studied unit-3, the student will be • Demonstrate the knowledge of cell cycle and M-Cdk inactivation. • To understand the creating G1 phase and cell cycle progression. • To acquire the knowledge in hormonal activity and cancer. 4. After studied unit-4, the student will be • Understand the chemistry of DNA • They acquire the knowledge of describing the structure, replication of DNA

	• To explain the post of transcriptional and transduction of DNA. 5. After studied unit-5, the student will be • To know the information transfer in prokaryotic and eukaryotic. • The student can able to understand the about the specificity of exon and introns
AQUACULTURE AND FARM MANAGEMENT	1.After studied unit-1, the student will be able to ….. • Know what are Aquaculture and their importance? • Gain knowledge on Global scenario and Indian status • Understand the prospects and scope of aquaculture • Acquire knowledge on farm design, structure and construction • Realize the importance of farm management 2. After studied unit-2, the student will be able to ….. • Acquire knowledge on cultivable species • Understand the culture system of the species • To gain the knowledge of culture practice of seaweeds, prawns, molluscs and fishes • Realize the importance of physico-chemical parameters in the culture • Gain knowledge on management aspects of farm 3. After studied unit-3, the student will be able to ….. • Understand the seed resource availability in the

	natural system • Know the methods of How to collect seeds from wild environment? • Acquire knowledge on artificial breeding techniques and induced breeding methods • Gain knowledge on packing and transportation of seeds • Learn information on the culture of live feed organisms and feed formulations 4. After studied unit-4, the student will be able to ….. • Know the traditional culture system followed in our country • Understand the intensive culture system practices in our country • Realize the importance of culture system of fishes • Why the integrated aqua farming of fishes practiced? • Understand the employment opportunity in the aquaculture industry 5. After studied unit-5, the student will be able to ….. • Understand the role of environmental factors in the culture system • Gain knowledge on feed management in the culture system • Acquire knowledge on Control of parasites and predators in the culture system • Know the eradication techniques of weeds in the farm • Procure knowledge on disease diagnosis and

	the methods used for diagnosis.
PUBLIC HEALTH AND HYGIENE	After studied unit-1, the student will be able to • Describe under connected relationships among physical social and environmental health and diseases. • Students comes to know the about the role of multiple determination of health across diverse population. 2. After studied unit-2, the student will be able to • Describe the environmental pollution and health hazards. • To study and able to understand hospital applications, health problems due to industrialization. 3. After studied unit-3, the student will be able to understand • The major themes for life skill based hygiene education. • Student acquire knowledge about communicable diseases. 4. After studied unit-4, the student will be able to understand • How to take precautionary steps for communicable diseases and sporadic diseases. • Student can able to learn the demerit's and alcoholism and drug dependence. • To learn the remedy for obesity mental illness and health problems. 5. After studied unit-5, the student will be able to understand • To know the government and voluntary organizations and their health service of India. • Understand the health programme in India

SEMESTER II	
GENETICS	After studied unit-1, the student will be able to • Describe the structure of nucleic acid and polypeptide concept. •Tthey can able to understand the bacterial genetics and family history. 2. After studied unit-2, the student will be able to • Discuss the mechanisms of genetic regulation . • To understand the knowledge of operon systems and metabolic errors. 3.After studied unit-3, the student will be able to • Describe the mutation of dosage compensation and imprinting. • To study the syndromes of sex & autosomal chromosomes in human. 4.After studied unit-4, the student will be able to • To understand the genes and development ,chromosomal breakage , mutagenesis and carcinogenesis • Understand the insight into the mathematical, statistical and computational basis of genetic analysis. 5.After studied unit-5, the student will be able to • To analyse the function of applied genetic research in technology, nature, and society. • They access the impact of genomics, proteomics and bioinformatics on society.
ENVIRONMENTAL BIOLOGY	1.After studied unit-1, the student will be able to understand • Asses necessary scientific concepts and data. • They establish integral cultural context. 2. After studied unit-2, the student will be able to

	understand • Acquire the knowledge and still to view the self and social situation in the ecological and cultural and social context. • Acquire the knowledge skill necessary to achieve and understanding environmental problems. 3. After studied unit-3, the student will be able to understand • Appreciate attributes of natural resources and management. • Appreciate the ideas of unsustainable development. 4. After studied unit-4, the student will be able to understand • Competent in basic forest management principles and evaluation of forest stands for health, wild life habitat. • Identifying soli type how they are formed and ways to modify soil structure and improved soil fertility. 5. After studied unit-5, the student will be able to understand list out major places and • Describing the effects of air pollution and their management. • Know about the global environmental issues.
BIOTECHNOLOGY	1.After studied unit-1, the student will be able to understand • The tools and strategies used in genetic engineering. • The applications of recombinant DNA technology and genetic engineering. 2. After studied unit-2, the student will be able to

	understand • The Bacterial plasmid vectors PBR 322 and PUL 19. • Bacteriophage vectors 3. After studied unit-3, the student will be able to understand • Biotechnological techniques like embryo transfer and in vitro fertilization 4. After studied unit-4, the student will be able to understand • Critically evaluate the role of micro-organisms in specific biotechnological processes 5. After studied unit-5, the student will be able to understand • The applications of biotechnology in agriculture, medicine and food science
LIFE AND DIVERSITY OF INVERTEBRATES AND CHORDATES AND CELL AND MOLECULAR BIOLOGY	
BIOCHEMISIRY	1.After studied unit-1, the student will be able to •Analyse buffer, electrolytes, and water balance. • Student acquire knowledge to the experiments on blood and urine samples. • Describe the transport of biological samples. 2.After studied unit-2, the student will be able to • Describe the digestion of protein, absorption, degradation of aminoacids. • Students can understand the deamination and transmination reactions. • Student will use current biochemical

	techniques to plan and molecular techniques. 3.After studied unit-3, the student will be • Exposed to wide range caries that combine biology and medicine. • Student learn the biological significance of how macro molecules broken down into micro molecules. 4. After studied unit-4, the student will be able to understand • Students were aware of tissues hormones and Synthetic hormones. 5. After studied unit-5, the student will be able to soluble vitamins. • Student can be able to understand the disorders of carbohydrates metabolisms.
WILDLIFE MANAGEMENT & CONSERVATION	1.After studied unit-1, the student will be able to • Understand the factors affecting the need to find sustainable practices for producing food. • How the environment influences plant growth and crop field? • Learn to modify soil structure and drainage to reduce erosion to reduce the soil erosion. 2. After studied unit-2, the student will be able to • Students can evaluate the current status of endangered mammals. • Students learn the information of project tiger and project elephant. • Apply knowledge to solve problems related to wildlife conservation. 3. After studied unit-3, the student will be able to • Identify species, characteristics, habited requirement and life cycle of bird.

	• Learn how wildlife conservation and management relates to economy both currently and in future. • Understand the structure and types of plumage. 4. After studied unit-4, the student will be able to • Identify the types of butterflies. • Identify the types of moths. 5. After studied unit-5, the student will be able to • Gain awareness and understanding of international forestry. • Develop skills geographical analysis, basic surviving, mapping.

M.Sc. COMPUTER SCIENCE

Subject	Course outcomes
SEMESTERI	
RELATIONAL DATABASE MANAGEMENT SYSTEM	CO1 - Students are able to have a broad understanding of database concepts and database management system software CO2 - Students are able to have a high-level understanding of major DBMS components and their function CO3 - Students are able to model an application's data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model. CO4 - Students are able to write SQL commands to create tables and indexes, insert/update/delete data, and query data in a relational DBMS. CO5 - Students are able to program a data-intensive application using DBMS APIs
ENTERPRISE JAVA PROGRAMMING	CO1 - Students are able to develop Applet Programming using various techniques CO2 - Students are able to develop applications using Abstract Window Toolkit and Events CO3 - Students are able to update and retrieve the data from the databases using JDBCODBC CO4 - Students are able to develop server side programs in the form of Servlets CO5 - Students are able to build up Java Applications using collections and JSP Tags.
PROGRAMMING USING	CO1 - Students are able to know the differences between desktop application and web

C#.NET	application. CO2 - Students are able to construct classes, methods, and access modifier and instantiate objects. CO3 - Students are able to create and manipulate GUI components in C# for windows application. CO4 - Students are able to code solutions and compile C# projects within the .NET framework. CO5 - Students are able to build the desktop application with Database.
RELATIONAL DATABASE MANAGEMENT SYSTEM	
COMPUTER ORGANIZATION	CO1 - Students are able to identify the types of instructions and the organization of registers and memory CO2 - Students are able to describe the translation model of assembly language to machine language. CO3 - Students are able to understand the micro-program by mapping the instructions. CO4 - Students are able to recognize the types of computer organizations. CO5 - Students are able to accept the better way of processing by Parallel and Vector processing.
PRINCIPLES OF INTERNET	CO1 - Students are able to learn the basics of Internet. CO2 - Students are able to provide fundamental knowledge WWW.
SEMESTERII	
DESIGN AND ANALYSIS OF ALGORITHMS	CO1 - Students are able to prove the correctness and analyze the running time of the basic

	algorithms for those classic problems. CO2 - Students are able tounderstand the basic knowledge of algorithm design and its implementation. CO3 - Students are able to learn the key techniques of Divide-and-Conquer and Greedy Method. CO4 - Students are able torecognize the concept of Dynamic Programming and its algorithms CO5 - Students are able to familiarize with Backtracking algorithms. CO6 - Students are able to understand Branch and Bound techniques for designing and analyzing algorithms.
WEB APPLICATION USING C#.NET	CO1 - Students are able to know the differences between desktop application and web application. CO2 - Students are able to construct classes, methods, and access modifier and instantiate objects. CO3 - Students are able to create and manipulate GUI components in C# for windows application. CO4 - Students are able to code solutions and compile C# projects within the .NET framework. CO5 - Students are able to build the desktop application with Database.
ADVANCED ENTERPRISE JAVE PROGRAMMING	
HUMAN COMPUTER INTERACTION	CO1 - Students are able to plan and Develop procedures and life cycle of Human Computer Interaction CO2 - Students are able to analyze product

	usage through appropriate assessments and testing techniques. CO3 - Students are able to apply the interface structure standards/rules for different users. CO4 - Students are able to encourage communication between understudies of brain science, structure, and software engineering on UI improvement projects. CO5 - Students are able to understand the intensity of HCI in the cutting edge world and the job it can play in advancing value, openness, and progress.
PRINCIPLES OF WEB DESIGN	CO1 - Students are able to learn how to combine basic HTML elements to create Web pages. CO2 - Students are able to understand the use of HTML tags and tag attributes to control a Web page's appearance. CO3 - Students are able to capable to learn how to add absolute URLs, relative URLs, and named anchors to Web pages. CO4 - Students are able to gain a good understanding of using tables and frames as navigational aids on a Web site. CO5 - Students are able to control appearance webpages by applying style sheet.

M.Sc. CHEMISTRY

SUBJECT	COURSE OUTCOMES
SEMESTER I	
ORGANIC CHEMISTRY – I	The student will be able to • Describe the concept of Stereochemistry • Illustrate the importance of Conformation • Analyze the mechanism of Aliphatic and Aromatic Substitution reactions • Acquire knowledge on the various concepts of reaction kinetics and mechanism
INORGANIC CHEMISTRY I	The student will be able to • Explain Isopolyacids and hetropolyacids of Vanadium, Chromium, Molybdenum and Tungsten. •Descirbe the structure, properties, correlation and applications of some Inorganic polymers. • Illustrates the chemistry of metal clusters. • Discuss polyhedral boranes, carboranes and metallocarboranes. • Explain the stability constant of co-ordination complexes. • Apply the stereo chemistry for co-ordination complexes. • Gain knowledge about the structure and bonding of Inorganic compounds.
PHYSICAL CHEMISTRY I	The student will be able to • Explain partial molar properties and the concept of fugacity. • Describe the phase diagrams of three

	component systems involving solid-liquid and liquid-liquid equilibria. • Gain the knowledge about micelles, surfactants, structure and stability of colloids. Illustrate the effect of pressure, dielectric constant and ionic strength of the solution on the rate of the reaction. • Describe acid base and enzyme catalysis.
ADVANCED POLYMER CHEMISTRY	o Have the knowledge on classification, nomenclature and properties of polymers. o Adequate knowledge on kinetics and mechanism of polymerisation. o Understanding on characterization of polymers. o Understand the morphology and applications of polymers.
CHEMISTRY IN AGRICULTURE	The student will be able to • Differentiate between different types of fertilizers. • Acquire knowledge on the various types of manures. • Appreciate the usage of different pesticides with caution • Illustrate the importance of types of herbicides and preservation of seeds • Analyze the characteristics of different soils.
SEMESTER II	
ORGANIC CHEMISTRY II	The student will be able to • Elucidate the mechanism of addition and elimination reactions • Appreciate the synthetic usage of various oxidizing and reducing reagents

	• Illustrate the importance of free radicals • Describe the concept of aromaticity
INORGANIC CHEMISTRY II	• Explain about the structure and properties of solids. • Describe the types of Nuclear reactions. • Explain about the stellar energy. • Discuss the types of Nuclear reactors. • Illustrate the radio analytical methods • Describe the chemistry of lanthanides and actinides. • Applying Nanotechnology to various metals. • Illustrate the types of transport proteins.
PHYSICAL CHEMISTRY II	• Describe the rate expression for complex reactions and experimental study of fast reactions. • Describe Debeye-Huckel limiting law and Bronsted equation. • Explain the structures of double layer and deriving Lippmann equation. • Apply group theory and finding the symmetries and point group to construct character tables of C2V and C3V.
ORGANIC CHEMISTRY PRACTICAL- I	
INORGANIC CHEMISTRY PRACTICAL	
MODERN SEPARATION TECHNIQUES	Have knowledge on principles on chromatography. Working knowledge on gas and HPCL chromatographic techniques. Adequate knowledge on application of ion-exchange chromatography. Understanding on solvent extraction and distillation techniques

MEDICINAL CHEMISTRY	The students will be able to Appreciate the importance of medicinal chemistry Acquire knowledge of classification of drugs Identify the importance of Chemotherapy Acquire knowledge of common body ailments Il lustrte the importance of health promoting drugs

PROGRAME OUTCOME AND COURSE OUTOEMS 2021 -2022

PROGRAME	COURSE	COURSE OUTCOME
	Phycology and Bryology	Students will understand the morphology and organization of the thallus and their role in medicine, industrial and food. Students will understand the interrelationship of algae, bryophytes.
	MYCOLOGY, LICHENOLOGY, BACTERIOLOGY, VIROLOGY AND PLANT PATHOLOGY	Students will understand the morphology and organization of the thallus and their role in industrial, medicine and food. Students will understand the
	PTERIDOPHYTES, GYMNOSPERMS AND PALAEOBOTANY	After successfully completing this course, the student will be able to recognize morphological, anatomical and reproductive characteristics of extinct and extant Pteridophytes, Gymnosperms and Paleo-Botany. The student will understand the evolutionary history of plant kingdom.
	MICROBIOLOGY	Student Learning Outcomes. Upon graduation, Microbiology majors should have a thorough knowledge and understanding of the core concepts in the discipline of Microbiology. Microbiology students will be able to: Describe how microorganisms are used as model systems to study basic biology, genetics, metabolism and ecology .
	PHARMACOGNOSY	The students are able to identify drug from natural origin and their supply, cultivation,collection, storage along with their special conditions and also define drugs from natural origin.identify the cultivation and collection conditions.identify the storage of drugs.Recall the knowledge about modern concept and scope of Pharmacognosy. To learn the fundamental principles on cultivation, collection processing and evaluation of medicinal plants. Discuss the phyto-chemical screening techniques and able to identify the Phyto-constitutes of plants.
	A. MUSHROOM CULTIVATION	The students are able to specify in the Marketing aspects-make profit with consumer satisfaction, financial aspects-arrange the financial support, and Socio-economic aspects-make people aware about good or bad products with reasonable price.

B. HORTICULTURE AND LAND SCAPING	The students will be able to recognize the major areas of Horticulture and Landscape horticulture includes the production, marketing and maintenance of landscape plants. Olericulture includes the production and marketing of vegetables. Pomology includes the production and marketing of fruits. The career in the field of horticulture is the best career choice for students. Horticultural crops i.e. fruit and vegetable acquire a place of important as protective food. They provide much needed health supporting vitamins, minerals. Besides, their value in human consumption, horticultural crops play an important role in commerce, particularly in export trade and processing industry.
ANATOMY AND EMBRYOLOGY OF	The students will be able to recognize the anatomical differences between
CELL AND MOLECULAR BIOLOGY	Students will gain knowledge about the basic and fundamental organization of life and genetic material and their applications in molecular aspects.
GENETICS, PLANT BREEDING AND EVOLUTION TECHNIQUES IN BOTANY	Students will know the principle of genetics value and the importance on
	To understand and familiar with modern instruments used in plant science field.
	To Understand Principle, working, ray diagram and application of advance microscopes
	The students are able to stain the bacteria with differential staining techniques.
	To understand bio-analytical methods used in various molecular biology.
INDUSTRIAL MICROBIOLOGY	The students are able to clarify scope of Industrial and Pharmaceutical Microbiology. Industrial microbiology may be defined as the study of the large-scale and profit motivated production of microorganisms or their products for direct use, or as inputs in the manufacture of other goods.Know various Culture media and their applications and also understand various physical andchemical means of sterilization. Know General bacteriology and microbial techniques for isolation of pure cultures of bacteria, fungiand algae. Master aseptic techniques and be able to perform routine culture handling tasks safely andeffectively

ORGANIC FORMING	The Students are able to appreciating in Organic farming is a farming method that involves growing and nurturing crops without the use of synthetic based fertilizers and pesticides.Organic farming uses method like green manure and composting which replaces nutrients taken from the soil from the previous crops, organic farming relies on natural breakdown of organic matter and hence allows the production of nutrients in the soil. It improves soil fertility and feeds nutrients to the soil to feed the plant. Organic farming is one of the effective methods for soil management.Organic Farming also controls other organisms with the help of methods such as biological pest control and Integrated Pest Management.
HERBAL SCIENCE	The students are able to learnt the major use of herbal medicines is for health promotion and therapy for chronic, as opposed to life-threatening, conditions. However, usage of traditional remedies increases when conventional medicine is ineffective in the treatment of disease, such as in advanced cancer and in the face of new infectious diseases.
MORPHOLOGY AND TAXONOMY OF	Upon completion of this course students are expected to be familiar with
BIOTECHNOLOGY AND GENETIC ENGINEERING	Students are expected to be educated from the systematic training given in
ECOLOGY AND CONSERVATION BIOLOGY	Students are expected to be familiar with components of the environment, major species composition, structure and functional ecology of terrestrial and aquatic ecosystems and conservation aspects
PLANT TISSUE CULTURE	The students are educatedto plant tissue culture is a collection of techniques used to maintain or grow plant cells, tissues or organs under sterile conditions on a nutrient culture medium of known composition. It is widely used to produce clones of a plant in a method known as micropropagation.These techniques have certain advantages over traditional methods of propagation. They produce exact copies of plants required that have desirable traits. They produce mature plants quickly. Multiple plants are produced in the absence of seeds,

BOTANY - PG ANNAMALAI UNIVERSITY	NANOBIOTECHNOLOGY	After learning the course, the students should be able to: Develop a fundamental understanding of basic concepts of nano-biotechnology and its uses in the field of life sciences. Evaluate applications of various concepts & techniques of nano-biotechnology to facilitate biotechnological advancement and innovations.
	ETHNOBOTANY	At the end of the course students should have increased: Your capacity to think critically; your ability to design and execute an experiment; your confidence and ability in communicating ideas. This will serve as a lasting and practical basis for a career, for example, in research - whether industry or academia - as well as teaching, media, law, commerce, government or management.
	FORESTRY AND CARBON MANAGEMENT	The students are able to forests sequester (or absorb) and store carbon dioxide from the atmosphere, helping reduce greenhouse gas emissions.Carbon sequestration is the process by which atmospheric carbon dioxide is taken up by trees, grasses, and other plants through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils.
	PLANT PHYSIOLOGY AND PLANT BIOCHEMISTRY	Students will understand the (i) phenomena of carbohydrate synthesis in
	RESEARCH METHODOLOGY	Students will understand the basics of bioanalytical instruments, analysis of bioactive ingredients using conventional and advanced instruments, and analyze the data statistically and the ethical guidelines to be followed during experimental and research work.
	A. BIOINFORMATICS AND IPR PATENTING	After completion of this course students can explore the information on biological data collection, comparison and analyses to find the interrelation between them for solving structural, functional and evolutionary problems using computational tools, various software's, databases and technologies.
	B. WOOD SCIENCE and TECHNOLOGY	The students are able to gain comprehensive knowledge in Wood Science and Technology. Wood technology in broad sense combines the disciplines of wood anatomy, biology, chemistry, physics and mechanical technology.possess right professionalism, value, attitudes and ethics. It possesses social accountability. They have skills as manager and entrepreneur

A. BIODIVERSITY AND CONSERVATION	Students are expected to gain knowledge on the extend of biodiversity at various levels,ecosystem services of biodiversity and modes of biodiversity conservation.
B. BIOLOGICAL INVASIONS	Students will acquire knowledge on plant invasiveness, attributes and impact of invasive species on biodiversity and productivity of native ecosystem and control measures of plant invasions.
MORPHOLOGY AND TAXONOMY OF	Upon completion of this course students are expected to be familiar with
BIOTECHNOLOGY AND GENETIC ENGINEERING	Students are expected to be educated from the systematic training given in
ECOLOGY AND CONSERVATION BIOLOGY	Students are expected to be familiar with components of the environment, major species composition, structure and functional ecology of terrestrial and aquatic ecosystems and conservation aspects
PLANT TISSUE CULTURE	The students are educatedto plant tissue culture is a collection of techniques used to maintain or grow plant cells, tissues or organs under sterile conditions on a nutrient culture medium of known composition. It is widely used to produce clones of a plant in a method known as micropropagation.These techniques have certain advantages over traditional methods of propagation. They produce exact copies of plants required that have desirable traits. They produce mature plants quickly. Multiple plants are produced in the absence of seeds,
NANOBIOTECHNOLOGY	After learning the course, the students should be able to: Develop a fundamental understanding of basic concepts of nano-biotechnology and its uses in the field of life sciences. Evaluate applications of various concepts & techniques of nano-biotechnology to facilitate biotechnological advancement and innovations.
ETHNOBOTANY	At the end of the course students should have increased: Your capacity to think critically; your ability to design and execute an experiment; your confidence and ability in communicating ideas. This will serve as a lasting and practical basis for a career, for example, in research - whether industry or academia - as well as teaching, media, law, commerce, government or management.

	FORESTRY AND CARBON MANAGEMENT	The students are able to forests sequester (or absorb) and store carbon dioxide from the atmosphere, helping reduce greenhouse gas emissions.Carbon sequestration is the process by which atmospheric carbon dioxide is taken up by trees, grasses, and other plants through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils.
	PLANT PHYSIOLOGY AND PLANT BIOCHEMISTRY	Students will understand the (i) phenomena of carbohydrate synthesis in
	RESEARCH METHODOLOGY	Students will understand the basics of bioanalytical instruments, analysis of bioactive ingredients using conventional and advanced instruments, and analyze the data statistically and the ethical guidelines to be followed during experimental and research work.
	BIOINFORMATICS AND IPR PATENTING	After completion of this course students can explore the information on biological data collection, comparison and analyses to find the interrelation between them for solving structural, functional and evolutionary problems using computational tools, various software's, databases and technologies.
	WOOD SCIENCE and TECHNOLOGY	The students are able to gain comprehensive knowledge in Wood Science and Technology. Wood technology in broad sense combines the disciplines of wood anatomy, biology, chemistry, physics and mechanical technology.possess right professionalism, value, attitudes and ethics. It possesses social accountability. They have skills as manager and entrepreneur.
	C. BIODIVERSITY AND CONSERVATION	Students are expected to gain knowledge on the extend of biodiversity at various levels,ecosystem services of biodiversity and modes of biodiversity conservation.
	D. BIOLOGICAL INVASIONS	Students will acquire knowledge on plant invasiveness, attributes and impact of invasive species on biodiversity and productivity of native ecosystem and control measures of plant invasions.
	ALLIED - PAPER- ZOOLOGY I	1. The students will be able to understand the life – cycle to and adaptations of protozoa, porifera coelenterata and platy helminthes.
		2. The student will be able to understand the functional morphology of
		3. The student will be able acquire knowledge about the functional morphology of chordata, prochordatas and pisces.

	4. The student will be able have a thorough knowledge about Frog and Calotes.
	5. The student will be able to understand the functional morphology of Aves and Mammals.
MICROBIOLOGY, LICHENOLOGY, BRYOLOGY AND PLANT PATHOLOGY	1. To understand the diversity of microorganisms, their importance and
	2. To know about bacteria and viruses and how they are classified.
	3. To know about symbionts in botany.
	4. To know about bryophytes, the non vascular plants.
	5. To understand the concept of plant diseases and protective measures.
PHYCOLOGY, MYCOLOGY, MICROBIOLOGY, LICHENOLOGY, BRYOLOGY AND PLANT PATHOLOGY	1. To learn practical knowledge of structure and reproduction of algae
	2. To know the microscopic structure of various fungi genera.
	3. To knowledge the structure of bacteria and virus
	4. To learn the thallus and reproduction structure of lichens.
	5. To familiarize the detailed internal structure and some bryophytes
ALLIED - PAPER- ZOOLOGY II	1. The student will acquire knowledge about cell structure, gene function and Genetic engineering.
	2. The student will be able to understand the cleavage pattern and gastrulation in Amphioxus.
	3. The students will have a thorough knowledge about the diseases of circulatory systems and urine formation.
	4. The student will be have an awareness about the environment.
	5. The student will understand the basic concepts of evolution.
PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY	1. To discuss the general Characteristic of pteridophytes
	2. To differentiate the various genera in pteridophytes.
	3. To learn the salient features and importance of gymnosperms
	4. To acquire knowledge on fossils and fossilization
	5. To know on various groups of fossil plants
ALLIED - 2, PAPER - 3, CHEMISTY - I	Basic knowledge on Metallurgy, Cycloalkanes, Polarising Effects, Stereochemistry, Chemical Kinetics, Catalysis, Photochemistry, VSEPR Theory, Fuels, Osmosis, Nuclear Chemistry, Petroleum Chemistry, Chemistry of Naphthalene, Conductors and Applications wherever necessary are to be taught for I- Semester.
	1. To increase food and ornamental plant production

HORTICULTURE	2. To providing employment, often in rural areas
	3. To improving the environment and management
	4. To creating and managing valuable sports and recreation facilities as one of the main leisure pursuits - gardening
	5. To gain knowledge of growth regulators, promoters and common diseases of horticultural crops.
MEDICINAL BOTANY	1. To discuss the various systems of medicines
	2. Promotion of cultivation and conservation of medicinal plants.
	3. To identify the plants to be conserved
	4. To gain knowledge about the drugs process
	5. To provide information to cultivate drug adulteration and evaluation
PLANT CELL BIOLOGY	1. Compare and contrast animal and plant cells and be able to distinguish each type under the microscope.
	2. Identify the following structures on the slides and explain the functions of plasma membrane, cytoplasm, nucleus, nucleolus, cell wall, and plastids
	3. To gain knowledge structure and functions of chromosomes.
	4. To knowledge of DNA structure and replication
	5. To gathering knowledge of RNA functions and their properties.
PTERIDOLOGY, GYMNOSPERMS, PALEOBOTANY AND PLANT CELL BIOLOGY	To learn practical knowledge of internal structures of pteridophytes
	To know Morphological characters and reproductive parts.
	To gain knowledge of structure and reproductive parts of gymnosperms
	To study the fossil plants
	To know detailed study of cell and cell division.
ALLIED - 2 PAPER - 4,CHEMISTRY – II	Basic knowledge on Coordination Chemistry, Industrial Chemistry, Carbohydrates, Aminoacids, Proteins, Electrochemistry, Paints and Pigments, dyes, Vitamins, Medicinal Chemistry, Corrosion and Applications wherever necessary are to be taught for II- semester.
MUSHROOM CULTIVATION	1. To gain knowledge about edible mushrooms
	2. To state the culture and methods of edible mushrooms
	3. To know the cultivation technology and their factors affecting the mushrooms.

BOTANY- UG ANNAMALAI UNIVERSITY		4. To state the different process of storaging , nutrition and medicinal values of mushrooms
		5. To understand the food preservation and processing techniques.
	HORTICULTURE	1. To increase food and ornamental plant production
		2. To providing employment, often in rural areas
		3. To improving the environment and management
		4. To creating and managing valuable sports and recreation facilities as one of the main leisure pursuits - gardening
		5. To gain knowledge of growth regulators, promoters and common diseases of horticultural crops.
	ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS	1. To learn the structure and function, types of simple tissues.
		2. To have knowledge on complex tissues and stomata types
		3. Gathering knowledge of nodal anatomy and internal structures of primary and secondary growth.
		4. To know the male and female gametophytes
		5. To explain the types of endosperm and development of embryo.
	MORPHOLOGY, TAXONOMY OF ANGIOSPERMS AND ECONOMIC BOTANY	1. Graduates will easily identify common and economically important plants.
		2. To knowledge about special features and economically important plants.
		3. To acquire knowledge on significance of taxonomy and herbarium technique.
		4. To provide information pertaining to fruits and seed characters.
		5. To understand the key aspects of morphology.
	GENETICS, PLANT BREEDING, EVOLUTION AND BIOSTATISTICS	1. To apply basic principles of genetics and Mendel's inheritance.
		2. To understand the recombination and chromosome theory of inheritance and sex Determination.
		3. To explain the importance of gene concepts and gene expression in plant cell.
		4. To state the improvement of crop plants and describe the basic principles of hybrid vigor.
		5. To know the theory of evolution and biostatistics problems.
		1. To gain knowledge about principles, to tipotancy of cell and differentiation in plant tissue culture.

TISSUE CULTURE	2. To acquire knowledge on physical and chemical methods and media.
	3. To impart knowledge about the various aspects of tissue culture and their applications.
	4. Employ various techniques in seeds and to describe the methods, isolation and purification of tissue culture
	5. To gain information about tissue culture and gene transfer techniques
MASS CULTIVATION OF ALGAE	1. To study of morphology and history of mass culture.
	2. To understand the values of algal plants.
	3. To know the various marine macroalgae.
	4. To gain information of economic importance of algae.
	5. To know the method of preparation and application of biodiesel.
BIOSAFETY AND BIOETHICS	1. To know what is biosafety and its importance.
	2. To know about various organizations involved in biosafety and guidelines of biosafety.
	3. To Intellectual property rights.
	4. To understand the process of patenting.
	5. To completely understand ethics involved biological research and its importance.
ETHNO BOTANY AND HERBAL MEDICINES	1. To study of traditional values in plant parts
	2. To know the different systems of phytomedicines.
	3. To identify the pharmacognostic studies of crude drugs.
	4. To be familiarize the pharmacological analysis and utilization.
	5. To knowledge the importance of herbal medicines.
PLANT PHYSIOLOGY AND PLANT BIOCHEMISTRY	1. Understand the various steps involved in the water uptake, minerals
	2. Gain knowledge in the various process involved in the photosynthesis,
	3. Impact knowledge in nitrogen metabolism and respiration.
	4. Acquire knowledge on catabolic pathway of metabolites and properties of carbohydrates, protein and lipids.
	5. Illustrate the mechanism of enzymes action and enzymatic kinetics.
	1. To understand the aspects of biotic and abiotic factors.

ECOLOGY, PHYTOGEOGRAPHY AND TOXICOLOGY	2. To acquire knowledge on ecosystem.
	3. To be familiarize with plant communities and ecological adaptations of plant.
	4. To know about the hazards of pollution and the importance of environmental toxicants.
	5. To gain an insight into the vegetation types and their importance.
ANATOMY, EMBRYOLOGY, MORPHOLOGY, TAXONOMY, ECONOMIC BOTANY, GENETICS, PLANT BREEDING AND EVOLUTION	1.To gain practical knowledge of tissues and internal structures of stem, root
	2. To familiarize the fertilization, male and female gametophyte developments
	3.To know characters of different family plants and its importance.
	4.To know gene inheritance and its practical solutions.
	5.To knowledge of plant breeding techniques.
PLANT PHYSIOLOGY AND PLANT BIOCHEMISTRY	1.To gain practical knowledge of physiological functions of plant.
	2. To know the photosynthesis under different CO_2 concentrations
	3.To know fermentation techniques
	4.To knowledge of enzymes activity
	5.To knowledge of ecological vegetations and phytogeographical regions.
PLANT BIOTECHNOLOGY	1. To learn about genomic organization
	2. To know the tools and techniques of genetic engineering
	3. To asses the transgenic plant and molecular farming.
	4. To gain knowledge about the bioreactor, metabolites by plant tissue culture and describe the microbial biotechnology.
	5. To know the intellectual property rights and patenting.
BIOFERTILIZERS	1. To realizes about the microbes used as biofertilizer.
	2. To understand the msaa cultivation of Azospirillum and Azotobacter
	3. To gain knowledge on Azolla and anabaena association.
	4. To knowledge about the VAM-Mycorrhizal types, growth and yield of crop plants.
	5. To know about the organic farming and fertilizers.
POSTHARVEST TECHNOLOGY	1. To learn how to maintain quality of fruits and vegetables.
	2. To know protect food safety for us
	3. To knowledge of reduce losses between harvest and consumption

		4. To learn various techniques of postharvest in crop plants.
		5. To knowledge of storage techniques in different crops
	FERMENTATION TECHNOLOGY	1. To knowledge of principles and practices in fermentation
		2. To familiarize alcohol production and fermentation methods
		3. To know the production of distilled beverages liquors
		4. To study antibiotics-strain improvement for secondary metabolite production
		5. To impact knowledge of enzymes production.
	COMPUTER APPLICATIONS IN BOTANY	1. Acquisition of working knowledge on computer and surfing the internet.
		2. Import knowledge on computer applications
		3. Train knowledge on database and operating systems.
		4. Employ knowledge on biological sequence search.
		5. Study about the biological gene and information systems.
	FORESTRY	1. To know increasing forest area and restoring ecological balance
		2. To knowledge of controlling of pollution
		3. To learn soil erosion
		4. To conserve natural water spring
		5. To knowledge conserve the wildlife.
	PLANT AND WATER CONSERVATION AND MANAGEMENT	1. To know about the importance and types of plant diversity.
		2. To know about the causes and effects of loss of biodiversity.
		3. To find out the ways of biodiversity conservation.
		4. To know about the basics of water conservation.
		5. To understand the ways of water conservation and management.
	PRINCIPLES OF MANAGEMENT	1.The student will be able to understand the concept of management.
		2.The student will be able to plan and make decisions.
		3.The student will be able to differentiate organisation structure and know the functioning
		4.The student will be able to delegate work, differentiate between power and authority
		5.The student will be able to coordinate activities in an organisation.
		1. To apply basic terms of statistical data solving practical problems field of
		2. To explain basic methods of Measure of central tendency

BUSINESS MATHEMATICS AND STATISTICS – II	3. To solve problems in the areas of simple and compound interest account, use of compound interest.
	4. To discuss effects of various types and methods of interest account.
	5. Connect acquired knowledge and skills with practical problems.
BUSINESS ORGANIZATION	1.The students understands the basic fundamentals of the business organization. 2.
	2.The student aattains the knowledge of various forms and types of the business organization.
	3.The student understands the main working aspects of organizations.
	4.The student aacquires in depth understanding of the Stock Exchanges and its functions.
	5.The students gain knowledge about Trade Associations and Chamber of commerce
PRINCIPLES OF INSURANCE	The student understands the basic functions and legal principles of insurance.
	The student aattains the knowledge of various types of Insurance.
	The student will be able to apply their knowledge on the insurance-related legal principles.
	The student gains in depth knowledge acquisition in Life Assurance.
	The student aacquires in depth understanding of Marine and Fire Insurance.
BUSINESS ETHICS	The student understands the importance of Ethics and Values in Business.
	The student aacquires the knowledge of various types of Ethics.
	The student learns the ethical practices to be followed in Human Resource and marketing activities.
	The students learn to be socially responsible towards the stakeholders of Business.
	The students develop the social skills required for the successful practice of management within the framework of societal values.

BUSINESS ENVIRONMENT	The student will be able to learn factors that affect the business environment - Its nature and significance - Brief overview of political - Cultural - Legal - Economic and social environments and their impact on business and strategic decisions.
	The student will be able to understand how Political Environment - Government and Business relationship in India - Provisions of Indian
	The student will be able to understand how influences from the society, cultural heritage, social attitudes, foreign culture, castes and communities, joint family systems, linguistic and religious groups and types of social organizations impact organizations.
	The student will be able to know how Economic Environment - Economic Systems influence organizations. To understand the impact from Macro-Economic Parameters - GDP - Growth Rate - Population - Urbanization -
	The student will be able to know how Financial Environment - Financial System - Commercial banks - RBI - IDBI - Non-Banking Financial Companies
BUSINESS MATHEMATICS AND STATISTICS II	1. Identify statistical tools needed to solve various business problems.
	2. Solving Simultaneous Equation using matrix Method.
	3. Able to find out the Correlation & regression.
	4. Develop Time Series Component of time Series Secular trend Seasonal Variation Cyclical Variation, Irregular Variation.
	5. Students can Use Index Number , Weighted and UN weighted Index Numbers in practical application .
	The student will be able to know CRM's broad category of concepts, tools, and processes that allows an organization to understand and serve everyone with whom it comes into contact. CRM is about gathering information that is used to serve customers – basic information, such as name, address, meeting and purchase history, and service and support contacts. In a supplier relationship it might be procurement history, terms and conditions, or contact information. This information is then used to better serve the clients.

	CUSTOMER RELATIONSHIP MANAGEMENT	This chapter will also let you know how CRM helps businesses build a relationship with their customers that, in turn, creates loyalty and customer retention. Since customer loyalty and revenue are both qualities that affect a company's revenue, CRM is a management strategy that results in increased profits for a business.
		The student will be able to learn various stages of CRM, driving forces beyond CRM, Benefits of implementing CRM, growth of CRM market in India and important principles of CRM.
		The student will be able to know what CRM Program is; the groundwork required for effective use of CRM; various components of CRM and types of CRM
		you will be able to learn various processes that involve in customer relationship management (CRM) to get customers and maintain a relationship with them; other processes include the management of customer data, information analysis, and generating reports to gain insights. Other aspects of the business operation that involves customers such as sales, business development, sales, marketing, and customer service will also be understood. You will also learn procedures that facilitate and help in the integration of CRM with other business workflows.
		Student will be able to know the use of technology in CRM – call center process; implementation of CRM; Requirements Analysis of CRM; selection of CRM package and reasons for the failure of CRM.
		Student will be able to learn the Origin of Banks - Definition of Bank - Types of Bank - Banking Systems - Unit Bank - Merits of Unit Bank - Demerits of Unit Banks - Branch Bank - Its merits and demerits - Financial System - Components of financial system.
		Student will be able to know the Concept of Social Responsibility of Banks - Role of banks in Primary, Secondary and Territory sector - Mixed Banking - Retail Banking - Wholesale Banking - Universal Banking.

PRINCIPLES OF BANKING SYSTEM	Student will be able to understand the roles of various banks: Reserve bank of India (central bank) - Commercial Banks - Cooperative Banks - flow of cooperative funds - Urban Cooperative Bank - Land Development Banks - Development Bank - NABARD (National Bank for Agriculture and Rural Development) - Regional Rural Bank - EXIM bank
	Student will be able to understand the Functions of Modern Commercial Banks - Savings account - Current account - Difference between savings account and current account - Fixed Deposit - Recurring Deposit - Granting of Loan - Clean Loan - Second loan - Overdraft -Cash Credit
	Student will be able to learn various financial services in the economy including Factoring - Lease Finance - Export Finance - Credit Card - Credit Rating - E-business - E-commerce - E-banking - Automatic Teller Machines.
FUNDAMENTALS OF COMPUTER	Student will be able to characteristics of computers – various generations of computers – Classification - Computer System - Uses of Computers
	Student will be able to computer architecture - CPU - Memory - Communication between various units of a computer system - Storage Devices - Magnetic Tape - Magnetic Disk - Optical Disk - CD/ROM.
	Student will be able to learn Input Devices - Types - keyboard - Mouse - Output Devices - Classification of Output - Printers - Plotters - Monitors.
	Student will be able to computer program - Developing a Program - Algorithm - Flowchart Program Testing and Debugging - Program Documentation - Types of Documentation - Characteristics of a good program - Computer Languages - Software.
	Student will be able to know the basic internet terms - Getting connected to internet - Internet applications - Electronic Mail - How e-mail works - Searching the Web - Internet and Viruses

PRODUCTION AND MATERIALS MANAGEMENT	Student will be able to understand the concept of operations and
	Student will be able to analyses and evaluate various production and scheduling techniques, and to identify appropriate location for factories.
	Student will be able to implement work and method study procedures.
	Student will be able to plan and implement suitable materials planning principles and practices in operations.
	Student will be able to plan and implement store keeping and material handling. Students will be able to rate vendors.
FINANCIAL ACCOUNTING	The student is able to know the basic concepts of accounting, principles, convention, rules of accounting and various books of accounting.
	The student is able to know the trail balance method, depreciation and their needs and various method of charging depreciation.
	The student is able to know the preparation of financial accounting, procedure for preparation of trading and profit and loss accounts and balance sheet.
	The student is able to know the need for preparation of single entry system and their uses. To know the different method for calculating the single entry system. To know the difference between single entry system with double entry system.
	The student is able to know the meaning of shares and its types. To know the procedure for issue, reissue and forfeiture. To know the meaning debenture and its producers for issue of debenture.
HUMAN RESOURCE MANAGEMENT	The student understands the concepts and basic functions of Human Resource Management.
	The student learns the implementation and evaluation of employee recruitment and selection processes.
	The student acquire knowledge in identifying the training needs and methods.
	The student understands the need and methods of performance appraisal.

	The student will be able to analyse the key issues related to Compensation, Mentoring, Career Planning, Promotion, Transfers and Termination.
MANAGERIAL ECONOMICS	The student understands the concepts and reasons of existence of firms and optimal decision making.
	The student learns to analyses the market supply and demand on market dynamics.
	The student acquire knowledge on production and cost analysis.
	The student will be able to know the applications of price discrimination.
	The student will be able to analyse the output decision of monopolistic and oligopolistic firms.
OFFICE MANAGEMENT	The student understands the concepts and basic functions of Office.
	The student uunderstands the responsibilities and skills required by the office manager.
	The student attains the knowledge of Location, Layout and the Environment of an Office.
	The student gains knowledge of various types of office furniture and its uses.
	The student learns the skill of records management.
SERVICES MARKETING	The student will have thorough understanding of services marketing,
	The student acquires knowledge of services strategies including service product and delivery
	The student gains Customer Service oriented mindset. 4. After studied Unit 4, the student learns to Identify and fill the service gaps.
	The student acquires in depth understanding of the challenges in managing and delivering the quality services.
	The student understands the birth, growth and development of tourism.
	The student gains knowledge in both national and international Tourism.

TOURISM MANAGEMENT	The student acquires in depth understanding of economic and cultural environment of tourism.
	The student understands the pricing strategy of tourism industry.
	The student learns the administrative system and ministry of tourism.
BUSINESS COMMUNICATION	The student understands the concepts and basic functions of Communication.
	The student will be able distinguish among various levels of organizational communication and its process.
	The student will be trained in effective business writing acquires in depth understanding of economic and cultural environment of tourism.
	The student will draft effective business correspondence with clarity.
	The student understands the various traditional and modern equipments used for communication.
MANAGEMENT CONCEPTS	The student understand the concepts related to Business.
	The student learns the roles, skills and functions of management.
	The student analyze effective application of the knowledge to solve organizational problems.
	The student acquires in depth knowledge in Communication, Leadership, Controlling, Motivation and Delegation
	1.Student will be able to know the importance of organizational behavior, its historical development - appreciate organization as a social system - socio-technical system - open system - factors influencing organizational behavior - environmental factors - constraints over organization and managerial performance.
	2.Student will be able to know the dynamics of groups in organizations: reasons for the formation of groups - characteristics of groups - theories of group dynamics - types of groups in organization - group cohesiveness - factors influencing group cohesiveness - group decision making process - small group behavior.

	ORGANISATIONAL BEHAVIOUR	3.Student will be able to leadership concept - characteristics - leadership theories - leadership styles - managerial grid - leadership continuum - leadership effectiveness. Motivation - concept and importance - motivators - financial and Non-financial - theories of motivation. Morale - Meaning - Characteristics - Determinants of Morale.
		4.Student will be able to understand the significance of organizational culture in functioning an organization. organizational Climate Organizational Effectiveness and organizational conflicts.
		5.Student will be able to learn concept of change and its significance in organizations: resistance to change - concepts of social change and organizational development.
	TAXATION	1.Student will be able to understand the concept of indirect tax and to know current taxation structure prevailing in India.
		2.Student will be able to understand the concepts of central sales taxes in India and to know the categories of collection taxes and offence and penalties for not paying sales taxes.
		3.Student will be able to understand the concepts of custom duties and know the different meaning of goods. To know the levy of customs and exemption of goods and levy rules.
		4.Student will be able to understand the Authorities of customs and excise officers and refund of customs duty and imposing of fines etc.,
		5.Student will be able to understand the concept of goods and service tax and to know the different rate of taxes for various goods and services and find the difference VAT and GST
BBA-UG ANNAMALAI	MANAGEMENT ACCOUNTING	1.Students should acquire the basic knowledge required for application of tools for decision making. To know the financial statement analysis and it tools.
		2.Describe the fundamental concepts of ration analysis and uses of ratios. To know short-term and long term solvency ratios.
		3.Students is able to know the budgets and budgetary control. To know the various methods of preparing the budget and its purposes, finally to know the objectives for preparing the budgets.

UNIVERSITY	MANAGEMENT ACCOUNTING	4.Student is able to know the concept of fund flow management and its objectives. To know the meaning of marginal costing techniques for decision making process. To know the various method to find out the profit and to select the projects.
		5.The student is able to know the meaning of cash flow statement and its significance. To know the distinction between cash flow and fund flow statement, finally to know the method for preparing the cash flow statement.
	OPERATIONS RESEARCH	1. Identify and develop operational research models from the verbal description of the real system
		2. Knowledge and understanding the characteristics
		3. Understand the mathematical tools that are needed to solve optimization problems
		4. Use mathematical tools to solve the proposed model
		5. Develop the report that describes the and the solving and techniques, analysis the result an propose recommendations.
	RETAIL MANAGEMENT	The student will understand the concepts and functions of retailer .
		The student will gain knowledge about retail property development in India.
		The student will apply the technology tool that aid merchandise planning.
		The student will be able to determine retails pricing strategies.
		The student will be able to identify the opportunities offered in retail as a career.
	PROJECT MANAGEMENT	The student will be able to apply the fundamentals of project management in their job.
		The student will be able to analyze the projects on various aspects.
		The student will be able to plan and design the approach to project management.
		The student will be able to know about the information on financial sources and project financial institutions.
		The student will be aware of becoming a better project manager.
		Understand the different types of guests and their needs

HOTEL MANAGEMENT	Describe guest services and guest accounting tasks appropriate to hotels
	Identify basic features of front office applications common to property Management system.
	Explain the function and operation of the various systems such as PMS, RMS, RVMS, GAMS, GMS, etc
	Understand about the back office management system and its procedures
	The students will be able;
	To get acquainted with the underlining principles and concepts of marketing and their relevance in hospitality industry
	To help students understand the different marketing tools to be used in order to create and deliver superior customer value
	To help students acquire the wisdom of developing an effective hospitality marketing program.
	To help students see how the marking mix is applied in a hospitality industry
	Students shall be able to:-
	Understand the licensing laws and regulations of the hospitality industries
	Identify the inspection safety and regulatory bodies
	Analyze the local area rules and the concerned departments pertaining to license, its renewal and other formalities.
	Identify the various problems that encounter in the food and beverage service operations
ENTREPRENEURIAL DEVELOPMENT	The student will be able to understand the enterprise, entrepreneur and entrepreneurship.
	The student will be able to get the complete picture of government programs available for entrepreneurs.
	The student will be able to understand and prepare business plan make presentation.
	The student will be able to write project report for starting an entrepreneurs.

	The student will be able to assess the qualities of an entrepreneurs and learn to be a successful entrepreneur.
TRAINING AND DEVELOPMENT	The student will be able to learn the basic concepts of training, identify training needs and functions of training department.
	The student will be able to know the various on-the-job and off the job techniques of training.
	The student will be able to have a clear picture about their career planning and development.
	The student will be able to understand the different techniques of management development programme.
	The student will be able to know the information about the different management training institutes in India.
MARKETING MANAGEMENT	The student will be able to identify the primary marketing activities of an oganisation.
	The student will be able to use marketing information and research to develop marketing strategies for targeting customers.
	The student will be able to create and analyse product positioning, brand building process, with appropriate product port folio structure which contributes to the success of products or services.
	The student will be able to understand the price elasticity and how it can be used to set price for a product. The student will be able to evaluate how to use distribution channels to market the products / services effectively.
	The student will be able to use the appropriate promotional tools for the promotion of products/ services.
BUSINESS LAW	The student will be able to understand the fundamental legal principles in developing various contracts.
	The student will be able to understand the commercial laws in the business world.
	The student will be able to identify the common forms of business associations and elements of Corporate Governance.
	The student will be able to understand the legality and statute of frauds in contracts.

	The student will be able to develop insights regarding the laws and transactions related to sales of goods.
RESEARCH METHODOLOGY	The student will be able to understand the basic framework of research process
	The student will be able to develop an understanding of various research designs and techniques.
	The student will be able to identify various sources of sampling techniques.
	The student will be able to indentify various sources of information for data collection.
	The student will be able to conduct a research and prepare a report.
COMPUTER APPLICATION IN BUSINESS	The student will know about the emergence of computers and various software solution used for business
	The student will be learn to use MS word and its functions
	The students will learn the application of Excel in problem solving and decision
	The student will be familiar with uses of PPT and also learn to design presentations
	The student will know about the emerging trends of computer applications in business
INDUSTRIAL RELATIONS AND LABOUR LAWS	Student will be able to understand the importance of industrial relation and know the role of trade union and know the industrial disputes and their resolutions.
	The student will be able to understand the meaning of participative
	The student will understand the meaning of industrial unrest and the reasons for employee dissatisfaction and disciplinary action. The student also understand the various method of strike and prevention.
	The student is able to understand the Indian factories act and provisions regarding welfare, safety and health of workers.
	The students is able to understand the concepts of workmen’s compensation act and provisions and also know the international labour organisation role and its various functions.

REWARD MANAGEMENT	Student is able to understand the importance of employee compensation and equity. Tom knows the wages policy and its structure and different levels of wages an major decisions.
	The student is able to understand the factors of fixation of wages and job pricing. To know the rationalizing and developing wages structures.
	The student is able to understand the concepts of fringe benefits and other allowances and know the consumer price index and bonus regulations.
	The student is able to know wages incentives and linking wages to productivity. To know the different types of incentives and productivity sharing plans.
	The student is able to understand meaning of reward and statutory provision. To know the pay commissions and machinery resolving disputes between Domestic and international companies and rewarding women.
CHANGE MANAGEMENT	The student will be able to provide an over view of the change process.
	The student will be able to review the spectrum of reactions to change.
	The student will be able to offer techniques for preparing for change.
	The student will be able to create and stimulate the culture for change.
	The student will be able to give suggestion for managing uncertainty.
E - BUSINESS	The student will be able to define appreciate the difference between traditional and electronic business
	The student will know basic infrastructure required to build an E-Business and secure it
	The student will be equipped with using electronic as a tool to perform business effectively
	The student will be familiar electronic data interchange and how does it help in transaction besides learning the importance of Web.

	The student will be able to use various electronic governance media and tools.
STRATEGIC MANAGEMENT	Student will be able to learn the business system, balancing business objectives with mission and vision. Appreciate strategic analysis of corporate goals and its capabilities.
	Student will be able to understand the corporate strategy, process of strategic planning, formulation of strategy, project life cycle, portfolio analysis and SWOT analysis.
	Student will be able to learn generic strategic alternatives - horizontal and vertical diversification.
	Student will be able to understand external growth strategy, mergers, acquisition, amalgamation, joint ventures, problems of organizational structure and the management of change.
	Student will be able to learn the implementation of strategy, elements of strategy, significance of leadership and organizational climate, planning and control of implementation.
INTERNATIONAL BUSINESS	The student will be able to define and explain the importance of globalization and international business
	The student will be known the options used and various modes of entering global markets.
	The student will understand how governments use trade policies to restrict movement of goods abroad
	The student will be familiar with how various regional co operational organization work and their functions.
	The student will be able make decisions of setting up MNCs and know how to invest abroad to establish MNC
INDIVIDUAL PROJECT	1. To help students to apply the concepts studied in the institution.
	2. To gain 'on the field' experience and identify present problems faced by the industry
	3. To help students gain career development skills
	4. To gain practical exposure that will bridge the gap of industrial expectation.
	The student will be able to calculate time value for money

FINANCIAL MANAGEMENT	The student will be able to explain Capital structure decision and suggest the best mix of capital structure using theories
	The student will calculate cost of capital how it is affected
	The student will be familiar with capital budgeting and develop a basic budget format.
	The student will know how to make funds available for routine operations.
FINANCIAL SERVICES	The student will be able to define Financial services and have knowledge on its types, will also be able explain in the Indian context
	The student will be able to explain how merchant banking works and how securitization is done
	The student will gain understanding on hire purchasing and leasing finance
	The student will be familiar with Factoring and RBI regulates them.
	The student will gain skills on venture capital process.
INVESTMENT MANAGEMENT	The student will be able to understand the various alternatives available for investment
	The student will be able to measure risk and return.
	The student will be able to find the relationship between risk and return.
	The student will be able to value the equity and bonds
	The student will be able to gain knowledge of the various strategies followed by investment practitioners.
MARKETING RESEARCH	The student will be able to scope and concept of marketing research.
	The student will be able to define the Marketing Research process.
	The student will be able to identify the appropriate tool for collecting data.
	The student will be able to choose the correct sampling method.
	The student will be able to apply the concepts of marketing research in sales, product, market and advertising.
	The student will be able to explore the special areas in rural marketing environment and to identify opportunities and emerging challenges in upcoming rural markets.

RURAL MARKETING MANAGEMENT	The student will be able to aware of categorizing the rural products and branding the products in rural areas.
	The student will be able to make sound marketing decisions n pricing strategies in rural market.
	The student will be able to analyse the distribution channels marketing strategies etc in the context of rural markets in India
	The student will be able to identify the appropriate promotion mix for rural market.
ADVERTISING AND SALES MANAGEMENT	The student will be able to set up advertising objectives and know the legal implications of advertising.
	The student will be able to design copy of advertisement.
	The student will be able to select the appropriate media for promotion.
	The student will be able to know the functions of salesmen.
	The student will be able to discover and demonstrate various sales promotion technique and their advantages. The student will also be able to demonstrate the key principles and tools of integrated market communication.
CREATIVITY AND INNOVATION MANAGEMENT	You will be able to define What is Creativity - Individual and Group Creativity - Convergent Thinking - Divergent Thinking and Generation of Creative Ideas.
	You will be able to learn creative Thinking Hats Methods - Redefinition Techniques - Random Stimulus - Generation of Creative Ideas in Groups - Brainstorming - Reverse Brainstorming - Synaptic - Morphological Method.
	You will be able to practice Creativity Exercises - Mental Gym - The Way the Mind Works - Difference Between Lateral and Vertical Thinking - Attitudes Towards Lateral Thinking - Basic Nature of Lateral Thinking - Techniques - The Generation of Alternatives - Challenging Assumptions.
	you will be able to learn Innovation - Suspended judgment - Analogies - Lateral Thinking - What is a Problem - Defined Problems - Creative Problem Solving - Models of Techniques of Creative Problem Solving

		You will be able to compare various creativity techniques - Mental Gym Quiz - Blocks of Creativity - Fears and Disabilities - Energy for your Creativity - Creative - Making Your Environment More Creative - The Creative Life Quiz - Case Study
	ORGANIC CHEMISTRY – I	1. Describe the concept of Stereochemistry
		2.Illustrate the importance of Conformation
		3. Analyze the mechanism of Aliphatic and Aromatic Substitution reactions
		4. Acquire knowledge on the various concepts of reaction kinetics and mechanism
	INORGANIC CHEMISTRY I	1.Explain Isopolyacids and hetropolyacids of Vanadium, Chromium, Molybdenum and Tungsten.
		2. Descirbe the structure, properties, correlation and applications of some Inorganic polymers.
		3.Illustrates the chemistry of metal clusters.
		4. Discuss polyhedral boranes, carboranes and metallocarboranes.
		5. Explain the stability constant of co-ordination complexes.
		6. Apply the stereo chemistry for co-ordination complexes.
		7. Gain knowledge about the structure and bonding of Inorganic compounds.
	PHYSICAL CHEMISTRY I	1. Explain partial molar properties and the concept of fugacity.
		2. Describe the phase diagrams of three component systems involving solid-liquid and liquid-liquid equilibria.
		3.Gain the knowledge about micelles, surfactants, structure and stability of colloids.
		4.Illustrate the effect of pressure, dielectric constant and ionic strength of the solution on the rate of the reaction.
		5. Describe acid base and enzyme catalysis
	ADVANCED POLYMER CHEMISTRY	O Have the knowledge on classification, nomenclature and properties of polymers.
		O Adequate knowledge on kinetics and mechanism of polymerisation.
		O Understanding on characterization of polymers.
		O Understand the morphology and applications of polymers.

HETEROCYCLIC CHEMISTRY	1. Have the knowledge on nomenclature of heterocyclic compounds.
	2. Understanding the molecular geometry of non-aromatic heterocycles.
	3.Gain knowledge on reaction mechanism of small ring heterocyclic compounds.
	3. Have knowledge on reaction mechanism of mesoionic and higher heterocyclic compounds.
MATERIALS CHEMISTRY	1.Understanding on alloys, ceramics, composites and nano materials.
	2.Knowledge on liquid crystals, Ironic conductors, and pervoskites.
	3.Understanding on super conductors, NLO materials, second and third harmonic generation.
	4. Basic understanding on smart materials.
CHEMISTRY IN AGRICULTURE	1. Differentiate between different types of fertilizers.
	2. Acquire knowledge on the various types of manures.
	3.Appreciate the usage of different pesticides with caution
	4. Illustrate the importance of types of herbicides and preservation of seeds
	5.Analyze the characteristics of different soils.
FOOD CHEMISTRY	1. Appreciate the importance of various foods.
	2.Acquire knowledge of remedies for various ailments.
	3.Identify the causes for food spoilage.
	4.Reason out the deficiency of vitamins.
	5.Illustrate the importance of minerals.
INDUSTRIAL CHEMISTRY-I	Acquire knowledge of fertilizers
	Appreciate the importance of sugar industries in India
	Acquire knowledge of Chemical explosives
	Illustrate the importance of leather industries
	Identify the importance of water industry
ORGANIC CHEMISTRY II	1. Elucidate the mechanism of addition and elimination reactions
	2. Appreciate the synthetic usage of various oxidizing and reducing reagents
	3.Illustrate the importance of free radicals
	4.Describe the concept of aromaticity
	1. Explain about the structure and properties of solids.

INORGANIC CHEMISTRY II	2. Describe the types of Nuclear reactions.
	3. Explain about the stellar energy.
	4.Discuss the types of Nuclear reactors.
	5.Illustrate the radio analytical methods
	6. Describe the chemistry of lanthanides and actinides.
	7. Applying Nanotechnology to various metals.
	8. Illustrate the types of transport proteins.
PHYSICAL CHEMISTRY II	1. Describe the rate expression for complex reactions and experimental study of fast reactions.
	2.Describe Debeye-Huckel limiting law and Bronsted equation.
	3.Explain the structures of double layer and deriving Lippmann equation.
	4. Apply group theory and finding the symmetries and point group to construct character tables of C2V and C3V.
ORGANIC CHEMISTRY PRACTICAL- I	
PHYSICAL CHEMISTRY PRACTICAL- I	
GREEN CHEMISTRY	Have the knowledge on 12 rules on green chemistry.
	Apply the attractive techniques in green synthesis.
	Use of ionic liquids, and polymer supported reagents in green synthesis. Apply the phase transfer catalysis in green synthesis.
SUPRAMOLECULAR AND NANOCHEMISTRY	Understand the basic concepts of interaction in supramolecular structures. Adequate knowledge on supramolecular frame works and synthesis. Gain knowledge on synthesis and preparation of nanomaterials. Understand the nanomaterials characterization and applications.
MODERN SEPARATION TECHNIQUES	Have knowledge on principles on chromatography.
	Working knowledge on gas and HPCL chromatographic techniques.
	Adequate knowledge on application of ion-exchange chromatography.
	Understanding on solvent extraction and distillation techniques
MEDICINAL CHEMISTRY	The students will be able to
	Appreciate the importance of medicinal chemistry
	Acquire knowledge of classification of drugs
	Identify the importance of Chemotherapy

CHEMISTRY - PG		Acquire knowledge of common body ailments
		Illustrte the importance of health promoting drugs
	TEXTILE CHEMISTRY	Appreciate the importance of textile chemistry
		Acquire knowledge of synthetic fibres
		Identify the importance of raw cotton
		Acquire knowledge of dyeing
		Illustrate the importance of finishes given to fabrics
	DAIRY CHEMISTRY	Identify the importance of diary chemistry
		Acquire knowledge of mikl-lipids, proteins, carbohydrates and vitamins
		Appreciate the importance of creams
		Acquire knowledge of milk powder and ice- creams
		Illustrate the importance of diary detergents
	ORGANIC CHEMISTRY III	Visualize the importance of UV-Visible and IR spectroscopy.
		Acquire knowledge of vibrational transition and identify various functional groups
		Apply the concept of Mass spectroscopy to different compounds
		Elucidate the structure of organic compounds using NMR
		Solve photochemical and pericyclic problems
		Illustrate the synthesis of heterocycles
	INORGANIC CHEMISTRY III	Explain about carbon donors
		Describe the structure and bonding of metallocenes (ferrocenes)
		Illustrate the different types of reaction of organo metallic compounds.
		Discuss the various catalysis processes in organo metallic chemistry.
		Explain the Electron transfer reactions of co-ordination compounds.
		Describe the various substitution reactions of coordination compounds.
		Analyse various types of photochemical reactions.
	PHYSICAL CHEMISTRY III	Derive Butler-Volmer equation and explain Pourbaix and Evan's diagram of corrosion.
		Explain electrical and magnetic properties of solids.
		Describe the basic principles and applications of microwace, vibrational, Raman, NMR and electronic spectroscopy.

	Compare Maxwell-Boltzmann and Fermi-Dirac and Bose-Einstein statistics.
Scientific Research Methodology	Understanding the importance of research and literature sources.
	Knowledge on isolation and purification techniques.
	Adequate knowledge on assessing the quality of analytical data.
	Working knowledge on report writing.
ADVANCED BIOINORGANIC CHEMISTRY	Understand the principles of bioinorganic chemistry.
	Knowledge on metalloporphyrins and metalloenzymes.
	Understand the role of metals in medicine.
ADVANCED ANALYTICAL TECHNIQUES	Have knowledge on electro analytical techniques.
	Understand the use of non-destructive method of chemical analysis.
	Knowledge on basic and advanced microscopic techniques.
	Adequate knowledge on thermal and radiochemical analytical methods.
INDUSTRIAL CHEMISTRY-II	Identify the importance of electrochemical industries
	Acquire knowledge of agrochemical industries
	Appreciate the importance of petroleum and fuel gases
	Acquire knowledge of paints and varnishes
	Illustrate the importance of Cement, Ceramic and Glass
SCIENCE OF PHOTOGRAPHY	The students will be able to
	Learning the basic concepts of photography
	Explaining the types and characterstics of Lens and filters
	Acquiring the knowledge of functions of films and SD cards
	Gaining the knowledge of aesthetic photography and lightings
ENERGY RESOURCES	Identify the importance of energy resources
	Appreciate the importance of solar energy
	Analyze the importance of energy from the ocean
	Acquire knowledge of wind energy and hydrogen energy
	Identify the importance of energy management
ORGANIC CHEMISTRY IV	Develop problem solving skills requiring application of chemical reaction.
	Acquire knowledge of terpenes and alkaloids.
	Elucidate the structure of proteins and nucleic acids.
	Solve problems related to molecular rearrangements

	Attain skills on separation and purification of organic compounds.
PHYSICAL CHEMISTRY-IV	Explain photophysical processes with the help of Jablonski diagram and analyze sternvolmer
	equation.
	Describe photovoltaic, galvanic cell and solar energy conversion.
	Illustrate Schrodinger equation and its applications.
	Explain Huckel theory of conjugate molecules and compare LCAO and MO theory for
	diatomic molecules.
	Illustrate Einstein and Debye heat capacity models and Derive Sackur tetrode equation.
ORGANIC CHEMISTRY PRACTICAL - II	
INORGANIC CHEMISTRY PRACTICAL - II	
PHYSICAL CHEMISTRY PRACTICAL- II	
INORGANIC CHMISTRY-IV	Explain the different types of inorganic spectra and also interpretation.
	Applying and interpreting NMR spectrums of various inorganic compounds.
	Applying and interpreting ESR spectrums of various inorganic compounds.
	Describe Koopman's theorem, structure, chemical shift and correlation with electronic charges of photo electron spectroscopy.
	Illustrate the principle, instrumentation and applications of AAS, AES and AFS.
ENVIRONMENTAL CHEMISTRY	Understanding of adverse effect of pollution.
	Knowledge on sampling techniques.
	Understanding on the adverse effect of air, water, and noise pollution.
	Awareness on radioactive pollution.
MEDICINAL CHEMISTRY AND DRUG DESIGN	Have knowledge on principles of drug design and development.
	Understanding the mechanism of drug action.
	Acquire Knowledge on various types of medicinal compounds.
	Gain Knowledge on quantitative analysis of drugs.
	Classify the different types of polymers.

	POLYMER AND PLASTICS	Illustrate the importance of stereochemistry of polymers
		Apply the methods for determination of molecular weight
		Acquire knowledge on the various types of rubber
		Differentiate thermoplastic and thermosetting plastic
	BASICS OF FORENSIC SCIENCE	Gaining the knowledge of microanalysis of DNA
		Describing the forensic engineering and finger print analysis
		Explaining the legal aspects and trace analysis
	HEALTH SCIENCE	Gaining knowledge of types of radiations
		Gaining knowledge of breathing mechanism of cardiovascular system
		Describing about the environmental effects on health
CHEMISTRY - UG	GENERAL CHEMISTRY – I	1) Recollect the Chemistry of Quantum Numbers.
		2) Review and apply periodicity of properties.
		3) Discuss various types of bonding through VB & MO theories.
		4) Name simple Aliphatic and Aromatic Compounds.
		5) Illustrate and apply electron displacement effects and reaction mechanisms.
		6) Elaborate the basic concepts of solid, liquid and gaseous states.
		7) Apply the principles of Volumetric Analysis.
	PHYSICS I	The student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension.
		The student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.
		The student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position.
		The student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains.

	The student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication.
BOTANY - I	1. To knowledge of cell and cell organelles
	2. To know classification and structure of tissues
	3. To understand characters and reproduction of bacteria and viruses
	4. To acquire knowledge of algae and fungi
	5. To study the structure and life cycle of some bryophytes, pteridophytes and gymnosperms
ZOOLOGY I	1. The students will be able to understand the life – cycle to and adaptations of protozoa, porifera coelenterata and platy helminthes.
	2. The student will be able to understand the functional morphology of Annelids, Arthropods , Molluscs and Echinoderms.
	3. The student will be able acquire knowledge about the functional morphology of chordata, prochordatas and pisces.
	4. The student will be able have a thorough knowledge about Frog and Calotes.
	5. The student will be able to understand the functional morphology of Aves and Mammals.
BIOCHEMISTRY I	Explain the structure, biological importance of carbohydrates, from monosaccharides to polysaccharides
	Identify the structure and classification of amino acids,
	Classify proteins and explain their properties
	Define and classify lipids with examples, explain the properties of fats and describe the structure and biological functions of phospholipids, glycolipids and sterols
	Illustrate the structure of nucleotides, distinguish DNA and RNA and describe the structure of DNA, types of RNA and their biological functions
MATHEMATICS – I	To Explore the Fundamental Concepts of Mathematics
SEMESTER II , PAPER 2	
GENERAL CHEMISTRY - II	1) Compare the basic properties of elements and their Compounds of s & p – block elements.

	2) Explain the reaction mechanisms of alkanes, alkenes and alkynes and predict the products.
	3) Classify dienes and analyze the stability of alkanes, alkenes and cycloalkanes.
	4) Recollect the basic concepts of Quantum Theory and Thermodynamics.
	5) Calculate the thermodynamic parameters using thermo chemical equations and data.
CORE PRATICAL PARTICAL PAPER 1	
VOLUMETRIC ANALYSIS	
ALLIED PAPER 2	
PHYSICS II	The student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity.
	The student will be able to describe the different atomic models and Stern and Gerlach Experiment.
	The student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.
	The student will be able to know the conversion of number systems from one to other and also will be able to design universal gates using NAND and NOR gates.
	The student will be able to understanding the basics of nanomaterial, synthesis and its applications.
ALLIED PRACTICAL- PHYSICS	
2. BOTANY II	
ZOOLOGY II	1. The student will acquire knowledge about cell structure, gene function and Genetic engineering.
	2. The student will be able to understand the cleavage pattern and gastrulation in Amphioxus.
	3. The students will have a thorough knowledge about the diseases of circulatory systems and urine formation.
	4. The student will be have an awareness about the environment.
	5. The student will understand the basic concepts of evolution.
BIOCHEMISTRY II	Illustrate the reactions of various metabolic pathways
	Acquire knowledge on the various metabolic disorders

	Classify enzymes and explain their functions
	Define and classify vitamins with examples, explain the sources, RDA and functions of fat soluble and water soluble vitamins
	Illustrate the sources, RDA and functions of minerals
BIOCHEMISTRY I & II	
MATHEMATICS - II	To Explore the Fundamental Concepts of Mathematics
GENERAL CHEMISTRY - III	1) Explain the basic principles of Inorganic Qualitative Analysis.
	2) Compare the properties of Carbon, Nitrogen and Oxygen elements and their compounds.
	3) Apply Huckel's rule and predict the Aromaticity of compounds.
	4) Discuss the mechanism of substitution and elimination reactions of Aliphatic and Aromatic
	compounds.
	5) Explain the Thermodynamic second law and predict the spontaneity of a process.
ALLIED II PAPER 3	
PHYSICS I	The student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension.
	The student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.
	The student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position.
	The student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains.
	The student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication

BOTANY – I	1. To knowledge of cell and cell organelles
	2. To know classification and structure of tissues
	3. To understand characters and reproduction of bacteria and viruses
	4. To acquire knowledge of algae and fungi
	5. To study the structure and life cycle of some bryophytes, pteridophytes and gymnosperms.
ZOOLOGY I	To acquire knownledge about different kinds of animal species.
	To study the systematic and fuctional morphology of invertebrates and chordates
BIOCHEMISTRY I	
MATHEMATICS - I	To Explore the Fundamental Concepts of Mathematics
SKILL BASES SUBJECT PAPER I	
WATER TREATMENT AND ANALYSIS	1) Classify water based on the presence of dissolved salts in it.
	2) Explain the various methods to make the water potable.
	3) Discuss the softening methods of hardwater and determine hardness of water.
	4) Understand electrodialysis and RO methods to desalinate Brackish water.
	5) Analyse the presence of Chemical substances in water indicative of pollution by measuring BOD and COD.
	6) Illustratrate the methods used for biological examination of water.
NON-MAJOR ELECTIVE PAPER I	
MEDICINAL CHEMISTRY	1) Understand the composition of blood and biochemical analysis of Urine and Serum
	2) Gain knowledge about uses and side effects of Antibiotics, Antipyreties, Analgesics and tranquilizers.
	3) Explain the causes, symptoms and treatment of Blood pressure, Diabetes, Cancer and AIDS.
	4) Classify and understand the sources and diseases caused by deficiency of Vitamins.
	5) Analyse the therepheutic importances of Indian Medicinal plants
	6) Describe the first Aid and Safety treatment of Shock, Haemorrage, Cuts and wounds and Burns.

CORE PAPER; PRACTICAL	
GENERAL CHEMISTRY - IV	1) Classify water based on the presence of dissolved salts in it.
	2) Explain the various methods to make the water potable.
	3) Determine the hardness of water and discuss the softening methods of hard water.
	4) Discuss electro dialysis and RO methods to desalinate brackish water.
	5) Analyze the presence of chemical substances in water indicative of pollution by measuring BOD and COD.
	6) Illustrate the methods used for biological examination of water.
INORGANIC QUALITATIVE ANALYSIS AND PREPARATION	
ALLIED 2; PAPER 4	
PHYSICS II	The student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity.
	The student will be able to describe the different atomic models and Stern and Gerlach Experiment.
	The student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.
	The student will be able to know the conversion of number systems from one to other and also will be able to design universal gates using NAND and NOR gates.
	The student will be able to understanding the basics of nanomaterial, synthesis and its applications.
BOTANY – II	1. To familiarize range of characters and economic importance of some families.
	2. To know structure of mature anther and types of ovules
	3. To understand physiology mechanisms of plant.
	4. To acquire knowledge of ecosystem and environmental pollution
	5. To study the Mendel's test of monohybrid and dihybrid, evolutionary theories.
ZOOLOGY II	To study the principles of cell biology, genetics, developmental biology, physiology, ecology and evolution.
BIOCHEMISTRY II	

MATHEMATICS - II	To Explore the Fundamental Concepts of Mathematics
FOOD CHEMISTRY	1) Describe the structures and nutritive values of cereals, Pulses and sugar and their medicinal values.
	2) Illustrate the composition and nutritive values of Vegetables, Fruits, Milk, Egg and soya beans.
	3) Define and classify Beverages and functions of appetizers.
	4) Explain the methods of preservation of foods.
	5) Discuss about Food Additives and their functions.
CHEMISTRY IN EVERY DAY LIFE	1) Explain the preparations of cosmetics, soaps and detergents and the Hazards of Cosmetics used in everyday life.
	2) Identify Adulterants in various food items.
	3) Define and classify Vitamins and understand their physiological importance.
	4) Describe Food preservative methods.
	5) Define Antipyretics, Analgesics, Anesthetics and Sedatives.
	6) Discuss the preparation and applications of plastics, Resins, Rubbers.
	7) Classify fertilizers and describe their uses and Hazards.
	8) Explain advantages and disadvantages of natural and artificial sweetening agents.
INORGANIC CHEMISTRY - I	1) Compare the properties of Halogens and their Compounds.
	2) Recollect the basic concepts and nomenclature of Co-ordination Compounds.
	3) Explain the theories of Co-ordination Compounds.
	4) Compare VBT with MOT and apply Complexes in qualitative and quantitative analyses.
	5) Calculate the CFSE Values of Octahedral and Tetrahedral Complexes.
	6) Analyze the bonding and structure of metallic carbonyls.
	7) Draw the structures of ionic crystals and explain the defects in solids.
	1) Elucidate the structures of saccharides.
	2) Assign the stereo configuration of Organic Compounds.

ORGANIC CHEMISTRY - I	3) Compare the Conformation and Configuration of cyclohexanes and substituted cyclohexanes.
	4) Explain the preparation, properties and uses of Nitro alkanes.
	5) Apply different reagents in studying various Organic reactions.
	6) Explain the mechanism of Organic named reactions.
	7) Explain the synthesis and properties of five and six membered heterocyclic compounds and condensed heterocyclic compounds.
	8) Compare the basicity of heterocyclic Compounds.
PHYSICAL CHEMISTRY - I	Explain the Thermodynamics of ideal and Non-ideal solutions, Nernst distribution law and its applications.
	Draw and explain phase diagrams of one Component and two Component
	Derive law of Chemical equilibrium and Van't Hoff isotherm.
	Determine molar mass from the colligative properties.
	Explain variation of conductivity with dilution, measurement of conductivity
	Explain Debye-Huckel Theory of strong electrolytes.
	Apply conductivity measurements and explain conductometric titrations.
	Explain buffer action and derive Henderson equation and pH of aqueous salt
ANALYTICAL CHEMISTRY - 1	1) Analyze Data and explain the methods of purification of solids.
	2) Purify solid and liquid Organic Compounds.
	3) Explain the concept of Gravimetric Analysis.
	4) Describe the principles, Instrumentation and applications of UV, Visible, Microwave, IR and Raman Spectroscopy.
	5) Determine the structure of Organic Compounds using various spectral techniques.
BASICS OF COMPUTER PROGRAMMING IN C AND ITS APPLICATIONS IN CHEMISTRY	1 To introduce the basics of computers.
	2 To learn C language and its applications in solving problems in Chemistry.
ORGANIC SYNTHESIS	1) Analyze the importance of Organic synthesis.
	2) Explain various disconnection approaches in Organic synthesis.
	3) Explain the role of protecting groups in Organic synthesis.
	4) Apply Ring synthesis in the synthesis of Camphor, Longifolene, Cortisone and Reserpine.
	1) Explain the refining process of petroleum and differentiate between Thermal and Catalytic Cracking.

APPLIED CHEMISTRY	2) Explain the various processes involved in paper technology.
	3) Recover glucose from molasses and estimate sugar.
	4) Prepare alcohol from molasses.
	5) Explain the Proximate and Ultimate analysis of Coal.
	6) Describe Chemical changes occurring in Milk during processing.
	7) Define the principle involved in photography.
	8) Explain the need for making milk powder and principle involved in drying process.
INORGANIC CHEMISTRY - II	1) Explain the stability of nuclides in terms of N/P ratio, mass defect, binding energy and packing fraction.
	2) Describe natural and artificial radioactivity and compare high energy nuclear reactions.
	3) Describe the various processes involved in Metallurgy.
	4) Compare the properties of d-block elements.
	5) Compare the properties of lanthanides and actinides.
	6) Classify Organometallic Compounds and discuss the biological importance of Fe, Cu and Zn.
GRAVIMETRIC ESTIMATION	
ORGANIC CHEMISTRY - II	1) Explain the mechanisms of inter and intra molecular rearrangements.
	2) Classify amino acids and explain their preparation and properties and synthesis of Peptides.
	3) Differentiate between DNA and RNA.
	4) Explain primary and secondary structures of proteins.
	5) Elucidate the structures of Antibiotics, Alkaloids and Terpenoids.
ORGANIC QUALITATIVE ANALYSIS AND PREPARATIONS	
PHYSICAL CHEMISTRY - II	1) Derive Nernst equation and explain Cell reactions.
	2) Explain Concentration Cells and polarization.
	3) Derive rate constant expressions for zero, first, second and third order reactions and determine the order of a raection.
	4) Compare Collision theory and ARRT.
	5) Explain Lindemann's theory of unimolecular reactions.
	6) Explain Langmuir Theory of Adsorption.

	7) Derive Michaelis-Menten equation for enzyme catalyzed reactions.
	8) State laws of photochemistry and explain the kinetics of photo chemical reactions.
	9) Explain various Photo physical processes and Photosensitized reactions.
PHYSICAL CHEMISTRY EXPERIMENTS	
ANALYTICAL CHEMISTRY - II	To impart knowledge about Different Chromatographic and Spectroscopic Techniques.
TEXTILE CHEMISTRY	To impart knowledge about the Production, Properties and Applications of Natural and Synthetic Fibres, Colour and Constitution, Classification of Dyes and Concept of Dyeing in Textile Industry.
NANO CHEMISTRY	1) Understand the basics of Nanotechnology .
	2) Explain the preparation ,properties and uses of Nano particles.
	3) Discuss the techniques used to synthesise Nano particles.
	4) Understand the role of Electron microscopes- SEM ,TEM,SPM,AFN, and STEN in Nano technology.
PHARMACEUTICAL CHEMISTRY	1) Define the terms involved in pharmaceutical chemistry.
	2) Explain the causes, symptoms and treatment of common diseases.
	3) Explain the composition of blood.
	4) Explain the role of antibacterial, antiseptics, vitamins, analgesics and anesthetics.
	5) Apply the therapeutic importance of Indian medicinal plants.
	6) Classify hormones and explain their functions.
POLYMER CHEMISTRY	1) Classify polymers and explain the various types of polymerization techniques.
	2) Explain various methods of determining molecular weights of polymers.
	3) Describe the chemistry of plastics and resins.
	4) Explain the preparation of commercial, natural and synthetic polymers.
	5) Enumerate the importance of Biopolymers, Conducting polymers and Acrylic polymers.

	GREEN CHEMISTRY	1) Summarize the importance of green chemistry.
		2) Select green solvents for various synthetic processes.
		3) Describe the various techniques to prepare nanoparticles.
		4) Explain the importance of green catalysis.
		5) Explain the rearrangement and aromatic substitution reactions with the help of green chemistry.
	AGRICULTURE AND LEATHER CHEMISTRY	1) Explain the structure Texture and Chemical properties of soil
		2) Define and classify fertilizers and illustrate the requirements of a good fertilizer.
		3) Control the pollution caused by fertilizers.
		4) Define and classify insecticides.
		5) Discuss leather tanning methods.
		6) Control pollution caused by tannery effluents.
		7) Define and classify fertilizers and illustrate the requirements of a good fertilizers.
		8) Control the pollution caused by fertilizers.
		9) Define and classify insecticides.
		10) Discuss leather tanning methods.
		11) Control pollution caused by tanning effluents.
	ADVANCED FINANCIAL MANAGEMENT	The student will be able to understand the functions of finance Management.
		The student will be able to know about the long term sources of funds and environment of working capital.
		The student will be able to gain information about capital structure and leverage
		The student will be able to gain knowledge about capital investment decision
		The student will be able to be acquainted with on the subject of working capital Management.
		The student will be able to understand the concept of Accounting for Decision making
		The student will be able to understand the Ratio Analysis Leverage analysis-Budgeting and budgetary control

ACCOUNTING FOR MANAGERIAL DECISION	The student will be able to understand the analysis of Fund flow and cash flow statements
	The student will be aware of the Marginal Costing, Applications and its technique
	The student will be able to know Financial decisions Making
MARKETING MANAGEMENT	1. The students will able to know the core market and their functions.
	2. The students will able to know the various kinds of Pricing and various stages in product life cycle, new product development.
	3. The students will gain knowledge about the marketing channel and distribution.
	4. The students will learn about the kinds of advertisement and qualities of good salesman.
	5. The Student will know about the recent trend in modern marketing and digital marketing.
ADVANCED BUSINESS STATISTICS	The Student Will Be Able To Know Partial And Multiple Correlations.
	The Student Will Be Able To Know Probability And Binomial Distribution.
	The Students will know the Issues Surrounding Sampling, Hypothesis, Z Test and T Test.
	The Student Will Be Able To Have The Awareness About Application Of Chi-Square Distribution.
	The Student Will Be Able To Know About Analysis Of Variance And F Test.
BUSINESS ENVIRONMENT	1. The students will able to learn Theoretical Framework of Business Environment.
	2. The students will able to make the student knowledge about business Economic Environment of Business.
	3. The students will able to Familiarize Current Political and Legal Environment.
	4. The students will able to understand the Socio Cultural Environment and Ethics.
	5. The students will able to learn the Latest Technology Environment for Business.

COMPUTER APPLICATION IN BUSINESS	The student will be able to understand the various components of a computer system: Storage Devices, Input Devices & Output devices
	The student will be able to develop an idea about World Wide Web and Internet browsing
	The student will be able to know about the Preparation and presentation of business documents using Word Document
	The student will be able to will gain knowledge of about Preparation and presentation of the business documents using Excel Sheet,
	The student will be able to acquire the knowledge about how to Prepare PPT- Power Point presentation using various Transitions, Animations and other layouts.
MANAGERIAL ECONOMICS	The student will be able understand the theories of managerial economics and factors.
	The student will be able to develop an idea about Demand analysis and Forecasting.
	The student will be able to provide an idea regarding law of variable proportions, product function and cost function.
	The student will be able to make them aware about the Economics of size and capacity Utilization and market structure pricing.
	The student will be able to acquire the knowledge about be Business cycle and Policies
PRINCIPLES OF MARKETING	The student will be able to understand the evolution of Marketing across ages through varying views on Marketing concept
	The student will be able to know the Bases of Market Segmentation and factors determining consumer behaviour
	The student will be able to know the Significance of Elements of Marketing Mix and Factors affecting price decision
	The student will be able to know about kinds of Pricing and types of Channels of Distribution
	The student will be able to know the recent trends in Marketing.
	Students will be able to gain knowledge on functions, nature and principles of insurance

ELEMENTS OF INSURANCE	Students will be able understand the existence of Life Insurance and learn its benefits
	Students will be able to gear up the principles and kinds of Marine Insurance
	Students will be able to know the usefulness of Fire Insurance to the stakeholders.
	The student will be able to know the Miscellaneous Insurance policies and Key players in Indian Insurance Industry
CORPORATE SOCIAL RESPONSIBILITY	The student will be able to acquire the knowledge Corporate Social responsibility of Business
	The student will be able to know the Identify the factors influencing CSR policy and Global Organisation CSR
	The student will be able to have to understanding of benefits of CSR to the company
	The student will be able to know the institutional investors in corporate governance
	The student will be able to know about corporate governance board and its power.
CORPORATE LAWS	1. Define Corporate Personality, Corporate Governance, E-Governance and describe the Corporate Governance Code in Companies Act.
	2. Discuss the prohibitions of certain Agreements, Abuse of Dominant Position and Regulation of Combinations under The Competition Act.
	3. Enumerate the Powers and Functions of SEBI.
	4. Describe the provisions related to listing of Securities, Public Offerings and discuss the prohibition of Insider Trading in various regulations of SEBI
	5. Discuss the provisions related to Regulation and Management of Foreign Exchange, Related Offences, Penalties and Appeals Procedure under FEMA, 1999.
	6. Elucidate the Corporate Insolvency Resolution Process and Liquidation Process under Insolvency and Bankruptcy Code, 2016.

HUMAN RESOURCE MANAGEMENT	The student will be able to understand the concepts of Human Resource Management
	The student will be able to understand Recruitment and Selection Procedure
	The student will be able to know the various ways of solving the employee grievances procedure.
	The student will be able to know the evaluation the methods of Performance Appraisal
	The student will be able to evaluate the Different Techniques of Training.
ADVANCED CORPORATE ACCOUNTING	The student will be able to make them aware about the accounts of banking companies.
	The students will gain knowledge on preparation of accounts of insurance companies.
	The students will be able to know develop knowledge of holding company concept & preparation of consolidated balance sheet.
	The student will be able to know about Inflation accounting and CPP method
	the student will be able to know about Human Resource Accounting in India.
EXPORT AND IMPORT MANAGEMENT	The student will be able to understand the International Trade and Foreign Trade Policy
	The student will be able to know the Balance of Payments and FEMA
	The student will be able to understand the Export Procedure and Export Documents.
	The student will be aware of the Guidelines of Import Procedure.
	The student will be able to know Export Pricing, Financing and EXIM Bank.
GLOBAL MARKETING	The students will be able to understand the concepts of Global marketing and Marketing information system.
	The students will be able to get full information about global market entry strategies and direct investment.
	The students will be able to understand the global product policy and pricing for international market

	The students will be able to learn important Global Marketing Channels and Physical Distribution
	The students will be able to know about international marketing, promotional strategies and International Marketing communication.
E-COMMERCE	1. The students will be able to understand the Applications of E commerce in business
	2. The students will be able to understand the Network Infrastructure of E Commerce.
	3. The students will be able to understand the Internet Protocols in E Commerce.
	4. The students will be able to understand the Network Security in E Commerce.
	5. The students will be able to understand the Types of Digital Documents in E Commerce.
PRINCIPLES OF MANAGEMENT	Students will be able to understand the principles & Functions of Management
	Students will be able to understand the Planning and its importance
	Students will be able to understand the Organization and its importance
	Students will be able to understand the Authority, Responsibility & Delegation.
	The student will be able to understand the Need for Co-ordination and importance of Control
ELEMENTS OF ACCOUNTING	The student will able to understand the basis account concepts and double entry system
	The student will able to Pass Journal Entries, Prepare Ledger Accounts.
	The student will able to know the Preparation Trial Balance.
	The student will able to know the Rectification after the preparation of final account is excluded
	The student will able to know the Preparation Trading a/c, Profit & Loss a/c and Balance Sheet
	The student will be able to acquire the basic knowledge and understand the types of contract and Agreement

COMMERCE P.G	ELEMENTS OF BUSINESS LAW	The student will be able to know the essential elements of contract and rules as to offer.
		The student will be able to have the understanding of law relating to indemnity and guarantee
		The student will be able to know the duties and rights of the Bailor and Bailee and Agent and Principal.
		The student will be able to know about law of Agency.
	GOODS AND SERVICES TAX (GST)	1. The students will able to know and familiarize with the fundamentals of Taxation.
		2. The students will able to know GST and its history of GST and their types.
		3. The students will able to know the exempted goods and Services under GST Act.
		4. The students will able to know the Administration of GST and Autority.
		5. The students will able to know how to avail the Appeal and Revision under GST Act.
	ORGANISATIONAL BEHAVIOUR	The student will be able to understand the basic concept of organisational behaviour and foundations of individual behaviour
		The student will be able to develop an idea about different motivational theories and evaluate motivational strategies used in a variety of organizational settings.
		The student will be able to understand the foundation of group dynamics and the nature of stress and its management.
		The student will be able to evaluate the appropriateness of various leadership styles and how to deal with organistional conflict.
		The student will be able to understand different types of organizational structures and importance of organizational effectiveness.
	ADVANCED COST ACCOUNTING	The student will be able to understand the basic concepts in Cost Accounting and also familiarizing with the preparation of Cost Sheets, Tenders and Quotations.
		The student will be able to understand Preparation of Process Costing.

ADVANCED COST ACCOUNTING	The student will be able to Know the Standard Costing and Variance Analysis
	The student will be aware of the Cost control and Cost Reduction.
	The student will be able to develop the knowledge about Activity based costing.
RESEARCH METHODOLOGY	The student will be able to understand the basics of Research Methodology.
	The student will be able to know the Data Collection and Sampling
	The student will have understanding of Processing Data.
	The student will be able to have the awareness of Data Analysis through opt Statistical Tools
	The student will be able to know about Research Report and SSPS pacakage
AGRIBUSINESS MANAGEMENT	The student will be able to understanding of the Management Concept and Agripreneurs.
	The student will be able to know the Agribusiness and Commodities Market.
	The student will be able to have the deep understanding of Agricultural Market and Products.
	The student will be able to have the awareness of Small Scale Industry and MSME.
	The student will be able to know about financial scheme for Agribusiness.
SERVICES MARKETING	The student will be able to understand the Essential Elements of marketing mix in Service marketing
	The student will be able to develop an idea about marketing strategies for various services marketing-mix.
	The student will be able to know and learn about Product support services and Identify the problems of Service quality management
	The student will be able to learn the of Marketing of financial services.
	The student will be able to acquire the knowledge about CRM.
	The student will be able to understand the concept of Business Analytic

BUSINESS ANALYTICS	The student will be able to understand the Categories of Business Analytical methods and models
	The student will be able to understand the Role and Significance of Decision Making.
	The student will be aware of the Modern Approaches in Decision Making and Common Problems in Decision Making
	The student will be able to know Value of Analytics in Decision Making.
SMALL BUSINESS MANAGEMENT	The student will be able to understand the concept of Small Business and MSME.
	The student will be able to know how to start a Small Industry step by step.
	The student will be able to understand the Type of the Organizations.
	The student will be aware of the Sources of Finance for Small Business.
	The student will be able to know Incentives and Subsidies given the Government.
BANKING THEORY	The Student will be able to know classification of banks, ownership, function and banking structure in India.
	The student will be able to familiar with the Types and Functions of Commercial Banks.
	The Students will able to analyse the Relationship between Banker and Customer.
	The Student will be able to know the Functions of Central Banks
	The Student will be able to Analyse Recent Trends in Banking Sector.
STRESS MANAGEMENT	The student will be able to understand the concept of Stress, Types and Causes of Stress
	The student will be able to understand the Personality its Types and Perception.
	The student will be able to understand the Emotional Intelligence - EQ
	The student will be aware of the Stress at Work Place.

	The student will be able to know Stress Management and Counselling skills.
DIRECT TAXES	1.The Students we able to Contrast The Different Basic Concepts In Income Tax
	2. The Students we able to understand and Compute Salary Income And Income From House Property
	3. The Students we able to understand and Construct The Statements For Business. Income, Professional Income And Capital Gains
	4. The Students we able to understand and Compute Income From Other Sources And Total Income Of Individuals
	5. The Students we able to understand and Trace Assessment Procedure and Familiarizing Tax Planning
INVESTMENT & PORTFOLIO MANAGEMENT	1. Making the students being well aware of types of financial markets
	2. Testing the knowledge of students about measurement of risk and return.
	3. Asses the performance of students in relation to Fundamental Analysis, Economic Analysis, Industry Analysis and Company Analysis.
	4. Evaluate student's knowledge on valuation of equity shares, preference shares, debentures and bonds
	5. Getting the students to familiarize Efficient Market Hypothesis
PROJECT DEVELOPMENT	1. The students will be able to understand the Project and its development:
	2. The students will be able to understand the Capital expenditure decisions of projects.
	3. The students will be able to understand the Economic Viability of the project.
	4. The students will be able to understand the Sources of Project Finance.
	5. The students will be able to understand the Project schedule and control mechanism.

FINANCIAL SERVICES	Achieve the target of students having better understanding of Financial Services in India.
	The student will be able to know the Collect the data from the students pertaining to venture capital
	Let the students know about Capital Market, Money Market Strategies and present position of stock market in India,.
	The student will be able to have the awareness of SEBI Guidelines and Structure and performance evaluation
	The student will be able to know about Investor Services & Credit rating agencies.
INFORMATION TECHNOLOGY IN BUSINESS	Students will be able to develop skills to practice information systems in Business.
	Students will be able understand the Accounting and Financial Information Systems.
	Students will be able to develop to skill by preparing to online business
	Students will be able to know the Security Issues in E-Commerce and Risk management approach to e-commerce security.
	The student will be able to understand the relevant information technology, growth of internet and Usage of Internet to society
ENTREPRENEURIAL DEVELOPMENT	The student will be able to acquire the basic knowledge and understand the types of contract and Agreement
	The student will be able to know the Identify the essential elements of contract and rules as to offer.
	The student will be able to have to understanding of law relating to indemnity and guarantee
	The student will be able to know the duties and rights of the Bailor and Bailee and Agent and Principal.
	The student will be able to know about law of Agency
OFFICE MANAGEMENT	Students will be able to support management in office administration.
	Students will be able to prepare business documents
	Students will be able to manage records and files. Students will also able to demonstrate business communication skills

	OFFICE MANAGEMENT	Students will be able to utilize appropriate office technology. Students will also able to execute the duties of an office administrator.
		The student will be able to know about to role of management in the workplace, levels and functions of management
	BUSINESS ORGANISATION	The student will be able to know about Basics of Business Organization
		The student will be able to aware about different forms of business organization
		The student will be able to gain knowledge on Industry location & operations
		The student will be able to Facilitate to get exposure on Functioning of Stock Exchange.
		The student will be able to get full information on Trade Association & Chamber of commerce.
	PRINCIPLES OF AUDITING	1. The Students will able to understand the concept of Auditing and Classification.
		2. The Students will able to Gain the knowledge about Audit Programme and importance.
		3. The Students will able to Get awareness the Students about Internal check and Audit.
		4. The Students will able to understand the Valuation of assets and liabilities.
		5. The Students will know about the qualification and disqualification of Auditors
	FINANCIAL ACCOUNTING I	Understand the basic fundamentals of Double Entry System Accounting
		Prepare Final Accounts
		Understand the depreciation accounting
		Prepare the accounts in Single Entry system
		Understand the importance of Tally Accounting
	BUSINESS ORGANIZATION	Knowledge about Business and Profession
		Understand the different Forms of Business Organization.
		Explore the theories of Plant Location and characteristics of Layout.

BUSINESS ORGANIZATION	Know the concept of Business Combinations and functions of Chamber of commerce, Trade Association.
	Understand the basic Concepts of MNCs
INDIAN ECONOMY - I	1.The student will be able to understand the various indicators of economic development.
	2.The student will be able to understand the importance, causes and impact of population growth.
	3.The student will be able to gain knowledge about the role of agriculture in economic development.
	4.The student will be able to gain knowledge about the role of agriculture labour problems and remedies .
	5.The student will be able to understand the industrial development during plan periods.
ELEMENTS OF INSURANCE	1.Understand the basic fundamentals of Insurance
	2.Apply the fundamentals of Life Insurance
	3.Understand the fundamentals of Life Insurance
	4.Apply the fundamentals of Marine Insurance
	5.Understand the procedure of E- insurance
CONSUMERISUM	1.Understand the basic fundamentals of Consumerism
	2.Apply the fundamentals Consumer Protection Act
	3.Understand the Amendments of Consumer Protection Act
	4.Apply the fundamentals Consumer Protection Council
	5.Understand the procedure of Consumer Redressal
FINANCIAL ACCOUNTING II	1.Understand the basic fundamentals of branch accounting
	2.Understand the basic fundamentals of Departmental accounting
	3.Understand the Hire purchase and Installment System of accounting
	4.Prepare the accounts partnership
	5.Understand the basics of Tally Accounting
OFFICE MANAGEMENT	1.To gain knowledge about nature and scope of organization.
	2..To gain effective knowledge about
	be able to Administrative arrangements and physical conditions
	3.To gain a knowledge of Office equipments and Office System
	4.To know about Office Correspondence

	5.To learn about Office Supervisor
INDIAN ECONOMY - II	1. The student will be able to understand the formation of National Income.
	2.The student will be able to acquire knowledge about the planning in India.
	3.The student will be able to clarify the economic reforms and LPG policy.
	4.The student will be able to understand the transport system and policy in India.
	5.The student will be able to understand the information technology in India.
MERCHANT BANKING	To gain knowledge about Merchant Banking .
	To impart effective knowledge about Public Issue Management.
	To learn about Post Issue Management
	To gain knowledge about Capital Market Instruments.
	To learn about Port Folio Management.
BUSINESS MATHEMATICS	The student will be able to Acquired skills in sets and operation on sets.
	The student will be able to measure the Simple and compound interests as well as annuities in business.
	The student will be able tosolve problems Discount on Bills-Present value, Bankers Discount- Profit and Loss, Roll, wages, overtime Gross salary.
	The student will be able to Get familiarized on Discount on Bills-Present value, Bankers Discount- Profit and Loss, Roll, wages, overtime Gross salary.
	The student will be able to find maxima and minima - applications in business problemsusing differentiations.
CORPORATE ACCOUNTING -I	Know the framework of Indian Contract Act 1872.
	Understand the other essential elements of Indian Contract 1872.
	Aware the provisions of Special Contracts and Modes of Discharge.
	Acquire Knowledge of Sale of Goods Act 1930.
	Consciousness on Consumer Protection Act 1986 .

BUSINESS CORRESPONDENCE	The student will be able to understand the basic concepts of business correspondence.
	The students will be able to prepare the business letter and letter style.
	The students will be able to know the different types of business letter's, offers, orders and complaints.
	The students will able to acquire the knowledge of preparing letters of application with cv, resume etc.
	The students will be able to understand the types and characteristics of business report.
BUSINESS STATISTICS AND OPERATIONAL RESEARCH	Acquired skills in analysis and interpretation of data.
	Gained knowledge on measures of Central Tendency and theirapplication in
	Learned about Correlation and Regression
	Get familiarized aboutIndex Numbers and Time series
	Solved challenging problems by using appropriate statistical tools.
BUSINESS ECONOMICS – I	The student will be able to understand the concept of Business Economics, Objectives and scope.
	The student will be able to gain knowledge of the demand and elasticity of demand.
	The student will be able to gain knowledge on Utility concept .
	The student will be able to acquire Knowledge of Demand forecasting and Demand Forecasting methods.
	The student will be able to gain knowledge of Production Function and Returns to scale
COMPUTER APPLICATIONS IN BUSINESS	Gainedbasic knowledge about computer concept and terminology
	Acquired skills to produce word processing documents
	Demonstrated basic skills involving MS excel sheet
	Acquired skills on data base
	Enhanced knowledge on business presentation by using presentation software
NON-MAJOR ELECTIVE	To gain knowledge about Commerce, Trade, Industry.
	To learn about Forms of Business organization.
	To acquire knowledge about Company.
	To know about Stock Exchange

COMMERCE U.G		To impart effective knowledge about Trade association and Chamber of commerce
	CORPORATE ACCOUNTING -II	Impart the knowledge of valuing shares and goodwill of the company.
		Understand the accounting procedures related to Alteration of share capitaland Internal Reconstruction.
		Be acquainted with accounting procedures for Mergers and acquisitions.
		Prepare consolidated financial statements of Holding company and itssubsidiary companies.
		Know the accounting procedures related to preparation of bank accounts.
	BUSINESS MANAGEMENT	Knowledge pertaining to Fundamentals of management
		Knowledge pertaining to develop planning
		Understand organising and staffing
		Knowledge pertaining to motivation structures.
		Advanced Programming techniques using control and coordination
	COMPANY LAW	To learn about Nature, Scope and Kinds of Company
		To gain effective knowledge about Formation of a Company
		To effectively impart knowledge about Prospectus of company
		To know about Members of Company
		To learn about Directors of Company and Winding up of Company
	MODERN BANKING	The students will be able to acquire the knowledge of different types of banking.
		The students will be able to know the measures and methods of credit control in central bank.
		The students will be able to understand the concept of SBI.
		The students will be able to study the different types of development banking in India.
		The students will be able to acquire the new concepts of E-Banking.
		The student will be able to understand the Cost and Revenue analysis in Business.
		The student will be able to gain knowledge of the pricing of perfect competition, monopoly and monopolistic competition.

BUSINESS ECONOMICS - II	The student will be able to gain knowledge of Theories of Distribution.
	The student will be able to acquire Knowledge on the capital budgeting.
	The student will be able to gain knowledge decision making under certainty and uncertainty
E-COMMERCE	To understand the knowledge of E-Commerce
	Gaining knowledge on E-Marketing
	Know the E-Payment systems.
	Knowledge on Electronic Data Interchanges (EDI)
	Conceive an idea of legal framework for E-Commerce.
ADVERTISING AND SALESMANSHIP	Impart knowledge on advertising
	Get familiarized about advertising agencies
	Get familiarized about recent trends in advertising
	Acquired knowledge on fundamental concept of salesmanship
	Impart knowledge on duties & responsibilities of salesmanship
COST ACCOUNTING- I	To taught the Nature and Scope of Cost Accounting, and Computation of Cost Sheet and Tenders.
	To learn the preparation of Material Purchase and Control.
	To impart knowledge about Methods of pricing of Material Issues.
	To study about preparation of Labour Cost Control.
	To gain knowledge about Distribution of Overheads.
PRACTICAL AUDITING	The students will be able to acquire the basic concepts of auditing.
	The students will be able to the meaning and importance of internal audit, internal check and control.
	The students will be able to understand the verification of vouchers and vouching.
	The students will be able to study the auditors appointment, removal, qualification and disqualification.
	The students will be able to identify the auditors reports and its kinds.
MANAGEMENT ACCOUNTING	To learn the preparation of Financial Statement Analysis.
	To gain effective knowledge about Ratio Analysis
	To impart knowledge about Fund Flow and Cash Flow Analysis.

	To study about Marginal Costing techniques.
	To know about the preparation of Budget and Budgetary Control
INCOME TAX LAW AND PRACTICE I	To understand the basic level of Income tax Act.
	To know the tax calculation on house property income
	To achieve knowledge on tax calculation of salaried people.
	To obtain knowledge on income tax of business/ professional income.
	To understand the administrative set up of income tax department and their powers
ENTREPRENEURIAL DEVELOPMENT	Understand the basic concepts and theories of entrepreneurship.
	Exemplify knowledge on course contents, curriculum and constraints of EDP.
	Conceive business ideas and convert them into business projects.
	Become familiar with institutions support various forms of assistances and subsidies.
	Learn the MSMEs schemes provided to budding entrepreneurs .
BUSINESS ENVIRONMENT	The students will be able to know the concept of external, micro macro of business environment.
	The students will be able to study the economic policies and conditions in India.
	The students will be able to understand the concept of natural and technological environment.
	The students will be able to acquire the knowledge of social environment and consumer protection.
	The students will be able to study the concept of globalization of Indian business.
MANAGEMENT INFORMATION SYSTEM	Understand the fundamental principles of MIS
	Basic knowledge about Concepts and Technologies used in MIS
	Acquired knowledge on process of developing and implementing information system
	Impart knowledge on Information Processing
	Enhanced knowledge on DBMS.
	Know the basic principles and practices of marketing.

PRINCIPLES OF MARKETING	Be aware of the importance of products, standards of branding, packing and quality management.
	Understand the pricing mechanism of marketing.
	Know the basic aspects of the channels of distribution and buyers' behaviours.
	Articulate sales Promotional techniques used in modern marketing.
COST ACCOUNTING II	To taught the Computation of Job, Batch, Contract Costing
	To learn the preparation of Process Costing.
	To impart knowledge about calculation of Operating Costing
	To study about preparation of Standard Costing.
	To gain knowledge about Reconciliation of Cost and Financial Accounts.
INCOME TAX LAW AND PRACTICE II	To know the calculation of taxes for gain on capital asset.
	To know the tax on other source and its calculation.
	To know the adjustment of carry forward Income/Expenditure.
	To Expertise in preparation of total income of individual/ firm etc.
	To gain knowledge on filing of income tax returns.
FINANCIAL MANAGEMENT	To understand the basic Principles and practices of Financial management.
	Determining the amount of Capital, Organization and Structure. Reduce cost of Capital and Operating Risks
	To have the knowledge and practice of arriving financial Decision makings
	To acquire practical knowledge on Calculation of working capital
	To gain knowledge on leverage and portfolio management
INNOVATION MANAGEMENT	Perceive the basics of innovation
	Appreciate the value of creativity
	Gain exposure to various theories of innovation
	Apprehend the innovation process.
	Inculcate the Shade of innovation for the success of business
LOGISTIC MANAGEMENT	To understand the basic concepts of logistic management
	To explore the supply chain intermediaries
	To explore the supply chain strategies
	To identify the warehousing strategies in logistic management

		To perceive the legal frame work of logistic management.
	SERVICE MARKETING	Understand the concepts and evolution of service marketing.
		Explore the 4 Ps of service marketing.
		To Perceive the strategies in service marketing.
		To explore the quality issues of service marketing.
		To understand the different services organizations.
	CUSTOMS AND GOODS AND SERVICE TAX	Understand the basics of Customs and Excise duty.
		Know the fundamental concepts of Goods and Service Tax (GST).
		Understand the Goods and Service Tax Registration.
		Analyze the procedures of Levy and Collection of GST.
		Understand the Assessment Returns and Refund of Goods and Service Tax.
	INVESTMENT MANAGEMENT	Understanding the Fundamentals of Investment
		Knowledge pertaining to Security Investment.
		Knowledge about Non Security Investment.
		Scientific reasoning about Risk and Return.
		Reflective thinking through Fundamental and Technical Analysis.
	FINANCIAL SERVICES	To gain knowledge about Financial Services, Capital and Money Markets
		To gain effective knowledge about leasing.
		To impart knowledge about Factoring.
		To know about Venture capital.
		To learn about Mutual funds.
	HUMAN RESOURCES MANAGEMENT	Understanding the basics of Human Resource Management.
		Ability to plan Human resource.
		Knowledge about leadership qualities through Recruitment and Selection.
		Comprehension about Training and Development.
		Awareness about Performance and Potential Appraisal.
	PROGRAMMING IN C	1. To understand simple algorithms,
		2. To understand language constructs
		3. To understand and develop programming skills in C.
		4. To understand the basic concepts of decision making and looping statements.

	5. To understand the concepts of arrays , structures, union, pointers and files.
Programming in C – Lab	Enhance the analyzing and problem solving skills and use the same for writing programs in C.
	Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards.
	Learn to debug a given program and execute the C program.
	To have enough practice the use of conditional and looping statements.
	To implement arrays, functions and pointers.
MATHEMATICAL FOUNDATIONS - I	To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra,
C++ & DATA STRUCTURES	The Student will be able to understand the concepts of object oriented programming Apply structure and inline functions.
	The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time
	The Student will be able to understand the concepts of Stacks and Queue using array and pointers.
	The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs.
	The Student will be able to understand the concepts of Sorting and Searching Algorithms.
C++ & DATA STRUCTURES LAB	Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.
	Demonstrate the Polymorphism Concepts and Operator Overloading.
	Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.
	Apply Algorithm for solving problems like Sorting and Searching.
	Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems

MATHEMATICAL FOUNDATIONS II	To know about Matrix Operations, Symmetric, Skew-Symmetric, Hermitian, Skew-Hermitian, Orthogonal, Unitary Matrices. Rank of a Matrix Solutions of linear equations Consistency and Inconsistency, Characteristic roots and Characteristics Vectors, Cayley - Hamilton Theorem, Integration of rational functions, Integration by parts, Reduction formulae, Area and volume using integration, Planes, Straight lines, Spheres, Curves, Cylinders.
PROGRAMMING IN JAVA	Students are able to know about a General-purpose and Purely object-oriented programming language including data types, control statements, and classes.
	Students are able to Secured, well-suited for internet programming using applets and GUI-based
	The Student will be able to understand the concepts of E-commerce and its different typesand describe the network infrastructure for E-commerce.
	The Student will be able to understand the concepts of networks and fundamental of security concepts, security services to counter them, understand the fundamental properties of cryptography Techniques.
	The Student will be able to understand the concepts of electronic payment systems,online security and understand the fundamentals of create a E-commerce web site.

	E-COMMERCE	The Student will be able to understand the concepts of basic The Student will be able to
		The Student will be able to understand the concepts of internet trading relationships including inter organization and intra-organizations.
		The Student will be able to understand the concepts of optimization and to formulate and Solve Linear Programming problems.
		The Student will be able to understand the concepts of Transportation problem and Assignment problem.

BCA - UG	OPERATION RESEARCH	The Student will be able to understand the concepts of sequencing problem.
		The Student will be able to understand the concepts of PERT-CPM and their applications in product planning control.
		The Student will be able to understand the concepts of Solve the Minimal Spanning Tree Problem, Shortest Route Problem, Maximal Flow Problem and Minimal Cost Capacitated Flow Problem.
	PROGRAMMING IN JAVA LAB	
	FINANCIAL ACCOUNTING– I	To introduce the basic concepts and conventions to the students, this would help in development of accounting knowledge.
		To understand the concept of Double entry system this helps in preparation of various books of accounts.
		To develop the capability of students to prepare the Final Accounts of a Small Business Concern.
		To introduce the concept of Single entry system of Accounting which helps them to prepare the accounts from incomplete records.
		To enhance the Accounting Knowledge by introducing the practical uses of Average Due Date and Bank Reconciliation Statement
	WEB TECHNOLOGY	The Student will be able to understand the concepts of HTML.
		The Student will be able to understand the concepts of java scripts.
		The Student will be able to understand the concepts of user defined functions.
		The Student will be able to understand the concepts of Active Server Page.
		The Student will be able to understand the concepts of – OLEDB connection class.
	Introduction to Information Technology	Students understand Major components of Computer System and its working principles.
		Students learn and understand the Role of an Operating System and basic terminologies of networks.
		Students understand how the Information Technology aids for the Current Scenario.
		Students understand the Computer Software.
		Students understand internet applications

RELATIONAL DATABASE MANAGEMENT SYSTEMS	Describe the database architecture and its applications Sketch the ER diagram for real world applications Uses various ER diagram for a similar concepts from various sources.
	Discuss about the relational algebra and calculus Construct various queries
	Describe the various normalization forms Apply the normalization concepts for a table of data Practices a table and implement the normalization concepts.
	Explain the storage and accessing of data.
	Illustrate the query processing in database management. Define the concurrency control and deadlock concept
ENTERPRISE RESOURCE PLANNING	Understanding the functionalities of Enterprise resource planning
	Understanding Characterize the ERP implementation procedures
	Understanding the elements of ERP
	Understanding the available ERP packages
	Understanding the models of ERP with other related technologies
WIRELESS DATA COMMUNICATION	To understand the concepts of basic OSI layers.
	To understand the concepts of signals and transmission media.
	To understand the basic concepts of error detection and DLC
	To understand the Characterize of wireless transmission technologies
	To understand the concepts of Security.
RDBMS LAB	Design and Implement a database schema for a given problem domain.
	Populate and Query a database using SQL, DDL/DML Commands.
	Build well formed in String Date/Aggregate Functions.
	Design and Implement a database query using Joins, Sub-Queries and Set Operations.
	Program in SQL including Objects (Functions, Procedures, Triggers)
FINANCIAL ACCOUNTING - II	To Understand the concept of Branch Accounting and enable the students to prepare Accounts for various types of Branches.
	To enhance the procedure for preparing Departmental Accounts.
	To Develop the skill of the students in preparing Hire Purchase Accounting, both in the books of Hire Purchaser and Hire Vendor.

	To Understand the Accounting procedure for Partnership in cases like Admission, Retirement, Death.
	To Understand the Accounting procedure for Dissolution and Insolvency of a Partner.
INTERNET OF THINGS	Analyze various protocols for IoT
	Develop web services to access/control IoT devices.
	Design a portable IoT using Rasperry Pi
	Deploy an IoT application and connect to the cloud.
	Analyze applications of IoT in real time scenario.
INTERNET TECHNOLOGY	Students understand the Fundamentals of Internet, Connectivity and its Resource Requirements.
	Students understand the Internet Technology and its applications
	Students Understand the basis of WWW and Web Browsers.
	Students learn how to Mailing system and applications of Internet.
	Students Understand relay chat that is how to read e- contents.
MOBILE APPLICATIONS DEVELOPMENT	Enable the student to get sufficient knowledge on concepts, functions and various system resources of operating systems.
DESIGN AND ANALYSIS OF ALGORITHMS	To build a solid foundation of the most important fundamental subject in computer science. Creative thinking is essential to algorithm design and mathematical Acumen and programming skills.
MOBILE APPLICATIONS DEVELOPMENT LAB	
OPERATING SYSTEM LAB	
DATA MINING	To enable the students to understand the importance of Data Mining and its techniques with recent trends and tools.
INFORMATION SECURITY	To enable the student to understand various methodologies available for securing information.
SOFTWARE TESTING	To study the concepts of software engineering with the aim of acquiring skills to develop Software applications, following all standardized procedures and techniques.
SOFTWARE ENGINEERING	This course is intended to provide the students with an overall view over Software Engineering discipline and with insight into the processes of software development.

	OPEN SOURCE SOFTWARE	To study the concepts of open source techniques that can be effectively applied in practice about HTML5, JavaScript, PHP, and PERL.
	PYTHON PROGRAMMING	
	PYTHON PROGRAMMING LAB	
	CORE PRACTICAL (Practical– 8)	
	BIG DATA ANALYTICS	To explore the fundamental concepts of big data analytics.
		To learn to analyze the big data using intelligent techniques and mining data stream.
		To understand the applications using Map Reduce Concepts.
	CRYPTOGRAPHY	Understand various Security practices and System security standards
		Understand different cryptographic operations
		Understand the various Authentication schemes to simulate different applications.
	DIGITAL IMAGE PROCESSING	This course enables the student knowledge about various image processing concepts like enhancement, restoration, segmentation, compression and recognition.
	ARTIFICIAL INTELLIGENCE	To induce the innovative ideas of students, related to Robotics, Artificial Intelligence and Machine Learning. This course enables the student's level to compete in the world of information and technology era.
	SYSTEM SOFTWARE	To have an understanding the basic design of assemblers, loaders, linkers, macro processor.
	MOBILE COMPUTING	To understand the challenges of wireless communication and the solutions that is in use.
		To study about various types of wireless data networks, wireless protocols and wireless voice networks.
		To design and implement mobile applications.
	OBJECT ORIENTED ANALYSIS AND DESIGN	The student should be made to learn the basics of OO analysis and design skills.
		Students are able to have a broad understanding of database concepts and databasemanagement system software
		Students are able tohave a high-level understanding of major DBMS components and their function

UNDER CBCS	Students are able tomodel an application's data requirements using conceptualmodeling tools like ER diagrams and design database schemas based on theconceptual model.
	Students are able towrite SQL commands to create tables and indexes,insert/update/delete data, and query data in a relational DBMS.
	Students are able toprogram a data-intensive application using DBMS APIs.
ENTERPRISE JAVA PROGRAMMING	Students are able to develop Applet Programming using various techniques
	Students are able to develop applications using Abstract Window Toolkit and Events
	Students are able to update and retrieve the data from the databases using JDBC-ODBC
	Students are able to develop server side programs in the form of Servlets
	Students are able to build up Java Applications using collections and JSP Tags.
PROGRAMMING USING C#.NET	Students are able to know the differences between desktop application and web application.
	Students are able to construct classes, methods, and access modifier and instantiate objects.
	Students are able to create and manipulate GUI components in C# for windows application.
	Students are able to code solutions and compile C# projects within the .NET framework.
	Students are able to build the desktop application with Database.
RELATIONAL DATABASE MANAGEMENT SYSTEM	
ENTERPRISE JAVA PROGRAMMING	
PROGRAMMING USING C#.NET	
	Students are able to identify the types of instructions and the organization of registers and memory

COMPUTER ORGANIZATION	Students are able to describe the translation model of assembly language to machine language.
	Students are able to understand the micro-program by mapping the instructions.
	Students are able to recognize the types of computer organizations.
	Students are able to accept the better way of processing by Parallel and Vector processing.
PARALLEL COMPUTING	Students are able to compute speedup, efficiency, and scaled speedup of parallel computations, given appropriate data
	Students are able to apply Amdahl's Law to predict the maximum speedup achievable from a parallel version of a sequential program, given its execution profile
	Students are able to analyze the efficiency of a parallel algorithm
	Students are able to explain the relative advantages and disadvantages of mesh, hypercube, and butterfly networks with respect to diameter, bisection width, and number of edges/node
	Students are able to explain the advantages and disadvantages of constructing parallel computers using
EMBEDED SYSTEM	Students are able to understand basic concepts in the embedded computing systems area;
	Students are able to determine the optimal composition and characteristics of an embedded system;
	Students are able to understand what is a microcontroller, microcomputer, embedded system
	Students are able to design and program an embedded system at the basic level;
	Students are able to develop hardware-software complex with the use of the National Instruments products.
	Students are able to demonstrate an understanding of the foundations and importance of E-commerce
	Students are able to demonstrate an understanding of retailing in E-commerce by: analyzing branding and pricing strategies, using and determining the effectiveness of market research and assessing the effects of disintermediation.

E-COMMERCE	Students are able to analyze the impact of E-commerce on business models and strategy
	Students are able to describe Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational.
	Students are able to describe the infrastructure for E-commerce Describe the key features of Internet, Intranets and Extranets and explain how they relate to each other.
INTRODUCTION TO COMPUTER APPLICATION	Students are able to know about computer and basic applications of computer.
	Students are able to get knowledge about operating system
	Students are able to aim at imparting a basic level appreciation Programme
PRINCIPLES OF INTERNET	Students are able to learn the basics of Internet.
	Students are able to provide fundamental knowledge WWW
ADVANCED ENTERPRISE JAVA PROGRAMMING	Students are able to work with JSP, JSF and Servlet using MVC approach.
	Students are able todevelop the web applications using the MVC framework
	Students are able todevelop Enterprise web application using EJB.
	Students are able toimplement the Object-Relation Mapping technique using Hibernate
	Students are able to gets knowledge of Aspect Oriented Programming using Spring and Spring MVC.
DESIGN AND ANALYSIS OF ALGORITHMS	Students are able to prove the correctness and analyze the running time of the basic algorithms for those classic problems.
	Students are able tounderstand the basic knowledge of algorithm design and its implementation.
	Students are able to learn the key techniques of Divide-and-Conquer and Greedy Method.
	Students are able torecognize the concept of Dynamic Programming and its algorithms
	Students are able to familiarize with Backtracking algorithms.
	Students are able to understand Branch and Bound techniques for designing and analyzing algorithms.

WEB APPLICATION USING C#.NET	Students are able to know the differences between desktop application and web application.
	Students are able to construct classes, methods, and access modifier and instantiate objects.
	Students are able to create and manipulate GUI components in C# for windows application.
	Students are able to code solutions and compile C# projects within the .NET framework.
	Students are able to build the desktop application with Database.
HUMAN COMPUTER INTERACTION	Students are able to plan and Develop procedures and life cycle of Human Computer Interaction
	Students are able to analyze product usage through appropriate assessments and testing techniques.
	Students are able to apply the interface structure standards/rules for different users.
	Students are able to encourage communication between understudies of brain science, structure, and software engineering on UI improvement projects.
	Students are able to understand the intensity of HCI in the cutting edge world and the job it can play in advancing value, openness, and progress.
SOCIAL INFORMATION NETWORKS	Students are able to clear understanding of real world applications
	Students are able to comprehend the elements of the social network
	Students are able to demonstrate and envision the social network
	Students are able to understand the role of web in the social network
	Students are able to apply the concept of social network in appropriate application
CLOUD COMPUTING	Students are able to understand the broad perceptive of cloud architecture and model.
	Students are able tounderstand the concept of parallel and distributed computing
	Students are able to understand the different technologies.

COMPUTER SCIENCE - PG		Students are able tounderstand the features of virtualization.
		Students are able to learn to design the trusted cloud computing system with different cloud platforms
	PRINCIPLES OF WEB DESIGN	Students are able to learn how to combine basic HTML elements to create Web pages.
		Students are able to understand the use of HTML tags and tag attributes to control a Web page's appearance.
		Students are able to capable to learn how to add absolute URLs, relative URLs, and named anchors to Web pages.
		Students are able to gain a good understanding of using tables and frames as navigational aids on a Web site.
		Students are able to control appearance webpages by applying style sheet.
	OPEN SOURCE APPLICATIONS	Students are able to understand the features of PHP
		Students are able to develop the different applications using PHP
		Students are able to demonstrate the applications using PHP with Mysql
		Students are able to understand the concepts of Perl
		Students are able to develop the applications using Perl
	PROBLEM SOLVING TECHNIQUES	Students are able to develop programming techniques required to solve a given problem.
		Students are able to develop problem solving skill using top – down design principles.
		Students are able to design an algorithm for a problem.
		Students are able to develop techniques to handle array structure
		Students are able to develop techniques such as searching and sorting
	DISTRIBUTED OPERATING SYSTEM	Students are able to understand foundations of Distributed Systems.
		Students are able to get the idea of memory management
		Students are able to comprehend in detail the system level and support required for distributed system.
		Students are able to recognize the shell script commands of Unix
		Students are able to understand the use of web services in B2C and B2B applications.

XML AND WEB SERVICES	Students are able to understand the design principles and application of SOAP and REST based web services.
	Students are able to design collaborating web services according to a specification.
	Students are able to implement an application that uses multiple web services in a realistic business scenario.
PROGRAMMING USING PYTHON	Students are able to explore the fundamental concepts of Python
	Students are able to understand Basics of Python programming language
	Students are able to solve simple problems using Python
	Students are able to acquire fundamental knowledge and skills on Python Programming
	Students are able to understand the nuances of this language.
	Students are able to know the usage of modules and packages in Python
	Students are able to familiarize with file concepts in Python
	Students are able to familiarize with web concepts using Python.
DISTRIBUTED OPERATING SYSTEM	
XML AND WEB SERVICES	
PROGRAMMING USING PYTHON	
BLOCKCHAIN TECHNOLOGY	Students are able to understand the functions of Blockchains
	Students are able to have clarity in the Concepts, challenges, solutions with respect to blockchain
	Students are able to understand the facts and myths related to cryptocurrencies.
	Students are able to apply the concept of Blockchain for various applications.
	Students are able to correlate Current Indian scenario in governing cryptocurrencies in India with Global standard.
INTERNET OF THINGS	Students are able to design and develop IOT based solution for real world applications
	Students are able to realize the evolution of Internet in Mobile Devices, Cloud & Sensor Networks

INTERNET OF THINGS	Students are able to understand the building blocks of Internet of Things and its characteristics.
	Students are able to understand the concept of IOT and its application.
NETWORK SECURITY	Students are able to identify some of the driving factors needed for network security
	Students are able to Identify and classify attacks and threats
	Students are able tocompare and contrast symmetric and asymmetric encryption systems.
	Students are able toidentify the web systems vulnerable to attack.
	Students are able touse appropriate secure mail applications and security protocols
PROGRAMMING USING C	Students are able to understand a functional hierarchical code organization.
	Students are able to define and manage data structures based on problem subject domain.
	Students are able to work with textual information, characters and strings.
	Students are able to work with arrays, structures, pointers and files.
PROGRAMMING USING C++	Students are able to understand object oriented programming and advanced C++ concepts.
	Students are able to understand the various functions and arguments in object oriented programming.
	Students are able to understand the classes and objects in C++.
	Students are able to familiarize with inheritance and polymorphisms.
	Students are able to understand the concepts files and exception handling
PROGRAMMING USING PYTHON	Students are able to explore the fundamental concepts of Python
	Students are able to understand Basics of Python programming language
	Students are able to solve simple problems using Python
	Students are able to acquire fundamental knowledge and skills on Python Programming.

	Students are able to understand the nuances of this language.
	Students are able to know the usage of modules and packages in Python
	Students are able to familiarize with file concepts in Python
	Students are able to familiarize with web concepts using Python.
MOBILE APPLICATION DEVELOPMENT	Students are able to know about the mobile application development environment
	Students are able to develop interface and design
	Students are able to use the techniques in Mobile Applications
SOFTWARE PROJECT MANAGEMENT	Students are able to understand the activities during the project scheduling of any software application.
	Students are able tolearn the risk management activities and the resource allocation for the projects.
	Students are able toapply the software estimation and recent quality standards for evaluation of the software Projects.
	Students are able toacquire knowledge and skills needed for the construction of highly reliable software project.
	Students are able to able to create reliable, replicable cost estimation that links to the requirements of project planning and managing.
BIG DATA ANALYSIS	Students are able to learn about types of digital data and big data
	Students are able to gain knowledge of various Big data analtics and its Technologies
	Students are able to study about various NoSQL databases and management techniques.
	Students are able to work with NoSQL databases such as MongoDB and Cassendra
	Students are able to design Big data queries using Hive and Pig.
	Students are able to understand the various searching techniques, constraint satisfaction problem and example problems- game playing techniques.
	Students are able toapply these techniques in applications which involve perception, reasoning and learning.

ARTIFICIAL INTELLIGENCE	Students are able toexplain the role of agents and how it is related to environment and the way of evaluating it and how agents can act by establishing goals.
	Students are able toacquire the knowledge of real world Knowledge representation.
	Students are able toanalyze and design a real world problem for implementation and understand the dynamic behavior of a system.
	Students are able touse different machine learning techniques to design AI machine and enveloping applications for real world problems.
MACHINE LEARNING	Students are able to design and implement machine learning solutions to classification, regression, and clustering problems;
	Students are able to evaluate and interpret the results of the algorithms.
	Students are able to select and implement machine learning techniques and computing environment that are suitable for the applications under consideration.
	Students are able to solve problems associated with batch learning and online learning, and the big data characteristics such as high dimensionality, dynamically growing data and in particular scalability issues.
	Students are able to understand and apply scaling up machine learning techniques and associated computing techniques and technologies.
	Students are able to recognize and implement various ways of selecting suitable model parameters for different machine learning techniques.
CYBER SECURITY	Students are able to understand the cyber threats and their Impact
	Students are able to have an awareness towards cybercrimes and legal impact against them.
	Students are able to avoid becoming a Victim to cyber threats
	Students are able to assess risks and weakness in security policies
	Students are able to respond to security alerts and identify flaws in systems and networks.

	DECISION SUPPORT SYSTEM	Students are able to recognize the relationship between business information needs and decision making
		Students are able to appraise the general nature and range of decision support systems
		Students are able to appraise issues related to the development of DSS
		Students are able to select appropriate modeling techniques
		Students are able to analyze, design and implement a DSS
	RESEARCH METHODS AND ETHICS	Students are able to demonstrate knowledge of research processes (reading, evaluating, and developing);
		Students are able to perform literature reviews using print and online databases;
		Students are able to identify, explain, compare, and prepare the key elements of a research proposal/report;
		Students are able to compare and contrast quantitative and qualitative research
	PROGRAMMING IN C	The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions
		The Student will be able to understand the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping.
		The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions.
		The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C.
		The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods.
	Programming in C - Lab	Enhance the analyzing and problem solving skills and use the same for writing programs in C.
		Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards.
		Learn to debug a given program and execute the C program.
		To have enough practice the use of conditional and looping statements.

	To implement arrays, functions and pointers.
MATHEMATICS – I	To Explore the Fundamental Concepts of Mathematics
MATHEMATICAL FOUNDATIONS - I	To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra, Permutations & Combinations, Differentiation, Straight lines, pair of straight lines, Circles, Parabola, Ellipse, Hyperbola.
C++ & DATA STRUCTURES	The Student will be able to understand the concepts of object oriented programming Apply structure and inline functions.
	The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time problems Apply the OOPs concepts class and object. Understand Explain the file concept and exception handlings in C++
	The Student will be able to understand the concepts of Stacks and Queue using array and pointers.
	The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs.
	The Student will be able to understand the concepts of Sorting and Searching Algorithms.
C++ & DATA STRUCTURES LAB	Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.
	Demonstrate the Polymorphism Concepts and Operator Overloading.
	Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.
	Apply Algorithm for solving problems like Sorting and Searching.
	Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems
MATHEMATICS II	To Explore the Fundamental Concepts of Mathematics

MATHEMATICAL FOUNDATIONS II	To know about Matrix Operations, Symmetric, Skew-Symmetric, Hermitian, Skew-Hermitian, Orthogonal, Unitary Matrices. Rank of a Matrix Solutions of linear equations Consistency and Inconsistency, Characteristic roots and Characteristics Vectors, Cayley - Hamilton Theorem, Integration of rational functions, Integration by parts, Reduction formulae, Area and volume using integration, Planes, Straight lines, Spheres, Curves, Cylinders.
PROGRAMMING IN JAVA	Students are able to know about a General-purpose and Purely object-oriented programming language including data types, control statements, and classes
	Students are able to Secured, well-suited for internet programming using applets and GUI-based
PHYSICS I	The student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension.
	The student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.
	The student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position.
	The student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains.
	The student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication.
STATISTICAL METHODS AND THEIR APPLICATIONS I	To understand and computing statistical Methods by which to develop the programming Skills

COMPUTER SCIENCE - UG	Digital Logic Design and Computer Organization	This course aims to provide the students with a detailed knowledge on digital logic, internals of the System logic circuits and to know the working principles of the computers.
	Introduction to Information Technology	Students understand Major components of Computer System and its
		Students learn and understand the Role of an Operating System and basic terminologies of networks.
		Students understand how the Information Technology aids for the Current Scenario.
		Students understand the Computer Software.
		Students understand internet applications
	RELATIONAL DATABASE MANAGEMENT SYSTEMS	Describe the database architecture and its applications Sketch the ER diagram for real world applications Uses various ER diagram for a similar concepts from various sources.
		Discuss about the relational algebra and calculus Construct various queries in
		Describe the various normalization forms Apply the normalization concepts for a table of data Practices a table and implement the normalization concepts.
		Explain the storage and accessing of data.
		Illustrate the query processing in database management. Define the concurrency control and deadlock concept
	RELATIONAL DATABASE MANAGEMENT SYSTEMS LABS	Design and Implement a database schema for a given problem domain.
		Populate and Query a database using SQL DDL/DML Commands.
		Build well formed in String Date/Aggregate Functions.
		Design and Implement a database query using Joins, Sub-Queries and Set Operations.
		Program in SQL including Objects (Functions, Procedures, Triggers)
	ALLIED -2 PAPER - 2	The student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity.
		The student will be able to describe the different atomic models and Stern and Gerlach Experiment.
		The student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.

	The student will be able to know the conversion of number systems from one to other and also will be able to design universal gates using NAND and NOR gates.
	The student will be able to understanding the basics of nanomaterial, synthesis and its applications.
WIRELESS DATA COMMUNICATION	To understand the concepts of basic OSI layers.
	To understand the concepts of signals and transmission media.
	To understand the basic concepts of error detection and DLC
	To understand the Characterize of wireless transmission technologies
	To understand the concepts of Security.
INTERNET TECHNOLOGY	Students understand the Fundamentals of Internet, Connectivity and its Resource Requirements.
	Students understand the Internet Technology and its applications
	Students Understand the basis of WWW and Web Browsers.
	Students learn how to Mailing system and applications of Internet.
	Students Understand relay chat that is how to read e- contents.
MOBILE APPLICATION DEVELOPMENT	This course aims to provide the students with a detailed knowledge on Mobile Application Development and Deployment about Android programming from basics to building mobile applications for digital world.
OPERATING SYSTEM	Enable the student to get sufficient knowledge on concepts, functions and various system resources of operating systems.
DESIGN AND ANALYSIS OF ALGORITHMS	The objective of the course is to teach techniques for effective problem solving in computing. The use of different paradigms of problem solving will be used to illustrate clever and efficient ways to solve a given problem. In each case emphasis will be placed on rigorously proving correctness of the algorithm.
DATA MINING	To enable the students to understand the importance of Data Mining and its techniques with recent trends and tools.
INFORMATION SECURITY	To enable the student to understand various methodologies available for securing information.

	SOFTWARE TESTING	To study the concepts of software engineering with the aim of acquiring skills to develop Software applications, following all standardized procedures and techniques.
	SOFTWARE ENGINEERING	This course is intended to provide the students with an overall view over Software Engineering discipline and with insight into the processes of software development.
	OPEN SOURCE SOFTWARE	To study the concepts of open source techniques that can be effectively applied in practice about HTML5, JavaScript, PHP, and PERL.
	BIG DATA ANALYTICS	To explore the fundamental concepts of big data analytics.
		To learn to analyze the big data using intelligent techniques and mining data stream.
		To understand the applications using Map Reduce Concepts.
	CRYPTOGRAPHY	Understand various Security practices and System security standards
		Understand different cryptographic operations
		Understand the various Authentication schemes to simulate different applications.
	DIGITAL IMAGE PROCESSING	This course enables the student knowledge about various image processing concepts like enhancement, restoration, segmentation, compression and recognition.
	ARTIFICIAL INTELLIGENCE	To induce the innovative ideas of students, related to Robotics, Artificial Intelligence and Machine Learning. This course enables the student's level to compete in the world of information and technology era.
	SYSTEM SOFTWARE	To have an understanding the basic design of assemblers, loaders, linkers, macro processor.
	CLOUD COMPUTING	To enable the students to learn the basic functions, principles and concepts of cloud computing Systems.
	INTERNET OF THINGS	This course presents the Introduction to IoT, M2M,IoT Architecture, IoT Model And Views, IOT protocols and Real world design constraints enable the students to learn the concepts of IoT.
		The student will be able to understand the basic theoretical foundation of microeconomics.

MICROECONOMICS I	The student will be able to analyse consumer behavior based especially on market purchases.
	The student will be able to analyse consumer equilibrium through the techniques of indifference curve and budget line.
	The student will be able to compare the cost for the purchase of disclosing and reporting on condition subject to improvement
	The student will be able to learn the nature of different market structure based on the characteristics of market.
MACROECONOMICS I	The student will be able to get awareness on National Income components.
	The student will be able to know about the classical theory of Employment and Unemployment.
	The student will be able to know about the theories of Consumption Function.
	The student will be able to know about the Investment function and its empirical evidences.
	The student will be able to understand the General Equilibrium models.
STATISTICS FOR ECONOMICS I	The student will be able to understand the basic Statistics.
	The student will be able to gain knowledge on collection of data and statistical survey.
	The student will be able to understand the Sampling methods
	The student will be able to understand the Descriptive Statistics.
	The student will be able to gain knowledge on correlation and regression analysis.
INDIAN ECONOMIC DEVELOPMENT	The student will be able to understand the workforce participation in different sectors.
	The student will be able to understand theimportance of agriculture in economic development.
	The student will be able to analyze the achievements of all the five year plans and present NITI Aayog's functions.
	The student will be able to understand the economic infrastructure and its role in economic development.
	The student will be able to gain knowledge on new economic policy and its implications in India.

AGRICULTURAL ECONOMICS	The student will be in a position to understand the overview of agricultural
	The student acquires knowledge on knowing various models on agriculture and its development.
	The student will be able to understand the agricultural marketing and its operations.
	The student will be able to understand different sources of agricultural finance.
	The student will be able to understand the government pricing policies on agriculture and allied industries
LABOUR ECONOMICS	The student will be able to understand thetheories of labour market.
	The student will be able to understand the employment and unemployment issues.
	The student will be able to gain knowledge on wage determination in theory and practice.
	The student will be able to know about the labour movement.
	The student will be able to understand the labour legislations in India.
MONETARY ECONOMICS	the student will be able to understand the nature and scope of monetary economics.
	The student will be able to understand the Classical theories of money.
	The student will be able to gain knowledge the Keynesian and post Keynesian theories of money.
	The student will be able to acquire knowledge on monetary policies and its operations.
	The student will be able to acquire knowledge on the concept of inflation and deflation.
BASIC ECONOMICS	1.The Students will be able to know the basic ideas of micro economics to the non-economic students
	2. The students will be able to understand the basic knowledge about the consumption, demand and supply
	3. The students will be able to know about the factors of production and their features

	4. The students will be able to understand various market condition and their pricing.
RECENT ISSUES IN INDIAN ECONOMY- I	1. Understand the approach to economic development.
	2. Describe the indicators of development.
	3. Understand the objectives and strategies of Indian Planning.
	4. Understand the features of India`s population.
	5. Understand the development of infrastructural facilities in India.
	6. Understand the new economic policy in India.
AN INTRODUCTION TO ENVIRONMENTAL ECONOMICS	1.The students will able to understand the subject of environmental
	2. The students will able to understand the economic techniques to analyse
	3. The students will able to understand the procedures of allocation goods and resources, optimal usage and market failure in public goods provision
	4. The students will able to understand the theoretical and practical knowledge of principles and practices in natural resource management, sustainability, globalization and environmental management to professional practice or further study;
	5. The students will able to understand, analyse, synthesis and reflect the social implications of environmental concerns and challenges both in India and global.
MICROECONOMICS II	The student will be able to understand the theories of firm.
	The student will be able to acquire knowledge on theories of distribution.
	The student will be able to get awareness on the contribution of economist towards welfare economics model.
	The student will be able to understand the general equilibrium through various models.
	The student will be able to acquire knowledge on modern utility analysis
	The student will be able to know about the macroeconomic policies and its implications.
	The student will be able to understand the concept of multiplier and accelerator.

MACROECONOMICS II	The student will be able to gain knowledge on various theories of inflation and deflation
	The student will be able to acquire knowledge on different phases of business cycle and its theories.
	The student will be able toanalyse the application of monetary and fiscal policy to attain the price stability.
STATISTICS FOR ECONOMICS II	The student will be able to understand the various probability theorems.
	The student will be able to identify the Statistical tools in probability distributions.
	The student will be able to understand the Sampling distribution.
	The student will be able to use testing of hypothesis in research.
	The student will be able to gain knowledge on analysis of variance.
ECONOMICS OF SOCIAL ISSUES	The student will be able to understand economic value and cultural heritage.
	The student will be able toget awareness on various social issues.
	The student will be able to know the functioning of IPL.
	The student will be able to understand the conceptual framework of the economics of discrimination.
	The student will be able study the impact of IT on business and culture.
STATISTICAL SOFTWARE	The student will be able to understand to open a file, code the data and enter the data in the file.
	The student will be able to understand the usage of diagrammatic representation of the coded data and its interpretations.
	The student will be able to get thorough knowledge of the application of various statistical tests.
	The student will be able to acquire better understanding of the application of advanced statistical tests.
	The student will be able to perform the different test on statistical errors and time series models
	The student will be in a position to apply different concepts of matrices in various economic situations.

ECONOMICS - PG	MATHEMATICAL ECONOMICS	The student understands the application of derivatives and their usage in economic concepts.
		The student acquires thorough knowledge of higher order derivates and its application in economic theoretical concepts.
		The student gets acquainted with the application of input – output analysis and also different methods of game theory.
		The student gets clear understanding of integration and its usage in economic concepts.
	MARKETING MANAGEMENT	1. Understand the nature, scope, importance, characteristics of marketing, marketing planning, marketing segmentation
		2. Analyse the marketing environment, Consumer behavior and market research
		3. Identify the Product decisions and the strategy of pricing decisions
		4. Understand the distribution channels of a business firm and the composition of sales promotion
		5. Understand the Marketing services
	RECENT ISSUES IN INDIAN ECONOMY – II	1. Understand the approach farming and precision.
		2. Analyse the trends in agricultural farming
		3. Understand the pricing of agricultural inputs.
		4. Describe the performance of public sector enterprises in India.
		5. Distinguish between micro and small enterprises.
		6. Understand the corruptions.
		7. Understand the tax evasions.
		8. Explain trade reports in India.
	AGRICULTURAL ECONOMY OF INDIA	1.The students will be able to understand the structure of the agricultural sector of the Indian economy.
		2. The students will be able to understand role and impact of institutional support to agricultural sector.
		3. The students will be able to be able to demonstrate an awareness of various agricultural market structures.
		4. The students will be able to understand the marketing of agricultural products.
		The student will be able to gain in depth knowledge on various theories of taxation.

PUBLIC FINANCE I	The student will be to acquire knowledge about the Public expenditure policies.
	The student will beget thorough knowledge on principles of public finance.
	The student will be able toacquire knowledge on role of government in mixed economy.
	The student will be able derive knowledge on performance and evaluation of public enterprises.
INTERNATIONAL ECONOMICS	The student will be able to understand various international trade theories.
	The student will be able to know the terms of trade and its implications.
	The student will be able to get thorough knowledge on Balance of payments
	The student will be able to understand the implications of international organizations.
	The student will be able to acquire knowledge on trade problems and trade policies in India
ECONOMICS OF GROWTH AND DEVELOPMENT	the student will be able to understand the growth and development.
	The student will be able to acquire knowledge on various theories of
	The student will be able to analyze various growth models.
	The student will be able to get knowledge on various tools to measure the economic development.
	The student will be able to identify the social and institutional factors and its role in economic development.
RESEARCH METHODOLOGY	The student will be able to understand the significance of research.
	The student will be able to gain knowledge on designing research.
	The student will be able toidentify the important conditions in the formulation of hypotheses.
	The student will be able to gain proficient in organizing economic survey.
	The student will be able to become proficient in writing of research report.

INDUSTRIAL ECONOMICS	The student will be able to understand the role of industry in economic development of a country
	The student will be able to acquire knowledge on the market structure and market performance.
	The student understands the pattern of industrial development over the decades in India and its contributions
	The student is able to learn the different sources of finance and its procedures.
	The student will be in a position to analyze the existence of different small-scale industries and its nomenclature.
ECONOMETRICS	The student will be able to understand the concept of econometrics.
	The student will be able to know the perception of lagged variables, usage of dummy variables and testing the validity of the regression analysis.
	The student will be able to understand the simultaneous equation model.
	The student will be able to understand the usage of secondary data analysis.
	The student will be able to build econometric model based on the nature of data and its applicability.
HEALTH ECONOMICS	The student will be able to get awareness about health concept and its indicators.
	The student will be able to know the issues of general health facilities.
	The student will be able to understand the need for health care
	The student will be able to understand the importance of health education new health policy.
	The student will be able to analyse the situations of health in developing countries.
Tamilnadu Economy	Understand the geographical feature and natural resources of the Tamil Nadu Economy
	Formulate the human development indicators and relevance to the economy
	Appreciate the growth and development planning in Tamil Nadu

	Evaluate the structure and growth of the agricultural and industrial sector.
	Demonstrate the development of service sector in the economy
Labour Economics	Perform supply and demand analysis in the labour market
	Analyze the effect of labour unions
	Explain the analyse the determinants of wages
	Show what causes changes in the productivity of labour
	Understand Labour welfare legislations in India
Urban Economics	Understand the theories of urbanization
	Appreciate the economic and social factors causing migration from rural to urban
	Evaluate the problems of urbanization
	Formulate the policies for integrated development of towns
	Analyse the measures of decentralization industry-growth centres, installing satellite
PUBLIC FINANCE II	The student will be understand tax structure of India.
	The student will be to understand theories of public debt and its impact.
	The student will be able to acquire knowledge on the fiscal policy and its objectives.
	The student will be able to know about the Finance Commission and its Recommendations.
	The student will be able to know about the role of Local Finance.
MANAGERIAL ECONOMICS	The student will be able to understand the concept of Managerial Economics, Role of Managerial Economist and Decision making process.
	The student will be able to acquire Knowledge of Demand forecasting and forecasting methods.
	The student will be able to gain knowledge of the different methods of fixing price.
	The student will be able to gain knowledge on Capital Budget.
	The student will be able to gain knowledge of investment decisions and different methods of appraising project profitability.

HISTORY OF ECONOMIC THOUGHT	Student will be able tounderstandeconomic thought before classical period.
	The student will be able to understand the classical theories of Value, Growth and Distribution.
	The student will be able to understand the Neo Classical School.
	The student will be able to understand Keynesian revolution and monetarism.
	The student will be able to understand the contribution made by Indian economists.
HUMAN RESOURCES DEVELOPMENT	The student will be able to understand the importance of Human Resource Development.
	The student will be able to understand the theories of HRD.
	The student will be able to understand development of human capacity through training.
	The student will be able to study organizational behavioural issues of HRD.
	The student will be able to study recent trends in HRD.
FINANCIAL ECONOMICS	The student will be able understand the history of financial market.
	The student will be able to understand the functions of RBI and Commercial Banks.
	The student will be able to study role of money market and capital market inIndia.
	The student will be able get an understanding of the financial position of Non-Banking financial companies.
	The student will be able to understand recent issues in Foreign exchange market.
ENVIRONMENTAL ECONOMICS	The student will be able to study the scope and significance of environmental economics.
	The student will be able to understand the various causes, and effects of pollution.
	The student will be able to understand the environmental education.
	The student will be able to understand the how environment helps to attain sustainable development.

		The student will be able to acquire knowledge on International environment policy.
	Economic of Insurance	Understand different aspects of Insurance policies basics
		Obtain a holistic perspective of schemes /health insurance of implemented by government
		To understand the life insurance policies
		To development of insurance institution of market
		Evaluate the Insurance Policies in social welfare
	Rural Economic Development	Understand different aspects of rural development
		Obtain a holistic perspective of schemes / programmes of implemented by government
		Formulate planning and management of rural development programmes
		Demonstrate development programs that are implemented
		Evaluate Regional Planning and Policy implication
	Women And Economy	To understand patrilineal and matrilineal systems and its relevance to current scenario
		Evaluate Women's decision making power at household and community levels
		Analyze women's contributions to national income
		Appreciate women's labour force participation in agriculture and non-agriculture sectors
		Formulate gender neutral policies for gender equity and gender equality
	MICRO ECONOMICS I	The student will be able to understand the concept of Micro Economics, Definitions of Economics, Inductive and Deductive methods and Positive and Normative Economics.
		The student will be able to acquire Knowledge of the law of Diminishing
		The student will be able to understand the Indifference curve analysis, Consumers equilibrium and consumer surplus.
		The student will be able to gain knowledge of the theories of Production Function and producer equilibrium.
		The student will be able to gain knowledge of types of cost and Revenue

STATISTICS FOR ECONOMICS –1	The student will be able to understand the concept of statistics with its functions.
	The student will be able to acquire the Knowledge ofmethods of collecting primary data.
	The student will be able to gain knowledge of calculating mean, mode and median.
	The student will be able to gain knowledge on measures of dispersion.
	The student will be able to gain knowledge of skewness and kurtosis
AGRICULTURAL ECONOMICS	The student will be able to understand the nature and importance of Agriculture
	The student will be able to gain knowledge of Agricultural productivity.
	The student will be able to understand the size of Land holdings.
	The student will be able to gain knowledge of sources of Agricultural Credits.
	The student will be able to understand the scope and types of Agricultural markets.
BASICS OF COMPUTER APPLICATION I	To enable students to learn the Basics of Computer
	To help them understand the Logics of Programming
	To promote practical learning of operating computers
FINANCIAL ACCOUNTING– I	To introduce the basic concepts and conventions to the students, this would help in development of accounting knowledge.
	To understand the concept of Double entry system this helps in preparation of various books of accounts.
	To develop the capability of students to prepare the Final Accounts of a Small Business Concern.
	To introduce the concept of Single entry system of Accounting which helps
	To enhance the Accounting Knowledge by introducing the practical uses of
MICRO ECONOMICS – II	The student will be able to understand the concept of market competition and how price and output determined in a perfect competition.
	The student will be able to acquire Knowledge of the Imperfect market, price
	The student will be able to understand the Marginal productivity theory of

MICRO ECONOMICS –II	The student will be able to gain knowledge of the theories of wages and the importance of Trade unions.
	The student will be able to gain knowledge of the theories of Interest and profit.
STATISTICS FOR ECONOMICS –II	The student will be able to understand the calculation of coefficient of correlation and rank correlation.
	The student will be able to acquire Knowledge of importance and calculation regression analysis.
	The student will be able to acquire knowledge on the components of time series.
	The student will be able to gain in depth knowledge of methods of constructing index numbers.
	The student will be able to understand probability theorem.
AGRICULTURAL MARKETING	The student will be able understand to basic concepts of marketing.
	The student will be able to acquire knowledge of marketing functions.
	The student will be able to understand the structure of market.
	The student will be able to acquire knowledge of channels of marketing.
	The student will be able to know the regulations of market.
BASICS OF COMPUTER APPLICATION II	To introduce the basic concepts of Information Technology to Students
	To inculcate Practical learning of MS Office components for simple Business Applications
	To understand the Internet concepts and basic Internet Applications
FINANCIAL ACCOUNTING II	To Understand the concept of Branch Accounting and enable the students to prepare Accounts for various types of Branches.
	To enhance the procedure for preparing Departmental Accounts.
	To Develop the skill of the students in preparing Hire Purchase Accounting,
	To Understand the Accounting procedure for Partnership in cases like Admission, Retirement, Death.
	To Understand the Accounting procedure for Dissolution and Insolvency of a Partner.

INDIAN ECONOMY - 1	The student will be able to understand the various indicators of economic development.
	The student will be able to understand the importance, causes and impact of population growth.
	The student will be able togain knowledge about the role of agriculturein economic development.
	The student will be able to understand the industrial development during plan periods.
	The student will be able to acquire knowledge about the role of industries in Economic development, and also to analyze the existing leading financial institutions in Indian Economic development.
MONETARY ECONOMICS -1	The student will be able to understand the concept of Money, Stages of evolution of Money & Functions of Money.
	The student will be able to acquire Knowledge from Monetary standards and standard system of Note issue.
	The student will be able to understand the theories on value of money and Index numbers.
	The student will be able to gain knowledge on Demand for money & Supply of money.
	The student will be able to gain knowledge on Inflation, Deflation and effects of Inflation.
ECONOMICS OF ENTREPRENEURSHIP	The student will be able to understand importance of entrepreneurship.
	The student will be able to gain knowledge on different theories of motivation.
	The student will be able to understand the creativity, innovation and decision-making process.
	The student will be able to understand various assisting organizations like industrial park and SEZ.
	The student will be able to acquire knowledge on rules and legislations for internal functioning and for external operations.
	The student will be able to acquire knowledge on economic characteristics of
	The student will be able to gain knowledge on the comparison of Tamil Nadu

ECONOMIC DEVELOPMENT OF TAMIL NADU-1	The student will be able to understand the saga of infrastructure development.
	The student will be able to understand the prevailing agriculture crop pattern.
	The student will be able to get knowledge on agricultural production, animal husbandry and fish farming.
WOMEN AND THE ECONOMY	The student will be able to understand the role of women in economic development.
	The student will be able to acquire Knowledge on women empowerment.
	The student will be able to understand the concept of demography.
	The student will be able to get clear picture on status of women in health and education.
	The student will be able to gain knowledge on women rights.
COST AND MANAGEMENT ACCOUNTING - I	To understand the basic concepts of cost accounting and relationship between cost and management accounting
	To know the importance and purpose of cost sheet
	To analyze and evaluate the information for determination of stock levels
	To Know the basic concepts of Management Accounting and relationships
	To Understand the importance of budgets and applying the techniques in various functional budgets.
INTERVIEW SKILLS AND PERSONALITY DEVELOPMENT	The student will be able to understand to write curriculum vitae.
	The student will be able to acquire Knowledge of inter personnel
	The student will be able to acquire the knowledge of interview skills.
	The student will be able to gain knowledge on categories of group discussion.
	The student will be able to gain practical knowledge on solving the competitive exam question paper.
	The student will be able to understand the concept of economics with definition.
	The student will be able to acquire Knowledge of the importance of micro economics and macroeconomics.

FUNDAMENTALS OF ECONOMICS - 1	The student will be able to understand the economic growth and economic development.
	The student will be able to gain knowledge on causes of poverty and eradication programmes.
	The student will be able to gain knowledge on employment guarantee programmes.
INDIAN ECONOMY-II	The student will be able to understand the formation of National Income.
	The student will be able to acquire knowledge about the planning in India.
	The student will be able to clarify the economic reforms and LPG policy.
	The student will be able to assess the India's foreign trade policy.
	The student will be able to understand the transport system and policy in India.
MONETARY ECONOMICS -II	The student will be able to understand the Commercial banks and its functions.
	The student will be able to acquire Knowledge of Central banks, its functions and the instruments of credit control.
	The student will be able to acquire knowledge of Monetary policy and itsrole in a developing economy
	The student will be able to gain knowledge of importance of Money market in economic development
	The student will be able to gain knowledge of Capital market and its working in India.
Basic Econometrics	the student will be able to understand the nature and scope of econometrics.
	The student will be able to gain knowledge on Linear regression.
	The student will be able to understand generalized least square and its applications.
	The student will be able to understand simultaneous equation methods.
	The student will be able to understand to apply econometric models.

ECONOMIC DEVELOPMENT OF TAMIL NADU-1	The student will be able to acquire knowledge on various industries from
	The student will be able to gain knowledge on the role played by industrial
	The student will be able to acquire knowledge on human capital of Tamil Nadu with education and skilled work force.
	The student will be able to understand the pattern of resource allocation on various sectors.
	The student will be able to get knowledge on various welfare schemes of Tamil Nadu.
DEVELOPMENT ECONOMICS	The student will be able to understand the importance of growth for development.
	The student will be able to analyse various growth models.
	The student will be able tounderstand the present-day growth models.
	The student will be able to acquire knowledge on various stages of growth.
	The student will be able to get knowledge on the importance of resource allocation.
COST AND MANAGEMENT ACCOUNTING - II	To apply and analyze the various methods of wage payment
	To understand and apply the concepts of marginal costing
	To gain knowledge about the flow of cash in and out of the organization through the preparation of statement.
	To apply and analyze the various classification of ratio’s based on the management information.
	To understand how risks enters into the capital budgeting decision and its impact on the value of investment
MICRO SMALL AND MEDIUM ENTERPRISES	The student will be able to understand the characteristics of MSME and their role in economic development.
	The student will be able to acquire Knowledge about various forms of ownership structure of the companies.
	The student will be able to understand the importance of financial planning and sources of finance.
	The student will be able to gain knowledge on various growth performed by MSME in India.

	The student will be able to understand the functions of entrepreneurship along with motivating factors.
FUNDAMENTALS OF ECONOMICS -II	The student will be able to understand the concept of public finance.
	The student will be able to acquire Knowledge on the functions of Reserve Bank.
	The student will be able to understand concept of inflation.
	The student will be able to gain knowledge on deflation.
	The student will be able to gain knowledge on international trade
MACRO ECONOMICS -1	The student will be able to understand the Nature concepts of National Income and Methods of Measuring National Income.
	The student will be able to appreciate different theories of Employment
	The student will be able to analyses the theories of consumption function
	The student will be able to acquire the knowledge about the Investment function
	The student will be able to critically evaluate General Equilibrium Analysis
FISCAL ECONOMICS - I	The student will be able to understand the scope of public finance.
	The student will be able to acquire Knowledge on the sources of public revenue.
	The student will be able to understand the theories of taxation.
	The student will be able to gain knowledge on the canons of public expenditure.
	The student will be able to gain knowledge of sources, effects and redemption of public debt.
MANAGERIAL ECONOMICS	The student will be able to understand the concept of Managerial Economics, Role of Managerial Economist and Decision-making process.
	The student will be able to acquire Knowledge of Demand forecasting and Demand Forecasting methods.
	The student will be able to gain knowledge of the different methods of fixing price.

	The student will be able to gain knowledge on Profit Theories and Break - even analysis
	The student will be able to gain knowledge of Capital Budgeting and different methods of appraising project profitability
INDUSTRIAL ECONOMICS	The student will be able understand the Nature and Scope of Industrial economics and role of public & private sectors.
	The student will be able to acquire knowledge of the theories of Industries
	The student will be able to understand the Organization of a Firm, Ownership, control and objectives of a Firm.
	The student will be able to acquire knowledge of the firm, productive
	The student will be able to acquire knowledge of Industrial Finance, assessment of financial soundness.
ENVIRONMENTAL ECONOMICS - 1	The student will be able understand theimportance and issues of environmental economics.
	The student will be able to acquire knowledge of Natural resources, its Depletion and methods of conservation.
	The student will be able to understand the types of environmental pollution and methods to control pollution.
	The student will be able to acquire knowledge of the Environmental
	The student will be able to acquire knowledge of welfare economics and
INTERNATIONAL TRADE - I	The student will be able understand to basic concepts of International Trade and classical theories of International Trade.
	The student will be able to acquire knowledge of Modern theories of International Trade.
	The student will be able to understand the theories of exchange.
	The student will be able to acquire knowledge ofobjectives of Exchange Control, Procedure of Exchange Control, Methods & effects of Exchange Control.
	The student will be able to know the International monetary system and liquidity.
	The student will be able to get introduced to industrial organizations.

INDUSTRIAL ORGANISATION-1	The student will be able to gain knowledge on the features of scientific management.
	The student will be able tounderstand the various forms of capitalization and its structure.
	The student will be able to understand the layout procedures for an organization.
	The student will be able to get acquainted to production management techniques.
ECONOMICS OF CAPITAL MARKET AND DIGITAL ECONOMY	The student will be able to understand the term capital markets and its
	The student will be able to gain knowledge on financial institutions and
	The student will be able to become familiar with shares and debentures.
	The student will be able to understand the functions of stock exchange and SEBI.
	The student will be able to get knowledge on the digital transactions.
INTRODUCTION TO RESEARCH METHODOLOGY	The student will be able to understand the significance of research.
	The student will be able to acquire the knowledge of qualities of good
	The student will be able to gain knowledge about the methods of research.
	The student will be able to identify research problem
	The student will be able to understand the methods of collection of data.
MACRO ECONOMICS II	The student will be able to understand the concepts of Multiplier Accelerator principle and business cycles theory.
	The student will be able to acquire the knowledge about the Demand for money in the Keynesian model and classical views.
	The student will be able to gain knowledge about the inflation and deflation concepts towards economic development.
	The student will be able to assess various policies to economic development
	The student will be able to promote the knowledge to the students about the India’s foreign trade.
	The student will be able to understand the principles of Budgeting.

FISCAL ECONOMICS - II	The student will be able to acquire Knowledge on deficit financing in India.
	The student will be able to understand the instruments of fiscal policy.
	The student will be able to gain knowledge on federal finance.
	The student will be able to gain knowledge of local bodies
HISTORY OF ECONOMIC THOUGHT	The student will be able to understand the contributions of Mercantilists and Physiocrats.
	The student will be able to understand how Marxian Theories differ from Classical theories.
	The student will be able to demonstrate the Contributions of Keynes to Economics
	The student will be able to discuss the economic ideas of Welfare School
	The student will be able to apply the economic ideas of different Indian Economic thinkers to Modern India.
ENVIRONMENTAL ECONOMICS - II	The student will be able to understand the energy production and consumption
	The student will be able to acquire Knowledge on various types of resources and the economics behind its consumption
	The student will be able to understand the environmental issues
	The student will be able to gain knowledge on environmental protection Act
	The student will be able to gain knowledge about global environmental issues and local environmental issues.
INTERNATIONAL TRADE - II	The student will be able to understand the meaning of terms of trade and its implications.
	The student will be able to acquire Knowledge on currency market issues.
	The student will be able to understand the disequilibrium in the Balance of Payment.
	The student will be able to gain knowledge on international capital movement.

	The student will be able to gain knowledge on free trade vs protectionism
INDUSTRIAL ORGANISATION - II	The student will be able to acquire knowledge about material management.
	The student will be able to gain knowledge on the functions of personnel management.
	The student will be able to understand about the implications of labour legislations.
	The student will be able to understand the operational functions of sales management.
	The student will be able to get knowledge on various aspects of controlling management and its requirements.
ENERGY ECONOMICS	The student will be able to get knowledge on nature and scope of energy economics.
	The student will be able toacquire the ideas on the role of energy institutions.
	The student will be able to gain knowledge on energy crisis and environmental impact and some solutions to overcome.
	The student will be able to understand the various energy sector.
	The student will be able to get knowledge on renewable energy sources
LABOUR ECONOMICS	The student will be able to understand the Labour and their problems.
	The student will be able to understand about trade union movement.
	The student will be able to become familiar with industrial dispute and measures to settle dispute.
	The student will be able to understand the social security measures.
	The student will be able to get knowledge on the functions of International LabourOrganisation.
	The student will be able to understand the risk factors and security measures through insurance.
	The student will be able to understand the importance and functions of life insurance.

INSURANCE AND ECONOMICS	The student will be able to become familiar with kinds of insurance.
	The student will be able to understand the role of insurance in economic development.
	The student will be able to get knowledge on the role on insurance and IRDA.
DEMOGRAPHY	The student will be able to understand the population and relevant theories.
	The student will be able to understand the emerging trends in population.
	The student will be able to understand the terms fertility, nuptiality and mortality.
	the student will be able to understand the impact of migration on urbanization.
	the student will be able to get knowledge on the population policy of India.
Economics of Development and Planning	The student will be able to get knowledge of economic development growth.
	The student will be able toacquire the ideas of various theories of economic development.
	The student will be able to get analytical knowledge of various growth models.
	the student will be able to understand the various forms of capital formation.
	the student will be able to get knowledge on planning commission and today's NITI Aayog.
HUMAN RESOURCE MANAGEMENT	The student will be able to understand human resource management.
	The student will be able to gain knowledge on human resource planning.
	The student will be able to understand the real meaning of human resource development.
	The student will be able to understand how transfer is being used as a tool in HRM.

		The student will be able to acquire knowledge about various techniques and methods of performance appraisal.
	BRITISH POETRY (CHAUCER TO 20th CENTURY)	To sensitize them to feel the pulse of poetic expression by making them
		To enable them u
		Understand the concepts related to Elizabethan l, Metaphysical, Romantic,
		To make them appreciate poetry by critically analyzing the poems in terms of theme, content, background, etc.
	AMERICAN LITERATURE	The student will come to know the prominent women writers
		The student will able to distinguish the various thinking of American society
		The student will understand transcendentalists and naturalists
		The student will receive the seclusion temper and patriarchal society
		The student will learn the reality of working classes and middle classes living in cities
	INDIAN LITERATURE IN ENGLISH	The student will be able to know the importance of translation in various works
		The student will know the sufferings and submissive conditions of people
		The student will know the childhood sufferings and search for identity through short stories
		The student will learn the myths and ethics of Indians
		The student will know how to write the script
		The student will be inspired by various motivational writings
	ADVANCED LINGUISTICS	The student will follow the proper pronunciation of the words
		The student will learn how to communicate effectively in various places
		The student will easily know the difference between linguistics and non-linguistics
		The student will link the relationship between language and literature
		The student will enjoy the dialects of various places and persons
		The student will think about the multi- lingualism
		To demonstrate the understanding of the social and artistic movements that

INDIAN WRITING IN TRANSLATION	Apply discipline to specific skills in learning creative performance. Analyze and interpret texts and performances both in spoken and written form.
	This encourages economy of setting, concise narrative and the omission of a complex plot: character is disclosed in action and dramatic encounter but is seldom fully developed.
	Despite its relatively limited scope a short story is often judged by its ability to provide “a complex” or justifying treatment.
	We can demonstrate knowledge and comprehension of major texts and traditions of language and literature written in English as well as their social, cultural, theoretical and historical contexts.
FOURTH WORLD LITERATURE	The student will be able to know the sufferings of the natives of different countries.
	The student will understand the desires and longings of natives
	The student will come to know the dream and dark side of the people
FOLK TALE AND MYTH	As per another legend, the disciples of Gautama were cursed to become lizards.
	They resided in the temple and were relieved of the curse by the divine grace of Vishnu. There is a panel in the temple were the two lizards are depicted in the roof of the temple.
	The unit designates a critical approach in literary studies and also an eclectic approach to study the complex relationship between literature and myth.
	In short complex, critical and theoretical questions about myth and literature continue to be asked
LITERATURE FOR SOCIAL TRANSFORMATION	The student will come to know the conditions of pre- independent India
	The student will realize the contemporary situation in society
	The student will know how the materialistic world dominates humanism
	The student will able to know the nature of knowledge and what is essential for students to learn

	The student will be able to know how to write the satirical tone of prose
	The student will be able to understand the conditions and sufferings of the working classes
GREEN CULTURAL STUDIES	The student will learn about the endangered conditions of the earth
	The student will get awareness and concentrate on the welfare of human life
	The student will understand the connectivity between women and nature
	The student will be able to know about the sufferings and the strength of nature
	The student will get the beautiful landscapes and heritage of Tamil writings
PUBLIC SPEAKING AND CREATIVE WRITING	The student will learn how to appreciate and analyze the poem
	The student will get an idea of how to write poem
	The student will receive the adequate knowledge about the paragraph writing
	The student will become a good writer after getting the ideas about writing methods
	The student will be able to know how to differentiate between fiction and non- fictional writings.
BRITISH DRAMA	Apply discipline – specific skills to the creation of performance
	Draw connections between theatrical practices and social contexts in both modern and pre-modern periods.
	They will demonstrate proficiency in specific skills like: acting, directing, choreography, play-writing or dramaturgy.
	They will be able to analyze, interpret and evaluate the dramatic literature and theatrical productions.
TRANSLATION THEORY AND PRACTICE	The learner knows about the history of translation and its practice.
	Interpretation of SL and TL can be done.
	Reproduction of the translation and the process and product can be understood.
	Problem and solution of the translation and the equivalence of the translation can be learned.

		Translation is done in practice.
	CONTEMPORARY LITERARY THEORY - I	It reinforces the student's literary competence.
		The students will develop an independent critical persona.
		The students can understand the various types of theories
		Theories after the 20th century is learned
	AFRICAN AND CANADIAN WRITINGS	The pain of the exploited is taught via Poetry.
		The Situation of Woman in the Colonies is taught.
		The reaction of the Colonizers against the capture is sketched.
		Abuse of Colonial people for the trade of the Capitalist is highlighted.
	POPULAR LITERATURE	The learners will be aware of the new features of literature.
		To students can understand the changing trends in English literature.
		The readers will be able to appreciate the works in literature from the point of view of the refugees.
		The learners can be aware of the popular works in literature and what made those works popular.
ENGLISH - PG	CHILDRENS LITERATURE	The student will be inspired to pay more attention to nature
		The student will be motivated to visualise a world devoid of fears
		The student will understand the contrast between worlds of childhood and reality
		The student will learn to appreciate how the poet deals with a simple idea in an extraordinary way.
		The students will be inspired by the thought and words of true genius
		The student will appreciate the importance of honest work and responsibility
	PREPARATORY EXAM FOR NET/ SET/TRB – PAPER-II	The students learn about the importance of the Chaucer to the
		The learner can experience the important features of the Romantic and the Victorian period.
		The students can acquaint the knowledge over the Modern and Contemporary Period.
		The students are taught about the American Literature and the learner also can develop his knowledge in the field of translation studies too.

	The learner explores the various forms of Criticism and the contemporary Theories.
SOFT SKILLS	The students can recap the language skills, Grammar, Vocabulary, Phrase, Clause and sentences.
	The learner can build his fluency gradually.
	The students can acquaint with LSRW skills and can also develop his Non-Verbal Communication.
	The students are taught about the Learning etiquettes
	The student can also learn about the importance of Business Etiquette.
THEORISING SEXUALITIES	Appreciate, if not accept the viewing of gender as a continuum
	Critically analyze different gender self-identification preferences such as transgender and inter-genders rather than seeing the polar genders male and female as the only 'natural' ones
	To show sensitivity to the legal and social persecution faced by persons belonging to the LGBTQ or simply, Queer, community in societies across the world and view their rights as human rights
	To Exercise an enhanced openness and honesty when encountering/
PREPARATORY EXAM FOR NET/ SET/TRB – PAPER-I	The students are taught about the Teaching and Research Aptitude.
	The learners can attempt the Comprehension passages and understand the Communication patterns.
	The students are introduced to Mathematical Reasoning, Logical Reasoning and General aptitude.
	The students can interpret the data and learn the various aspects of Information and Communication Technology.
	The students are taught about the higher education system and the people
WORLD LITERATURE IN TRANSLATION	Helps the students to works in various fields of translation studies, comparative literature and world literature.
	To know the importance of Classical literature.
	To give a world outlook to the learners.
	Challenges the hegemony of English in world literature
	Make the students to learn the political values and emphasie on global processes over national traditions

SHAKESPEARE STUDIES	Learn as to how Shakespearean comedy is interwoven with obstacles, misunderstanding, jealousy, disguise which ultimately leads to fictional nature of the characters in the play
	Learn how Shakespeare has used revenge tragedy in extensively to make the audience learn and correct themselves through Aristotle's principle of catharsis.
	Learn the genre of Historical plays of Shakespeare. Shakespeare's inspiration from chronicles of Holinshed to draw plots for his Historical plays is vividly presented in such a way that it will make even commoners learn about their king's history.
	Learn the struggle between reason and emotion, the clash of east and west and the very definition of honor, while all the way they are exposed to political intrigue, power struggle and struggle between the lovers.
SINGLE AUTHOR STUDY	The learners are exposed to the poetry of Tagore
	The essays of Tagore are introduced to the learners.
	The students can experience the rich themes and characterization in the plays of Tagore.
	The writing style of Tagore can be explored in the Short stories.
	The learners can also understand the style of Tagore in his Novels.
POST COLONIAL STUDIES	Analyze texts using key concepts and theories in the field
	Interrogate dominate discourse in texts influenced by colonial ideologies
	Appreciate texts emerging from postcolonial nations
	Engage with the interplay of issues of race, colour, caste and gender in a neo – colonial world
	Challenge social inequalities existing in colonized regions and communities in the age of post colonialist.
	To learn as to how the second wave of feminism kick- started its course with the publication of The Second sex. Women's struggle throughout history is brought out of The Second sex. Women's struggle throughout history is brought out.

GENDER STUDIES	The difference between feminism and womenism. Womenism as a separate entity to bring out the double suppression of black women in the hands of white and black men.
	Learn the plight of women who are physically harassed to keep them under the control of men. However they are revisited in recorded history to stand against men, despite their physical indifference,
	Learn the importance and the role of myth in the control of women throughout history while also learning a need to rewrite the changes in the myth via Panchali from The Mahabharatam
	Learn the struggles of transgender so as to face problems from within and also from the society to find their own identity, an identity crisis marred constantly due to the bias in society towards the classification of sex.
ENGLISH LANGUAGE TEACHING – THEORY AND PRACTICE	The students were taught how the English Language Teaching takes place in
	The learners are introduced to several teaching Methods.
	The learners are exposed to different language teaching theories.
	The language testing and Evaluation is taught to the students.
	Teaching aids are introduced to the learners.
FILM STUDIES	On successful completion of the course, students will be able to trace the evolution of
	cinema and major film movements critically. Analyze cinema from various perspectives.
	To identify various technical aspects of cinema.
	Appreciate and develop an academic discourse on cinema.
	Analyze the relationship between films and literature through adaptations
ENGLISH FOR MEDIA	The student is introduced to the essence of the Mass media and its definitions function.and its
	The learner learns the News Analysis and its types.
	In this the learner knows about the review, editorial columns etc.
	Different kinds of reports are taught like election, crime report etc.
	Writing and editing of T.V, Radio etc. is taught the learners.
	On successful completion of the course, students will be able to

	FANTASY FICTION	Demonstrate a basic understanding of the sub-genre of fantasy fiction
		Identify the genre and features of fantasy fiction
		Discuss the evolution of fantasy fiction
		Evaluate and discuss a work of fantasy fiction using prescribed texts
		Discuss the socio-cultural contexts and their impact on works of fantasy fiction.
	INDIAN WRITING IN ENGLISH	Students will be able to examine the concepts of Indian English Poetry.
		Students will be able to comment on the humor in A Very Indian Poem in English.
		Students will be able to understand the life of fishermen community
		Students will be able to grasp the in-depth ideas about the poem Home Coming.
		Students will be able to know about Autobiographical Poem.
		Students will be able to appreciate the poem Of Mother, among other Things.
		Students will be able to identify different images of the Mother.
		The students will be able to understand the sense of loss of identity in immigrants
		Students will be able to analyze the reality of a beggar Old Woman.
		Students will be able to understand the style of Indian Poetry.
		Students will be able to scrutinize the writing style adopted by Kushwant Singh.
		Students will be able to understand Tagore as a short story writer.
		Students will be able to identify the writing style of BhabiniBhatachariya .
		Students will be able to inculcate the moral ideas of Swami Vivekananda.
		Students will be able to evaluateBhabiniBhatachariya as an essayist.
		Students will be able to analyze the plot Nagamandala.
		Students will be able to know about the writing style of GirishKarnad.

	Students will be able to understand the superstitious beliefs in Indian culture .
	Students will be able to know about the significance of marital relationship .
	Students will become familiar with popular myth.
	Students will be able to understand the concept of globalization.
	Students will be able to absorb the importance of family.
	Students will be made aware of corruption in India
ADVANCED ENGLISH GRAMMAR	Students will be able to get distinct ideas on all the parts of speech.
	Students will be able to understand Parts of Speech and their types.
	Students will be able to use Parts of Speech with relevant Examples.
	Students will be able to examine the usage of Parts of Speech in various contexts.
	Students will be able to identify the different ways to adopt Parts of Speech.
	Students will be able to know about the Types of sentences.
	Students will be able to understand Statement sentence with illustrations.
	Students will be able to know Interrogative sentence with illustrations.
	Students will be able to identify Imperative sentence with illustrations.
	Students will be able to understand Exclamatory sentence with illustrations.
	Students will be able to know about Sentence Pattern and its types.
	Students will be able to recognize the different types of Sentence Pattern.
	Students will be able to identify the different ways to adopt Sentence Pattern.
	Students will be able to examine the correct usage of Sentence Pattern.
	Students will be able to distinguish the Sentence Pattern with the help of illustrations.
	Students will be able to know about Tense and its kinds.

	Students will be able to understand and use Tenses in day to day life.
	Students will be able to know about Subject and its Usage.
	Students will be able to be familiar with Concord.
	Students will be made aware of Verb and its Kind.
	Students will be able to understand Phrases.
	Students will be able to absorb noun, verb, adjectival and prepositional phrases.
	Students will be made aware of Definitions of Clauses and its types.
	Students will be able to comprehend Clauses with illustrations.
	Students will be able to distinguish Clauses with the help of illustrations.
LITERARY FORMS AND TERMS	Students will be able to understand how poetry requires a different writing style.
	Students will be able to get,in-depth ideas of Poetry.
	Students will be able to understand the traits of Lyric, Ode, and Sonnet.
	Students will be able to examine Elegy and Epic.
	Students will be able to scrutinize different kinds of Poetry.
	Students will be able to understand prose aswriting with distinct style.
	Students will be able to know the characteristics of Short Story.
	Students will be able to understand the ideas behind Essay.
	Students will be able to understand the basic traits of Biography.
	Students will be able to know about Autobiography in detail.
	Students will be able to understand Drama as a genre with distinct style.
	Students will be able to distinguish Tragedy and Comedy as a separate genre.
	Students will be able to understand Tragi - Comedy.
	Students will be able to examine characteristics of One Act Play.
	Students will be able to absorb the principles of the Absurd Drama .
	Students will be able to understand novel'scharacteristics.
	Students will be able to know about Historical Novel.

	Students will be able to be familiar with Picaresque Novel.
	Students will be made aware of The Stream of Consciousness Novel.
	Students will be able to absorb the characteristics of various types of Novels
	Students will be able to understand few important Literary Terms.
	Students will be able to absorb the basic ideas of Plot, Melodrama and Irony.
	Students will be made aware of Euphemism, Expressionism and Satire.
	Students will be able to comprehend Allegory, Comic Relief and Dramatic Monologue.
	Students will be able to identify the usages of Literary Terms.
BRITISH LITERATURE I	The students will be able to
	1. Identify the characteristic features of metaphysical poetry
	2. Critically appreciate the poem, “Hymn to God, the Father”
	3. Analyse the theme of “Song for St. Cecilia’s Day”
	4. Identify the neoclassical elements found in the prescribed poems
	5. Understand Dryden as a neoclassical poet
	The students will be able to
	1. Understand Milton’s greatness as a poet
	2. Understand how one has to wait for the right time to accomplish great works
	3. Appreciate the grand style of Milton
	4. Understand Pope as the representative poet of neoclassicism
	5. Appreciate the value of simple life
	1. Understand the three fruits of friendship
	2. Know the purpose of studying
	3. Understand the advantages of studying
	4. Understand the greatness of books
	5. Appreciate the style of Bacon
	1. Understand the social life of 17th century England
	2. Critically appreciate the play, The Shoemaker’s Holiday”
	3. Analyse the characters of the Play
	4. Know how war leads to disability of persons

	5. Understand the class system of English People
	1. Understand Pilgrims Progress as an Allegory
	2. Appreciate the theme of salvation.
	3. Understand that the road to Heaven is not easy, the cost is great,
	4. Know that the true Christian must be willing to pay the cost no matter what.
	5. Know that man is full of sin, but this does not keep him from attaining glory.
AMERICAN LITERATURE	1. the student will be able to grasp the lyrical richness embedded in American Poetry
	2. the student will be able to understand the modern American writer like Merwin and his thoughts related to Environment
	3. the student will come to know the great American Poets like Frost, Lowell and Sandburg and their works.
	4. the student will be able to develop a taste of American poetry and thus he or she further reads and understands
	5. the student will search in web, related poems written by these great poets to develop further knowledge on poetry
	1. the student will be able to admire and try to emulate the literary expertise of Walt Whitman, Emily Dickinson, Edgar Allan Poe and Wallace Stevens
	2. the student will come to know the literary terms available in the American poetry
	3. the student will get inspiration from Walt Whitman and his knowledge about India
	4. the student will read further about these great poets
	5. the student will develop a taste to study the lifestyle of American people
	1. the student will be able to judge the supremacy of American output
	2. the student will come to know the great prose writers of American Literature Emerson, Thoreau and Martin Luther King
	3. the student will understand the real thoughts of the American writers

	4. the student will get inspiration through these works and it will kindle him or her to read more
	5. the student will understand the philosophy of these writers.
	1. the student will be able to judge the supremacy of American drama
	2. the student will come to know the great dramatist of American Literature Arthur Miller
	3. the student will understand the real thoughts of the American dramatists in general
	4. the student will get inspiration through this drama and it will kindle him or her to read more dramas of American Literature
	5. the student will understand the usage of language in the drama
	1. the student will be able to judge the supremacy of American fiction
	2. the student will come to know the great fiction writers of American Literature Ernest Hemingway
	3. the student will understand the real thoughts of the American fictions and Sea life
	4. the student will get inspiration through this fiction and it will kindle him or
	5. the student will understand the real concept of lifestyle of Americans.
THE SOCIAL HISTORY OF ENGLAND	This Comprehensive Paper enables the students to understand the subject thoroughly and provides them the scope of their study. Helps them in the
	1. William Wordsworth as a Nature Poet
	2. Autobiographical element found in Tintern Abbey
	3. P.B. Shelly as a Revolutionary Romantic poet
	4. Literary devices used in Ode to the West Wind
	5. The theme of regeneration in Ode to the West Wind
	1. Characteristic features of Romantic age
	2. Appreciate Keats as a poet who is Known for his Odes
	3. Understand “beauty is Truth, truth beauty” with reference to Ode on a Grecian Urn
	4. Understand Samuel Taylor Coleridge as a romantic poet
	5. Analyze the supernatural element in Kublakhan

BRITISH LITERATURE II	1. Know the essayists of the Romantic Age
	2. Appreciate Charles Lamb as an essayist
	3. Analyze the humour in “A Dissertation Upon Roast Pig
	4. Understand Oliver Goldsmith as an essayist
	5. Critically analyze the essay, “A City Night Piece”
	1. Rivals as an anti sentimental comedy
	2. Why Lydia wants to marry a poor man
	3. The idea of malapropism
	4. The concept of duel
	5. How does Falkland’s plan backfire
	1. Analyze Robinson Crusoe as a travelogue
	2. Know whether Robinson Crusoe changed at the end of the novel
	3. Critically analyze Jan Eyre as a gothic novel
	4. Undersand how Jane Eyre fits into romantic Literature
	5. Analyze the character of Jane Eyre
INTRODUCTION TO ENGLISH PHONETICS	1) Students are exposed to the Evaluation of English Language at a deeper level, updating communication using Language, Spoken medium and Written medium.
	2) Students enrich information about understanding English phonetics with information on general phonetics.
	3) Illustrations facilitating readers comprehension of the subject both in orthography and in Phonetic transcription.
	4) Student gets knowledge about medium of speech medium of writing.
	5) Students attempt to the represent written language using marks on paper sounds used in spoken Language.
	6) Students are thought about intricacies of articulating English sounds enabling them to speak better.
	7) Students are thought about different levels of Linguistic analysis thereby preparing them to become effective speakers of English Language.
	8) Students are exposed to the use of modern technology stressing the importance of speech using mobile phone, radio, tape recorder, multimedia, etc.,

HISTORY OF ENGLISH LITERATURE I	1. Students are able to have a vast knowledge in History of English Literature down the ages
	2. Students are exposed to the major movements, changes and impacts in history.
	3. The students gain confidence in their course of study.
	4. It helps them in the long run to take up the competitive examination.
	5. It enables them to pass in the entrance tests when they go for higher studies.
SKILLS FOR EMPLOYMENT	1. The student will be able to know types of GD
	2. The student will be able to know about GD
	3. The student will be able to know how to prepare for GD
	4. The student will be able to understand leadership and problem solving skills
	5. The student will be able to develop leadership and problem solving skills
	1. The student will be able to discuss the purpose of interviews
	2. What are the technique the student will be able to follow at the time of interviews
	3. The student will be able know their strengths and weakness
	4. The students will be able to focus purpose of interviews
	5. The student will be able to concentrate do and don’ts while attending the interviews
	1.The students will be able to Know how to lay out the details in a CV
	2.The student will be able to learn how to organize in formation in an cover letter
	3.The student will be able come to know how to write a covering letter
	4.The student will be able to know FAOS about their family members
	5.The student will be able to learn how to answer question about yourself and your family
	1.The students will be able to grasp the workplace etiquette.

	2.The student will come to know values and Ethics
	3.The student will be able to discuss culture issues.
	4.The students will be able to know equal rights of boys and girls
	5.The students will come to know empowerment of women
	1.The students will be able to know ones likes and dislikes
	2.The student will be able to understand their attitude.
	3.They will be become familiar with things they need to talk about to answer a question.
	4.They will be able to answer the question about the suitability of the job.
	5.The student will be able to understand positive qualities that are valued at work.
LANGUAGE SKILLS AND COMMUNICATION I	1. Students will be able to know how to behave while meeting people.
	2. Students will be able to understand the ways of exchanging greetings.
	3. Students will be able to introduce them to a group of people.
	4. Students will be able to understand how to introduce others in anysuitation.
	5. Student will be able to understand how to give personal information in a coherent way.
	1. Students will be able to know how to converse over phone.
	2. Students will be able to know how to enquire over phone in formal suiation
	3. Students will be able to know how to deal with wrong numbers in telephone.
	4. Students will be able to know how to take and leave message after a telephonic conversation.
	5. Students will be able to develop the skill of answering over phone.
	1. the theme of Ulysses
	2. Ulysses as a dramatic monologue
	3. Character of Ulyses
	4. What does the scholar gypsy symbolize

BRITISH LITERATURE III	5. The “strange disease of modern life”
	1.My Last Duchess as a dramatic monologue
	2. critical appreciation of the poem My Last Duchess
	3. Describe the social custom according to “My Last Duchess “ - Ferrara by Robert Browning
	4. Theme of Darkling Thrush
	5.Mood of the poem Darkling Thrush
	1. Know the novelist R.L.Stevenson as a poet
	2. Critically appreciate the poem On Falling in Love.
	3. Analyze the poem On Liberty
	4. Comprehend the style of John Stuart Mill’s Poetry
	5. Understand the social life of 19th Century.
	1. Identify targets of Wilde's satire and analyze the treatment of these targets.
	2. Discuss the idea of art for art's sake.
	3. Identify the pun central to the play and analyze its meaning
	4. Who is the blocking figure in The Importance of Being Earnest?
	5. What precisely is a Bunburyist?
	1. Identify who Charles Dickens was.
	2. Summarize the characters and events of The Pickwick Papers.
	3. understand that true happiness is achieved only through reciprocated love.
	4. See the tremendous impact that one person's life can have on the many people with whom he comes in contact.
	5. Consider whether man or fate controls one's destiny.
	1. Characteristic features of English language like heterogeneousness, effect of loss of inflexions, simplicity of inflexions, gender system of English and development of periphrases
	2. Indo European family of languages
	3. Grimm’s law
	4. Verner’s law
	5. English as part of Indo European family of languages
	1. various methods of development of vocabulary

HISTORY OF ENGLISH LANGUAGE	2. words coined by imitation, abbreviation, initials, back formation
	3. words coined by suffixes and prefixes, syncopation, telescoping, metaanalysis, etc.
	4. various methods of change of meaning
	5. change of meaning listed by F.T. Wood,,
	1. the impact of influences of foreign languages
	2. the influence of Latin language
	3. greek influence
	4. French influence
	1. The history of English spelling
	2. Reason for descrepency between spelling and pronunciation
	3. Development of dictionaries
	4. Growth of Standard English
	5. Received pronunciation
	1. The reason for the development of American English
	2. New coinages
	3. Differences between American English and British English’
	4. Evolution of English as world Language
	5. Impact of English as universal language
HISTORY OF ENGLISH LITERATURE II	1. Students are able to have a vast knowledge in History of English Literature down the ages
	2. Students are exposed to the major movements, changes and impacts in history.
	3. The students gain confidence in their course of study.
	4. It helps them in the long run to take up the competitive examination.
	5. It enables them to pass in the entrance tests when they go for higher studies.
	1. To start with work
	2. Learns the methodical approach
	3. Able to focus on the task
	4. Gains control and get involved in the specific work
	5. Understands the need of the reading
	6. Gain control one writing and get involved in the specific work

Writing for Specific Purpose	1. Learn to organize ideas and write
	2. Known how to draft the message
	3. Write the revised message
	4. Known to edit the draft after proof-reading
	5. Learn to overcome the writes block.
	1. Construct subject line the key lines of the message in a captive way.
	2. Include the punctuation marks in the right place
	3. Learn to use the tens in the items in the menu bar like headings endings bullets and graphic devices
	4. Makes the message accessible
	5. Learn to incorporate the special effect
	1. Read their writing and make it clear
	2. Analyze the structure and word choice
	3. Able to give helpful information
	4. Known to write quick clean and direct
	5. Learn to write an easy to read style.
	1. Learn to deliver un- welcome news
	2. Responses to letter of complaints
	3. Shape a persuasive message
	4. Draft sales letters
	5. Interact with international correspondence
LANGUAGE SKILLS AND COMMUNICATION II	1. Students will be able to use expression to get someone's attention.
	2. Students will be able to mention connecting word while giving instruction.
	3. Students will be able to know the ways of making request, asking for directions, and also giving directions.
	4. Students will be able to know how to give instruction and seek clarification.
	5. Student will be able to grasp the procedures while present dialogues for any situation.
	1. Students will be able to know how to invite, accept and refusing invitation.

	2. Students will be able to develop the formal and informal ways for accepting and declining invitation.
	3. Students will be able to know how to congratulate and how to respond to congratulations.
	4. Students will be able to know how to ask, give and refuse permission in both formal and informal situations.
	5. Students will be able to learn how to apologize and respond to apologize.
BRITISH LITERATURE IV	1. Students will be able to understand the coming of a new ominous reality.
	2. Students will be able to understand the themes of the poems of W.B.Yeats with reference to “The Second Coming”.
	3. Students will be able to know the background of Irish literature with reference to Seamus Heaney.
	4. Students will be able to understand the violence and murders in Northern Ireland with reference to “TollundMan”.
	5. Students will be able to recognize the love of a father for his daughter through the poem “Prayer for My Daughter”.
	1. Students will be able to understand the theme of the poems of G.M.Hopkins.
	2. Students will be able to appreciate the literary genre sonnet.
	3. Students will be able to understand man’s lack of awareness and his insensitivity to nature.
	4. Students will be able to classify the poem, “Hound of Heaven” as an ode.
	5. Students will be able to understand the pursuit of a sinner by a loving God.
	1. Students will be able to understand the role of a teacher in the society.
	2. Students will be able to appreciate the responsibility of a teacher.
	3. Students will be able to understand various kinds of people and their behaviour.
	4. Students will be able to understand the idea of undeveloped heart.

B.A ENGLISH- UG		5. Students will be able to understand the ways and means of expressing emotions through characters.
		1. Students will be able appreciate G. B. Shaw as a Dramatist
		2. Students will be able to understand various social issues in the plays of G.B. Shaw with reference to “Pygmalion”
		3. Students will be able to understand the teacher- student relationship
		4. Students will be able to recognize the sense of humour in the plays of G. B. Shaw.
		5. Students will be able to understand the distinct social class system.
		1. Students will be able to know the theme of the novels of William Golding with reference to “Lord of the Flies.”
		2. Students will be able to understand the concept of beastial instinct and savagery.
		3. Students will be able to understand the suitability of the novel for film making.
		4. Students will be able to understand the concept of totalitarianism
		5. Students will be able to understand how the views in the novels are relevant in the current scenerio.
	SHAKESPEARE	1. grasp how Lear suffers from children’s ingratitude
		2. appreciate the innocence of Cordelia
		3. aPPreciate the significance of fool
		4. understand how hamartia leads to fall
		5. understand the role of fate
		1. Characteristic features of a romantic comedy
		2. To appreciate the world of magic
		3. The significance of love
		4. Appreciate the role of Puck
		5. Appreciate the role of songs
		1. To understand the characteristics of sonnets
		2. Shakespeare’s views on love
		3. Shakespeare’s affection for the dark lady
		4. The poetic language of Shakespeare

	1. Hazlitt as a critic
	2. Greatness of Shakespeare as playwright
	3. Critically appreciate Midsummer Night's Dream as a comey
	4. Dequincy's views on Macbeth
	5. Why the porter Scene is introduced after Duncan's death
LITERARY CRITICISM	1. Aristotle's concept of tragedy
	2. six formative element in tragedy
	3. Aristotle's Plot, character and tragic hero
	4. Functions tragedy
	1. understand the genesis of the Preface to the Lyrical Ballads
	2. know key concepts conversed in the Preface to the Lyrical Ballads
	3. have Wordsworth's views on themes, subject matter, function & diction of poet
	1.Why does the novel matter?
	2. How Lawrence highlight the superiority of the novel over other forms of literature
	3. What according to Lawrence are the supreme old novels
	4.The relation between tradition and individual talent
	5.The concept of objective correlative
	1. John Crowe Ransom as a pioneer of New Criticism
	2. The theory of new criticism
	3. Ferdinand de Saussure as forerunner of Structuralism
	4. The difference between new criticism and structuralism
	5. The theory of post structuralism
	Feminist Criticism - Post-Colonialism - Eco criticism
	1. to assess the different concept of Feminist Criticism
	2. To get identify the different impact of post colonialist features in literature
	3. Get introduce to Eurocentric concepts of criticism
	4. To distinguish between impact of orientalism and European imperialism.
	5. To understand the parallel between feminist criticism and eco criticism.
	1. Analyze the theme of loss of power

		2. Know the inevitability of younger generatins overthrowing the older ones
		3. Analyse myth and history in Mahmoud Darwish's poem, "Why have you left the horse alone"
		4. Understand the pain of exile
		5. Understand the theme of racial discrimination
		1. understand the complications that arise from trying to survive on a
		2. Realize that work is not a way out of poverty, but a physically and emotionally damaging state in which the economic laws of supply and demand often simply don't apply.
		3. Understand that low-wage workers are forced to fight an uphill, or even impossible, battle:
		4. understand that their problems stem not from individual weaknesses or laziness but from entrenched structural issues that make working your way out of poverty excruciatingly difficult.
	SUBALTERN LITERATURE	1. the tug-of-war between Western influences and native traditions and beliefs.
		2. Through Julius, that even decades of colonialism are incapable of erasing the rituals and beliefs of a people
		3. The concept of emptiness and loss.
		4. That Draupadi is an ironic tale of exploitation and struggle faced by a woman for being born in a low birth
		5. And explore the traumas undertaken by the women protagonists to resist and survive.
		1. How the psychological thriller,Dumb Dancers incorporate the element of valour from the Mahabharata,
		2. the stigma and struggle attached with mental illnesses, expressed though the traditional dance form, kathakali
		3. the mingling of Western and Yoruban elements in Death and the King's Horseman
		4. the universality of the theme of cultural responsibility
		5. The values of Yoruban society
		1. The Environmental problems which are often underestimated by the majority of mankind in Hungry Tide.

	2. Corruption and bureaucracy.as disease, which develops quickly, but takes
	3. The necessity of Responsibility.
	4. The theme of betrayal The Kite Runner
	5. The life of guilt moving towards redemption
CHILDREN LITERATURE	1. Young woman's struggle between familial duty and personal wor
	2. The danger of gender stereotyping
	3. To find happiness through daily activities and dreams
	4. The importance of being genuine
	5. What they deserve depends on how hard they work
	1. How being good leads to problems
	2. The traditional roles and propriety
	3. The underlying moral character of Anne
	4. How new moral codes perplex the traditional ones
	5. Anne's vision of future
	1. How Harry learns that he is awizard
	2. Harry's first experience of wizarding
	3. The character of Hermione Ganger and Professor Quirrell
	4. The Significance of Harry's eleventh birthday
	5. The importance Harry's vision on the Mirror Erised
	1. identify and describe the moral of the story, The Ugly Duckling
	2. analyze the characters of the story.
	3. analyzethe elements of a fairy tale.
	4. Understand how to manage problematic situations
	5. compare and contrast fairy tales
	1. it's in the fantasy literature that we find a sense of sub-creating a world
	2. that it is a wrong conception that one is behind in his reading and one is ahead,
	3. that there isn't a complete and unbridgeable gap between the books of the children, and the grown-
	4. That we grow up by moving along a sort of timeline, like a monkey climbing a stick.
	5. They should not criticize anyone for reading children's fiction
	1) To give students a better understanding on the history development of journalism in global and Indian context.

	JOURNALISM	2) Introduce students the concept related to News and Journalistic practice
		3) Ignites knowledge of professional Journalism and helps students to strengthen the underpinnings of journalism.
		4) Stimulates the students on getting knowledge about how newspaper encourages photo-journalism development.
		5) Prepares students has a good reporter and capable interpreted of society
		6) Imparts knowledge of sciences and history of arts to make one's way up in a world to meet out increasingly demanding competence in the field of journalism.
		7) Modality prepares a student to learn how to write editorials columns and feature articles.
	CONTENT WRITING	Content Writing will play a vital role in the era of "start ups". With technical expertise along with good writing skill scan provide a great career opportunity to a student.
		Writing for special purpose- nuances of technical writing- digital age writings- SEO- target identification and focus- various platforms. Types of Content Ads., Blogs, E-Books etc., Publication Platforms.
		Writing Tools, Tips, & Techniques.
		Advertising Objectives- Category of Ads. - Strategy - layout- language.
		Social media and present day platforms.Social media tools.
		Content Writing Exercises, Commercials, Social Advertisements, Short films, Projects as teams.
		1. Students will be able to understand contemporary American poetry with reference to Don Patterson.
		2. Students will be able to analyze why Patterson love all films that starts with rain.
		3. Students will be able to understand the poetic techniques used by Alice Oswald.
		4. Students will be able to know how art attempts to make a sense of the transformation after wedding.

CONTEMPORARY LITERATURE	5. Students will be able to understand the transformation that love creates in one's life.
	1. Students will be able to understand contemporary English literature with reference to Toni Harrison.
	2. Students will be able to recognize the universality of motherhood.
	3. Students will be able to understand how dead people live in the memories of people alive.
	4. Students will be able to critically analyze the theme of loneliness.
	5. Students will be able to have a glimpse of Jewish literature with reference to Sandra Feldman.
	1. Students will be able to understand contemporary English short story with reference to Doris Lessing.
	2. Students will be able to know the historical context of the short story "Through the Tunnel".
	3. Students will be able to know the psychological implications of imaginary fears.
	4. Students will be able to understand the South African literature with reference to Nadine Gordimer.
	5. Students will be able to fix the story, "Once Upon A Time" in the frame work- bed time stories.
	1. Students will be able to understand the contemporary British drama with reference to Richard Bean.
	2. Students will be able to know the existing racism among ethnic groups.
	3. Students will be able to understand the theatre techniques used.
	4. Students will be able to understand the contemporary American drama with reference to Stephen Karam.
	5. Students will be able to know the concept of familial drama.
	1. Students will be able to know the contemporary Canadian literature with reference to Yann Martel.
	2. Students will be able to appreciate the story of an Indian teen ager with a Bengal Tiger in a life boat after a ship wreck.
	3. Students will be able to understand the contemporary Brazilian literature with reference to Paulo Coelho.

	4. Students will be able to comprehend the role of symbols and omens in one's life.
	5. Students will be able to understand the suitability of the novels for film making.
INDIAN LITERATURE IN TRANSLATION	1. Learn the universal qualities of pure love irrespective of caste, creed and society.
	2. Appreciate the poetic style and the indigenous metaphor
	3. The concept of modern woman by Bharathiya
	4. The significance of selfless love
	5. ANNAMALAI as universal poet
	1. how to overcome anger, laziness , fear and complexes
	2. How to develop their leadership qualities
	3. How to develop their relationships
	4. Indian culture and tradition
	5. Able to face life with confidence
	1.Students will be able to understand the myths about chastity.
	2.Students will be able to understand the customs, taboos, beliefs and rituals of fishermen community.
	3.Students will be able to understand the socio-cultural background of India with reference to VivekShenbag.
	4.Students will be able to face problems after marriage.
	5.Students will be able to raise voice against domestic violence.
	1. Students will be able to understand the importance of culture depicted in the epic Mahabaratha.
	2. Students will be able to develop a taste for language and literature with reference to Sakuntalam.
	3. Students will be able to understand the sign of true love.
	4. Students will be able to learn the genre absurd play and the stream of consciousness
	5. Students will be able to explore Sartrean existentialism.
	1. Students will be able to understand Assamese literature with reference to Mahim Bora.
	2. Students will be able to visualize the concept of first love.
	3. Students will be able to know the importance of rural life.

	4. Students will be able to know the practices and rituals of the Tamil ancestors.
	5. Students will be able to understand the concept of birth and death.
NEW LITERATURES IN ENGLISH	1. Students will be able to understand the background of Australian literature with reference to A.D.Hope.
	2. Students will be able to understand the satire in the poems of A.D.Hope.
	3. Students will be able to understand the use of symbolism through the poem “Australia”.
	4. Students will be able to understand parental narcissism as a toxic quality
	5. Students will be able to know importance of children’s individual views
	1. Students will be able to understand the feelings of displacement through the poem “House and Land”.
	2. Students will be able to know the New Zealand literature.
	3. Students will be able to feel the state of immigrants.
	4. Students will be able to understand the racial and cultural tensions in Africa.
	5. Students will be able to understand the concept of colonialism.
	Students will be able to understand how race plays an important role in works of African writers.
	Students will be able to know the definition of emotional journey.
	Students will be able to understand the importance of journey and its benefits.
	Students will be able to understand how a writer takes up the role of a teacher.
	Students will be able to differentiate post-colonial and western writers.
	1. Students will be able to understand the richness of the African literature.
	2. Students will be able to develop taste for the techniques of drama with reference to Death and the King’s Horseman.
	3. Students will be able to understand the concepts of anti-colonialism.

	4. Students will be able to understand the background and rituals of Yoruba community.
	5. Students will be able to analyze that the play as a bridge between African and European culture.
	1. Students will be able to witness the background status of South Africa.
	2. Students will be able to know the international attention to South Africa's tragic history.
	3. Students will be able to capture the extremes of human emotions.
	4. Students will be able to comprehend African's hope for their freedom from hatred, poverty and fear.
	5. Students will be able to understand that the novel is a journey from rural life to urbanization.
ENGLISH FOR INFORMATION TECHNOLOGY	1 Student is able to use internet.
	2 Learn to send and receive e-mails
	3 Identify similar problems and know the ways to solve through FAO's
	4 Incorporate the required material from the web resource bank in learning English
	5 Exchange ideas using e-mail
	1 Learn the history of computer and its gradual development till date.
	2 Get educated in online quiz and enrich their knowledge
	3 Get their educational resource materials.
	4 Involve in creating and publishing their articles.
	5 Know to participate in online discussion and get their doubts clarified
	1 Students are able to compose news and upload
	2 They are able to locate popular places of tourism and learn their ecological significance
	3 Learn to create postcards and develop related knowledge
	4 Learn to draft classified ads for practical benefits
	5 They are able to construct puzzles and derive English language knowledge

	1 To create blogs and wikis
	2 Know to use web page
	3 Learn to apply multimedia in their web based activities
	4 Learn to edit content in wikis
	5 Know to operate playstore and download different apps
	1 Analyse content wise websites
	2 Know to browse profession related websites
	3 Have discussion and exchange ideas
	4 Get educated new techniques in teaching learning
	5 Improve their teaching learning in class rooms situation
	6 Get familiarized with ICT
B. FILM - APPRECIATION AND BOOK REVIEW	1. Students is able to get an overall view of cinema as a massive influence in the society
	2. Understand semi-idiomatic expressions coined through movies
	3. Differentiate regional movies from World Cinema
	4. Classify the important feature of cinema
	5. Learn to appreciate film language
	1 Learn the basics of film - language and venture on to higher level.
	2 Become knowledgeable in the trained areas of signs, codes and syntax of filmlanguage
	3 Identify the circuit of film experience connected to different fields of social political and religious life
	4 Become more knowledgeable at cultural, social and political levels
	5 Encouraged to write scripts for film
	6 Learn how myths are used in cinema.
	7 Comprehend the potentialities of cinema by concentrating on the sub-text
	8 Examine how the marginalized are portrayed through cinema
	9 Understand how colours are used to highlight different ideas.
	10 Appreciate the interactive process between the visual and the viewer
	1.Differentiate the main text from multiple sub- texts.
	2. Understand that cinema is used not only on entertainment but as laughter therapy

	3. Develops positive attitude
	4. Establish revolutionary ideas against the odds of life
	5. Appreciate the effects of sound and music
	1. Interpret the different concepts of the movie.
	2. Apprehend the art and culture depicted through movie
	3. Enlist the number of techniques used in cinema.
	4. Get trained to choose apt titles and catchy phrases to be used.
	5. Analyse the plot- structure of the movie
	6. Able to infuse valuable points through dialogues and impress audience
	7. Develop to write reviews for movies.
	1. Develop the habit of book reading
	2. Know the nuances and techniques of reading
	3. Identify the difference from plot and structure
	4. Learn their intricacies of characterization
	5. Critically analyse the elements of the novel
	6. Able to write reviews fluently on their own
WRITING FOR SPECIFIC PURPOSE	1. To start with work
	2. Learns the methodical approach
	3. Able to focus on the task
	4. Gains control and get involved in the specific work
	5. Understands the need of the reading
	6. Gain control one writing and get involved in the specific work
	1. Learn to organize ideas and write
	2. Known how to draft the message
	3. Write the revised message
	4. Known to edit the draft after proof-reading
	5. Learn to overcome the writes block.
	1. Construct subject line the key lines of the message in a captive way.
	2. Include the punctuation marks in the right place
	3. Learn to use the tens in the items in the menu bar like headings endings bullets and
	graphic devices

		4. Makes the message accessible
		5. Learn the incorporate the special effect
		1. Read their writing and make it clear
		2. Analyze the structure and word choice
		3. Able to give helpful information
		4. Known to write quick clean and direct
		5. Learn to write an easy to read style.
		1. Learn to deliver un- welcome news
		2. Responses to letter of complaints
		3. Shape a persuasive message
		4. Draft sales letters
		5. Interact with international correspondence
	CREATIVE WRITING	1. The student will be able to know various dimensions of creativity
		2. The student will be able to develop creative impulse ability Geniuses and talent
		3. The student will be able to grap the tools and techniques of creative writing
		4. The student will be able to appreciate the tools and techniques of writing
		5. The student will be able to appreciate the talent of geniuses
		1. The student will be able to grasp the lyrical richness of the poetry
		2. The student will come to know the liter any devices of the poetry
		3. The student will be able to understand the features of prose
		4. The student will be able of fours the multiple features of creative writing?
		5. The student will be able to know the principles of writing for digital media.
		1. The student will be able to understand the different elements and attributes of drama
		2. The student will be able to understand various genres of fiction
		3. The student will be able to analyze the character speech
		4. The student will be able to form dramatic devices used in conjunction with the episodic and climactic plot forms

		5. The student will be able to forms action description in creative writing.
		1. The students will be able to write a Photographic Description of places
		2. The students will be able to highlight the Various Attractions.
		3. The students will be able to give some cultural background of the places
		4. the students will be able to write catchy advertisements
		5. the students will be able to write articles for newspapers
		1. Students will be able to understand documentaries
		2. Students will be able to write documentaries
		3. The Students will be able to write scripts for Television programmes
		4. The students will be able to write scripts for radio programmes
		5. The students will be able to organize TV and Radio programmes.
		1. the student will be able to understand the brief history of language learning
		2. the student will be able to know that language can be acquired as a skill not as a knowledge
		3. the student will come to know the various innovative methods available in learning and teaching the language
		4. the student will be able to develop a taste for language learning and teaching
		5. the student will understand the objectives of teaching and learning English
		1. the student will be able to understand the mother tongue influence on the English language and how to avoid this as this is a major problem for non native English speakers
		2. the student will come to know the various listening activities as listening plays a very vital role in learning any language
		3. the student will get inspiration to learn native English language with correct accent
		4. the student will learn the techniques of spoken English

	ENGLISH LANGUAGE TEACHING - ELT	5. the student will remove the barriers that come across in effective communication
		1. the student will be able to understand the methods and approaches in teaching English
		2. the student will understand the translational method to learn the language
		3. the student will get inspiration through the direct methods of learning the language
		4. the student will understand the bilingual, situational and eclectic approaches of learning the language
		5. the students by learning these approaches and methods easily learn the language.
		1. the student will be able to learn various methods of learning the language
		2. the student will come to know the basis of communicative language teaching
		3. the student will understand the cooperative language teaching
		4. the student will get inspiration through the task-based and content-based teaching of English language
		5. the student will be able to approach the learning of a language in an easy
		1. the student will be able to understand the status of English in the world as English has become a world language
		2. the student will come to know the usage of English language in specific purposes related to all fields
		3. the student will understand the methods of approaches practiced in India to teach the English language
		4. the student will get inspiration through the various influences like technology, media and cyber on the English language
		5. the student will be able use the language in all specific purposes
		Demonstrate ability to think group actions critically by Cayley's theorem and apply the Sylow's theorems to describe the structure of certain finite abelian groups

UNDER CBCS	Know the internal and external direct product of groups. Also, apply the structure theorem on abelian groups to find the non-isomorphic abelian groups of certain orders.
	Check the irreducibility of a given polynomial
	Know about module and difference between the algebraic structures, Group, Ring and Module.
	Know the Linear transformation in canonical forms. Also, the matrix form of linear transformation and its properties.
Real Analysis I	Understand the concept of functions of bounded variation.
	Discuss the Riemann integration and to solve its related problems.
	Analyse the sequences and series of function and their limits
	Acquire the knowledge of Infinite Series and Infinite products
	Have knowledge of uniform convergence of sequence and series
Ordinary Differential Equations	Solve Second order linear differential equations.
	Solve nthorder differentialequations.
	Solve differential equations with variablecoefficients.
	Solve differential equations with regular singularpoints.
	Examine the existence and uniqueness of solutions of differentialequations.
	Apply ODE problems for real timeapplications.
Probability Theory	Know the basic notions of experiments, events, probability, random variables and probability distributions.
	Comprehend the various parameters and measures of the probability distributions.
	Understand the characteristic functions and its properties.
	Acquire the special types of discrete and continuous probability distributions.
	Procure the strong theoretical background about the limit theorems and its consequences.
Mechanics	Know mechanical systems under generalized coordinate systems.
	Know the Derivation of Lagrange's equations.
	Know the Hamilton's Principle.
	Know the Hamilton-Jacobi Equation and separability.
	Know the Lagrange and Poisson brackets.

Graph Theory	Grasp features and properties of special graphs
	Check the given graph is Eulerian or not. Also able to find the Eulerian circuit and Hamiltonian paths of the given graph.
	Find the matching/perfect matching, connectivity of given graphs
	Find independent sets and chromatic number of a given graph
	Apply coloring and planarity of graphs in real life problems.
Basic Mathematics Credits	Acquire the knowledge ofexponential and logarithmic series
	Understanding about matrices and its applications
	Formulate and solve the partial differential equations
	Apply the results on Laplace transform
	Learn the techniques on Fourier series.
Mathematical Foundations	Understand mathematical logical operators.
	Gain knowledge in set theory, binary operations with some problems.
	Solve problems on applications of differentiation and two dimensional geometry.
Mathematical Modeling	Understand concept of modelling and simulation
	Construct mathematical models of real world problems
	Solve the mathematical models using mathematical techniques
Algebra - II	Demonstrate ability to find the extension field of polynomials. Also, gets the clear understanding of algebraic extensions and algebraic closures.
	Work with the consequences of Galois Theory such as insolubility of certain classes of equations.
	Work with finite fields and certain important theorems related to Finite division ring
	Use of Frobenius integral quaternions and the Four square theorem.
Real Analysis - II	Understand the concept of Fouier series and Fourier integrals
	Analysethe functions of several variables.
	Discuss the inverse function theorem and implicit function theorem
	Acquire the knowledge of Lebesgue measure
	Analyse the concept of inner and outer measure
	Formulate and solve Partial Differential Equations (PDE) and apply PDE problems for real timeapplications.

PartialDifferentialEquations	Solve partial differential equations of first and second order.
	Classify the partial differential equations
	Identify the canonical forms of the partial differentialequations.
	Analyse the solution of Laplace, Diffusion and Wave equationsin Cylindrical and polar coordinates
	Discuss the existence and uniqueness of solutions and Duhamel's principle
Mathematical Statistics	Know the basic notions of sample, population, sample moments and their functions.
	Comprehend the parametric and non-parametric tests for small and large samples.
	Understand the various measures of estimation theory.
	Acquire the concepts of ANOVA test and hypothesis testing.
	Procure the strong background about the sequential analysis and its consequences.
Fuzzy Set Theory	Understand the basic concepts of Fuzzy Sets and the difference between the Fuzzy sets and crisp sets
	Analyse the Fuzzy sets and additional properties of • cuts.
	Discuss the operations on Fuzzy sets and Fuzzy complements
	Acquire the knowledge of various noms on Fuzzy sets and combination of operations
	Visualize the Fuzzy sets as Fuzzy numbers
	Analysethe Linguistic Variables, Arithmetic operation on intervals, Arithmetic operation on Fuzzy numbers
	Apply the concepts of Fuzzy mathematics in real life situation.
Difference Equations	Solve problems on Linear Difference Equations of Higher order
	Understand the system of Linear Difference Equations
	Apply Z-transform techniques in difference equations
	Solve problems on Oscillation Theory and Asymptotic Behaviour of Difference Equation
Fundamentals of Insurance	Understand the principles and regulations of Insurance
	Analyse the benefits of life insurance policies
	Discuss the marine insurance and its benefits
	Discuss the fire insurance and its benefits

MATHS - PG		Analyse the various insurance sector
		Understand the duties of an agent and procedure to get license.
	Numerical Methods	solve the algebraic and transcendental equations
		Understand the concept of interpolation with equal and unequal intervals
		Analyse the properties of divided difference
		Study the various methods for numerical differentiation
		Discuss the various methods for numerical integration
		Gain the knowledge of Euler's method,modified Euler's method and Runge-Kutta method.
	Fundamentals of Business	know about the Partial and Multiple Correlation
		Understand the basics concepts of Probability and Theoretical Distributions
		Identify the educated guess (hypothesis)
		Analyse the statistical inferences-Test of Hypothesis, Chi square and Goodness of Fit and F-Test
		Design and discuss the Analysis of Variance
	COMPLEX ANALYSIS - I	Understand the differentiability and analytic functions.
		Comprehend the elementary functions and complex integration.
		Acquire the knowledge of conformal mappings and Mobius transformations
		Discuss the Maximum Principle, Schwarz' Lemma And Liouville's Theorem.
		Procure the applications of theClassification of Singularities.
	TOPOLOGY	Know the basics of open and closed sets and the significance of the topological spaces.
		Comprehend the continuous functions on topological spaces, product topology and topology induced by the metric.
		Understand the connected spaces, connected subspaces, components and local connectedness.
		Acquire the notions of compactness, compact subspaces, limit point compactness and local compactness.
		Understandthe various countability axioms and the separation axioms.

DIFFERENTIAL GEOMETRY	Understand the characteristics of curves and surfaces in space and also the fundamental existence theorem for space curves.
	Discussthe intrinsic properties of surface.
	Analysethe geodesics and its normal properties and familiar with GaussBonnet Theorem.
	Discussthe developable.
	Understand Hilbert's Lemma and the fundamental existence theorem for surface theory.
LaTeX	Prepare the LaTeX document and the e-contents.
	Able to construct structures, tables inclusions, header and footer, bibliography management, etc.
	Understand about the mathematics document preparation.
DISCRETE MATHEMATICS	Understand about Lattices, applications of Lattices
	Discuss the Boolean algebras and polynomials
	Procure strong theoretical background on Finite Fields and Polynomials.
	Analsye the concept of coding theory and factorization of polynomials
	Identify the various types of codes
OPERATIONS RESEARCH	Analyse various inventory control modules
	Understand the concepts of network techniques
	Discuss the maintenance models in replacements
	Understand inventory control and functional role of inventory
	Analyse various performance of queueing models
MATHEMATICAL BIOLOGY	Formulate the mathematical models for real world problems
	Understand the concepts of Discrete Population Growth Models
	Discuss the Continuous Growth Models
	Analyse the Qualitative behavior of Populations and Mathematical Models in Epidemiology
QUANTITATIVE TECHNIQUES	Understand the linear programming problems(LPP)
	Discuss the simplex method to solve LPP
	Analyse the transportation and assignment problems
	Acquire the knowledge of resource leveling
	Study inventory control and functional role of inventory.

	Learn PERT-CPM technique for project management
SCILAB	Acquire the practical knowledge of SCILAB
	Analyse the matrices, polynomials in SCILAB
	Solve the solutions of differential equations
	Visualize the mathematical objects in 2D and 3D
COMPLEX ANALYSIS - II	Understand the concepts of residues
	Evaluate the integrals using Cauchy residue theorem.
	Comprehend the harmonic functions and its consequences.
	Understand the conformal mappings, normal families and Riemann mapping theorem.
	Acquire the concepts of entire and meromorphic functions.
	Procure the applications of analyticity and special functions.
FLUID DYNAMICS	Understand the concepts of kinematics of fluids in motions.
	Analyse the examples related to the equation of continuity and acceleration of a fluid
	Discuss two-dimensional flows, the stream function and the Milne Thompson Circle theorem.
	Acquire the concept of three-dimensional flows and derive Stoke's stream function
	Discuss the viscous flows and Navier – Stokes equations of motion of a Viscous fluid.
FUNCTIONAL ANALYSIS	Analyse the Banach space with examples
	Understand the natural embedding N in N**
	Discuss Banach spaces with the Hilbert spaces
	Dcquire the open mapping theorem, orthonormal complements and orthonormal sets
	Derive Gelgand-Neumark theorem
	Prove the structure theorems
NUMBER THEORY AND CRYPTOGRAPHY	Discuss the elementary number theory
	Understand the the quadratic, residues and reciprocity
	Develop the idea of Public key cryptography, RSA and discrete law
	Solve problems using the continued fraction method and the quadratic Sieve method
	AnalyseKnapsact, zero knowledge

		Discuss Fermat factorization and factor bases.
	ADVANCED NUMERICAL ANALYSIS	Compute the solutions of transcendental and polynomial equations
		Understand the system of linear algebraic equations
		Analyse interpolation and extrapolation
		Derive numerical differentiation and integrations
		Evaluate double integrals
		Solve differential equations by single and multi step methods
	CALCULUS OF VARIATIONS AND INTEGRAL EQUATIONS	Understand theconcept of calculus of variation and its applications
		Discuss the various types of integral equations
		Analysethe methods of successive approximations and fredholm theory
		Acquire knowledge on applications to Ordinary Differential Equations
	MATHEMATICAL ECONOMICS	Understand the knowledge of FIRM theory and perfect competition
		Analyse the CES production
		Acquire the knowledge of market equilibrium
		Control the stability of equilibrium
		Discuss the welfare economics, taxes and subsidies
	ENTREPRENEURIAL DEVELOPMENT	Understand the knowledge of entrepreneurship
		Analyse the entrepreneurial finance and role of various government agencies
		Develop the idea generation, creating awareness of business opportunities, and familiarizing them with formal practices
		Discuss the Government policies and benefits.
	PROGRAMMING IN C++	Understand the concept of Tokens Expressions and control Structures
		Analyse the types of functions and classes used in C++
		Discuss the inheritance and various types of inheritance
		Acquire the knowledge of Polymorphism in C++
	ALGEBRA	[1] know the relationship between roots and coefficients.
		[2] identify the nature of the roots of the given equation .
		[3] evaluate sum to infinity of the given binomial, exponential and logarithmic series.

	[4] identify the types of matrices and calculate the Eigen values of a given square matrix.
	[5] know the number theory concepts.
TRIGONOMETRY	[1] know the expansions of cosnθ, sinnθ in powers of cosθ and sinθ
	[2] expand powers of sines and cosines of θ in terms of functions of multiples of θ
	[3] know the concept of hyperbolic functions
	[4] know the logarithm of complex quantities
	[5] find the summation of trigonometric series.
CALCULUS	[1] determine extreme values of the given function
	[2] know the concept of Cartesian and polar coordinates
	[3] gain the knowledge of curvature, evolutes and envelope concepts
	[4] solve integration problems
	[5] evaluate double and triple integrals.
ANALYTICAL GEOMETRY OF THREE DIMENSIONS	[1] know the equation of the plane and its applications
	[2] gain the knowledge of straight line and its applications
	[3] solve sphere related problems
	[4] know the concepts of cone, right circular cone and enveloping cone
	[5] know the concepts related to cylinder.
ALLIED SUBJECTS FOR MATHEMATICS STUDENTS	
MATHEMATICAL STATISTICS - I	To apply Statistics Methods for Mathematical Problems
MATHEMATICAL STATISTICS II	To apply Statistics for Mathematical problems
NUMERICAL METHODS - I	This course will cover basic methods for finding the Finite differences, Central differences, Inverse interpolation, Summation of series, Interpolation for equal & unequal intervals, Solutions of simultaneous equations, Important principles, Method and Processes to get numerical results, Reliability of numerical result.
NUMERICAL METHODS II	This course covers the techniques of Numerical Differentiation and Numerical Integration. It also deals with solution of difference equations, Algebraic and Transcendental equations and Numerical solution of Ordinary differential equations of first order.

PHYSICS	The student will be able to find the acceleration due to gravity at a place using simple pendulum and compound pendulum. Also can know the properties of matter like elasticity, viscosity and surface tension.
	The student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.
	The student will be able to explain growth and decay of a transient current in a circuit containing resistance-inductance, resistance-capacitance and LCR in series. Also will be able to determine the horizontal components of earth's magnetic induction at a place using deflection magnetometer in Tan C position.
	The student will be able to derive the expression for the velocity of a sound in a stretched string and hence they can determine the frequency of A.C mains.
	The student will be able to understanding the principle of laser and can demonstrate the working of He-Ne laser and applications of laser. Also, the student will be able to learn the fibre optics, structure and application in communication.
PAPER-2	The student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity.
	The student will be able to describe the different atomic models and Stern and Gerlach Experiment.
	The student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.
	The student will be able to know the conversion of number systems from one to other and also will be able to design universal gates using NAND and NOR gates.
	The student will be able to understanding the basics of nanomaterial, synthesis and its applications.
CHEMISTRY – I	Basic knowledge on Metallurgy, Cycloalkanes, Polarising Effects, Stereochemistry, Chemical Kinetics, Catalysis, Photochemistry, VSEPR Theory, Fuels, Osmosis, Nuclear Chemistry, Petroleum Chemistry, Chemistry of Naphthalene, Conductors and Applications wherever necessary are to be taught for I- Semester.

MATHS - UG	CHEMISTRY – II	Basic knowledge on Coordination Chemistry, Industrial Chemistry, Carbohydrates, Aminoacids, Proteins, Electrochemistry, Paints and Pigments, dyes, Vitamins, Medicinal Chemistry, Corrosion and Applications wherever necessary are to be taught for II- semester.
	DIFFERENTIAL EQUATIONS	[1] solve the first order higher degree differential equations
		[2] solve the second order differential equations
		[3] know the concept of total differential equations
		[4] know the applications of Laplace transform
		[5] solve the partial differential equations.
	MATHEMATICS FOR COMPETETIVE EXAMINATIONS - I	[1] know the idea H.C.F. and L.C.M.
		[2] find the Average, square root and cubic root
		[3] solve the problems on ages and numbers
		[4] know the percentage, profit and loss
		[5] analyze the proportion and partnership problems
	BASIC MATHEMATICS	To introduce a few basic and elementary concepts of mathematics for other major students.
	VECTOR ANALYSIS AND FOURIER SERIES	[1] know the physical and geometrical meaning of the derivative
		[2] know the physical and geometrical meaning of the divergence and curl
		[3] evaluating line, surface and volume integrals
		[4] know the applications of Stoke's Theorem, Gauss Divergence Theorem and Green's
		theorem
		[5] analyze the Fourier series in both theory and application level
	MECHANICS	1. Provides basic knowledge of Resultant of forces and Equilibrium of a particle
		2. Knowledge pertaining to Parallel forces and coplanar forces
		3. To know about Center of mass
		4. Gain the knowledge of projectile and its applications
		5. Understand the concept of impact
	FOUNDATION MATHEMATICS FOR COMPETETIVE EXAMINATIONS	[1] know the idea of ratio and proportions
		[2] find the percentages
		[3] profit and loss problems
		[4] know the simple and compound interest problems

	[5] analyze the time and distance problems
ABSTRACT ALGEBRA	Students able to identify groups and subgroups.
	Students able to understand homomorphism and isomorphism.
	Students able to do the problems in permutation.
	Students able to study the basics of rings, ideals and integral domain.
	Students able to apply Euclidean rings in theorems.
REAL ANALYSIS I	1. know the concept countability
	2. identify convergent, divergent sequences
	3. solve conditional convergence and absolute convergence problems
	4. evaluate limit of a function
	5. know the concepts of open, closed sets.
COMPLEX ANALYSIS - I	(i) The students can gain knowledge about Complex functions and its nature, limits and Analytic functions.
	(ii) The students can gain knowledge about elementary transformations.
	(iii) The students can gain knowledge about line integrals and techniques for solving problems.
PROGRAMMING IN C LANGUAGE	To develop programming skill in the Computer Language C
PRACTICAL IN C LANGUAGE	1. Square of numbers: Using For loop, While loop, Do-While loop, Goto statement.
	2. Solution of a quadratic equation.
	3. Characters between two given characters.
	4. Counting the number of vowels and consonants in a sentence.
	5. 3x3 matrix addition and multiplication.
	6. Prime numbers between two give numbers.
	7. Simple interest and Compound Interest.
	8. Fibonacci series developing and finding the nth tem of Fibonacci series.
	9. Factorial numbers- Binomial Coefficient using function recursion.
	10. Pascal’s triangle development using recursion.
	11. Power of a value - use a function in the name power.
	12. Print an array of integers in reverse order using pointer.

	13. Interchange sort in ascending or descending.
LINEAR PROGRAMMING	1. formulate any real world problem as LPP
	2. understand various techniques of simplex method.
	3. understand analogies between transportation problem and assignment models
	4. interpret the solutions in game theory.
	5. know the concept of simulation.
SPECIAL FUNCTIONS	To develop computational skill in certain special functions which are frequently occurring in higher mathematics and mathematical physics.
MATHEMATICS FOR COMPETETIVE EXAMINATIONS - III	Beginning with Linear Dependence and Linear Independence on Vector Space
	Knowing about Dual spaces and Inner product spaces on Vector space
	Learning to study about Algebra of Linear transformations and its characteristic roots
	Converting Linear equations of Vector space to Matrices its canonical and triangular forms
	Deriving Trace and Transpose of Matrices.
REAL ANALYSIS II	[1] understand the concept of complete metric space
	[2] know the difference between continuity and uniform continuity
	[3] know Riemann integration and its properties
	[4] solve problems related to Rolle's theorem , law of mean
	[5] know the convergence of sequences of functions.
COMPLEX ANALYSIS II	1. The students can gain knowledge about Contour integration and problem solving techniques.
	2. The students can learn about singularities and Residues.
	3. The students can gain knowledge about power series expansions of analytic functions.
COMPULSORY PROJECT	
GRAPH THEORY	(i) After studying this course the students know about the basic foundations of graphs, subgraphs and trees.
	(ii) The students can learn about connected graphs, Eulerian graphs and Hamiltonian graphs.

	DISCRETE MATHEMATICS	This course aims to develop mathematical maturity and ability to deal with abstraction and to develop construction and verification of formal logical manipulation.
	FUZZY MATHEMATICS	1. To know the fundamentals of fuzzy Algebra.
		2. To know the basic definitions of fuzzy theory
		3. To know the applications of fuzzy Technology.
	B. R Programming (Practical)	Use R for statistical programming, computation, graphics, and modeling,
		Write functions and use R in an efficient way,
		Fit some basic types of statistical models
		Use R in their own research,
		Be able to expand their knowledge of R on their own.
	OPERATIONS RESEARCH	1. Interpret the solutions in network analysis
		2. Knowledge about optimal use of resources
		3. Understand to sequence the machines to do the job effectively
		4. Analyze the system given and interpret the solutions
	MATHEMATICAL STATISTICS - I	To apply Statistics Methods for Mathematical Problems.
	MATHEMATICAL STATISTICS II	To apply Statistics for Mathematical problems
	NUMERICAL METHODS - I	This course will cover basic methods for finding the Finite differences, Central differences, Inverse interpolation, Summation of series, Interpolation for equal & unequal intervals, Solutions of simultaneous equations, Important principles, Method and Processes to get numerical results, Reliability of numerical result.
	NUMERICAL METHODS II	This course covers the techniques of Numerical Differentiation and Numerical Integration. It also deals with solution of difference equations,
	ALLIED PAPER I CHEMISTRY I	Basic knowledge on Metallurgy, Cycloalkanes, Polarising Effects, Stereochemistry, Chemical Kinetics, Catalysis, Photochemistry, VSEPR Theory, Fuels, Osmosis, Nuclear Chemistry, Petroleum Chemistry, Chemistry of Naphthalene, Conductors and Applications wherever necessary are to be taught for I- Semester
	CHEMISTRY - II	Basic knowledge on Coordination Chemistry, Industrial Chemistry, Carbohydrates, Aminoacids, Proteins, Electrochemistry, Paints and Pigments,
		The students were enabled to understand the Physical features of Tamilnadu

SOCIAL AND CULTURAL HISTORY OF TAMILNADU FROM SANGAM AGE TO C.E 1565	The students realized the dark age of Tamil Nadu - The students will know about the style of Art and Architecture and the contribution of Pallavas in various fields
	The study enhances the students the growth of Tamil Nadu in the middle ages
	The students were given an insight of reestablishment of Pandiyan Empire
	The overall growth of Tamil Nadu which attracted the Muslim invasion from the Northern India and the establishment of Madurai Sultanate and the Vijayanagar Empire.
SOCIAL AND CULTURAL HISTORY OF INDIA UPTO C.E. 15263	The students will be enlightened about the Indian culture and history and
	Mauryas were the first dynasty almost the entire subcontinent and the propagation of Buddhist philosophy in the Oriental countries. New techniques of art and architecture
	The revival of Hinduism and it is recorded as the Golden period in Indian History
	The students will know how the Muslim rule in Delhi was governed
	The revival of Hinduism in South India and Sikhism in Punjab; Muslim reform movement in North India – The rule of Vijayanagar empire in South India.
SOCIAL AND CULTURAL HISTORY OF INDIA FROM C.E. 1526 TO C.E.1773	Elaborates the insight of the Mughals regarding their contribution
	Students will be enlightened about the rich contribution of the Mughals
	How the Marathas established their power during the Imperial Mughal period
	Students will be given to understand the contribution of religious leaders
	The advent of Europeans changed the course of Indian History and the contributions of Christian Missionaries in the field education, literature and health.
	The students will be taught on why and how the partition made enmity.
	The students were given an insight about the two great nations in the world and their relationship

INDIA AND HER NEIGHBOURS SINCE C.E.1947	Students will be taught how India helped Bangladesh to attain freedom and the contribution of Indira Gandhi. The relationship between Bhutan and Burma.
	The ethnic problem in Sri lanka and the India's drive for peace in Sri lanka and the relationship between India and Maldives
	Regional organizations towards peace and prosperity
INTELLECTUAL HISTORY OF INDIA	It enhances the ideologies of the Indian political thinkers
	This unit enables the students about the contribution of the great social thinkers in India
	The students will be given an insight of the various religious thinkers and their ideas about the religion
	The students will be enabled to the new political ideologies during the later 19th and 20th Centuries
	The contributions of great souls whose contributions towards literature
ARCHIVES KEEPING	1. To define the birth of records and practice of archives keeping
	2. To examine different types of preservation techniques
	3. To understand explicate the rules to access the records in archives
	4. To elucidate the different types of documentation procedures
	5. To realize the importance of national and state archives
ECONOMIC HISTORY OF INDIA UP TO 1526. A.D	The students will understand the India's trade with other countries in the
	India's economic growth between 6th and 4th Century BEC
	India's economy during the later half of the ancient period
	The students will be given an insight of the economic conditions in the Southern India
	Economic condition of India during the Delhi Sultanate
CONTEMPORARY HISTORY OF TAMIL NADU FROM C.E..1947 TO C.E.2001	The students were elaborated their insight regarding the Congress rule in
	The emergence of DMK and its ideology will be taught in this unit
	This unit taught the students how the matinee idols came to power in Tamilnadu
	This unit taught how the media popularizes the conditions of Tamilnadu and take it to the general public
	This unit taught the students about the overall growth the conditions of

INTRODUCTION OF TOURISM	A student with a strong sense of history and a very strong historical background is best suited to the field of tourism. The chief prospect for the students of history are greater compared to others with not so similar a
CONSTITUTIONAL HISTORY OF INDIA FROM C.E.1773 TO C.E.1947	This unit teaches the non major students to understand how we are
	This unit gives an insight during the Gandhian era and various activities during this period
	This unit elaborates how Indians struggled for freedom
	This unit gives an sufficient information towards India's independence.
	This unit teaches the non-major students how India attained independence.
SOCIAL AND CULTURAL HISTORY OF TAMIL NADU FROM AD 1565 TO AD 2000	This unit bring to light the contributions of Nayaks to economy, culture and fine arts
	The contributions of Christian missionaries towards the development Tamil literature
	This unit gives an insight Tamilnadu during the 19th and 20th centuries and the growth of trade union movement
	This unit narrates the emergence of reservation policies and the Dravidian movement
	This unit brings the student the overall growth of Tamilnadu and womenfolk.
SOCIAL AND CULTURAL HISTORY OF INDIA FROM A.D.1773 TO A.D.2000	This unit brings to light the efforts of British towards the development of Education in India and the Indian Government's contribution in the field of education.
	This unit explains how religious and social reform movements took place in India
	This unit teaches the student about the Agrarian movement in India
	This unit gives an insight of the trade union movements in India
	This unit elaborated the development of fine arts in India
GENERAL STUDIES FOR COMPETITIVE EXAMINATIONS	This unit will enable the students to understand the physical geography of
	This unit covers how the economy of India is distributed
	This unit gives an insight how the Union and State government were
	This unit narrates the modern day technology and the growth of Science

		This unit teaches the meanings of our national flag, water savings, contributions of sports personalities and some of the major events in India and the world
	ADMINISTRATIVE HISTORY OF INDIA	This unit teaches the students about administrative efficiency of Indian rulers
		This unit covers various measures taken for better governance
		This unit teaches us how we are governed
		This unit teaches the administrative functionaries in independent India
		This unit elaborates the functions of State governments in India
	INTRODUCTION TO ARCHAEOLOGY	This unit elucidates the importance of archaeology to understand our past.
		This unit describes the growth of mankind to the students
		This unit describes the planning of cities and towns in ancient India and the growth of civilization
		This teaches the students about the importance of learning to read the
		The study of coins will enable the students about the trade activities in India and maritime trade.
HISTORY - PG	ECONOMIC HISTORY OF INDIA FROM C.E. 1526 TO C.E. 1857	This unit teaches how the Mughal rulers introduced a system of revenue
		This unit elaborates the Agrarian conditions and the introduction of commercial crops
		This brings to light the growth of Industries during British period and Independent India
		This unit will enable the students pertaining to trade and commerce
		This unit teaches the overall development of transports.
	THE INDIAN NATIONAL MOVEMENT	For the non- major students this unit will explain the struggle for freedom
		This unit covers the first war of Indian Independence in 1857
		The role of Congress towards achieving oneness is described in this unit.
		The new phase of operation, ahimsa, is described
		This unit elucidates the role of national leaders
		This unit teaches the non-major students how effective local self - government functions

PANCHAYAT RAJ	This unit covers the main aims and objectives of Panchayat raj
	This unit gives an insight on the structure and functioning of Panchayatraj
	This covers the role of resource management and the role of non-governmental organizations
	This unit explains the panchayat role and the emancipation of women.
THE CONSTITUTION OF INDIA	Every Indian should know about our Constitution which will help them for competitive examinations
	It describes the role of hierarchy in India
	This unit gives an insight about the functioning of the Indian judiciary
	This elaborates the governance in the state and other commissions in India
	This unit describes the federal structure of our country
HISTORY OF WORLD CIVILIZATIONS (EXCLUDING INDIA) – ANCIENT PERIOD	This unit explains the students various civilizations of the world and their
	Students can understand and enhance their knowledge why all the civilizations sprang on the banks of rivers.
	Students understands the values of Persian and Hebrew civilizations and their contribution to world civilization.
	The Study helps the students to appreciate the classic civilization of Greece
	The students understands the values of Chinese, Japanese, Maya, Aztec and Inca civilizations
HISTORIOGRAPHY	The students learns the meaning and definition of History and also the scope of History
	The students enhance their knowledge through the study on history and the allied subjects
	Unit III: The students will have an insight on the growth of historiography
	The students will be taught on quantitiative and qualitative history
	The study helps the students to know the contributions of Indian Historiographers to the development of Historiography.
	The ending of Divine Right theory during Louis XVI and the cause and course

HISTORY OF EUROPE FROM C.E.1789 TO C.E.1919	The Congress of Vienna and the Concert of Europe where the student will learn about the role of Metternich and the consequent revoloutions in France.
	The people come to gether to build a nation society in Germany and Italy
	The student will know the trends happened in Europe in the later half of the
	Europe during the First World War
HISTORY OF THE USA FROM C.E.1900 TO C.E. 2000	The student will know the growth of American progress under the dynamic
	The problem of great depression and the rise of US of America will be taught to the students
	The post- World War Experience of the USA is taught to the students
	Astronomical advances by the USA will be taught
	Recent Presidents of USA that will enable the students to understand the current situations.
INTRODUCTION TO NUMISMATICS	
ISLAMIC HISTORY AND CULTURE FROM A.D.500 TO A.D.750	Objectives Islam is one of the major religions of the world. It had very humble beginnings in Arabia, but within a short period of time spread to many regions of the ancient world. The study of this paper will introduce the students to the beginnings of Islam, Its prophet, the teachings of Islam and the early Caliphates.
HISTORY OF MODERN JAPAN FROM A.D.1900 TO A.D.2000	Objectives History of Modern Japan offers an interesting insight to students on the rapid progress of Japan in the 20th Century. Students are expected to learn and imbibe the spirit with which Japan could achieve such progress. The transformation of Japan into a technological super power will offer a good lesson to all learners about the importance of science and technology in the country's progress.
RESEARCH METHODOLOGY IN HISTORY	Objectives This paper aims to help the students to understand the methodology so as to pursue research in the field of Historical Studies.
	This unit helps the students to understand the rise and spread of Christianity
	This unit teaches the students about the feudalism and its merits and demerits and the causes and courses of Crusades. This also elucidates the rise of Univerties

HISTORY OF WORLD CIVILIZATIONS (EXCLUDING INDIA) MEDIEVAL AND MODERN PERIOD	This unit gives an insight about renaissance and reformation and geographical discoveries and entering modern era
	This unit describes the causes, course and results of French Revolution alongwith Industrial and Agrarian Revolutions.
	This unit teaches the students about the efforts of the countries to bring peace.
INTERNATIONAL RELATIONS SINCE AD 1919	This unit describes the efforts of national power and national interest.
	This unit explains the students regarding the war debts and world economic crisis and the rise of dictatorship
	The unit express about the Second World War and its aftermath.
	This unit helps the student to know the meaning of disarmament and arms control and emergence new world order
	This unit helps the student to know the present scenario of maintain world peace and the role of international associations.
ISLAMIC HISTORY AND CULTURE FROM C.E.750 TO C.E. 1258	The Abbasid Caliphate witnessed tremendous growth in terms of its spread in Asia, Africa and Europe. The Abbasids made remarkable contribution to world civilizations, indeed they provided the needed link between the ancient and the moderns. A study of the paper will immensely help the students to understand Islamic history, culture and civilization better.
HISTORY OF MODERN CHINA FROM A.D.1900 TO A.D.2000	The History of Modern China helps the students to understand about the communist World in General and neighboring country in particulars
	The student will be abletoclearly under stand theorigins, causes and the legacy of ColdWar, the diplomatic man euvers during Cold Warand the disintegration of USSR , which marked the end of ColdWar.
	The student will be able to understand the process of decolonization; thee mergence of new independ entstates and their interaction withd eveloped countries in terms of economic and political cooperation; the collapse of West European Empires and the alliances the two Super powers had in Europe

	CONTEMPORARY HISTORY OF THE WORLD	The student will be able to understand the situation in Asia, Latin America, Africa, Eurasia and the Middle East since 1945 and its development there of.
		The student will be able to under stand the concept of globalization, environmentalism, neoliberalismand transnation alorganizations And know about the growth of economiesin US, EuropeInd iaand China in the post industrialization period. He will also be able to understand the religious fund amentalism and nationalism.
		The student will be able to understand the impact of revolutionin Information, Communication, Transportation, Space, Missileand Nuclear Tech nologies. He will alsobeable to interpretthe Strategic Nuclear Doctrines of variouscountries.
HISTORY - UG	FUNDAMENTALS OF NATIONAL SECURITY	To develop a special subject knowledge on the vital concept of National Security - and the approaches to achieve National Security (Special reference to India).
	ARCHAEOLOGY I	The Study of Archaeology and its branches Numismatics, Excavation and Monuments helps to understand the history of ancient period.
	COMPETITION EXAMINATIONS	1. To Impart overall idea about Competitive Examinations
		2. To create awareness about various Central Level Competitive Examinations
		3. To educate the students about various State Government Services & Examinations
		4. To make students alert about the opportunities in Teaching positions
		both Central/State and School / Higher Education.
		5. To motivate the students through preparation tips & suggestions.
	ARCHAEOLOGY - II	The Study of Archaeology and its branches - Numismatics, Excavation - Monuments helps to understand the history of ancient period. It is a base to graduates to understand the Cultural heritage of our country.
	FUNDAMENTALS OF MICROBIOLOGY	1. Understand the scope and relevance of Microbiology as a scientific discipline.
		2. Decide on the correct type of microscopy and staining.
		3. Gain knowledge on the various classification of microorganisms.

	4. Study the morphology and structure of microorganism.
	5. Get acquainted with various sterilization techniques.
BIOCHEMISTRY I	Explain the structure, biological importance of carbohydrates, from monosaccharides to polysaccharides
	Identify the structure and classification of amino acids,
	Classify proteins and explain their properties
	Define and classify lipids with examples, explain the properties of fats and describe the structure and biological functions of phospholipids, glycolipids and sterols
	Illustrate the structure of nucleotides, distinguish DNA and RNA and describe the structure of DNA, types of RNA and their biological functions
MICROBIAL PHYSIOLOGY	1. Outline on the nutritional requirement and nutritional types of bacteria.
	2. Demonstrate various techniques employed in the cultivation of microorganisms.
	3. Discuss on the different phases of microbial growth.
	4. Explain the basic concepts of microbial metabolism.
	5. Elaborate on the biosynthesis of bacterial cell wall and mechanism of photosynthesis.
EXPERIMENTS IN BASIC MICROBIOLOGY	To enable the students to perform sterilization of glasswares; to prepare culture media and sterilize them; to stain and observe various microorganisms; to perform biochemical test to differentiate bacteria.
BIOCHEMISTRY II	Illustrate the reactions of various metabolic pathways
	Acquire knowledge on the various metabolic disorders
	Classify enzymes and explain their functions
	Define and classify vitamins with examples, explain the sources, RDA and functions of fat soluble and water soluble vitamins
	Illustrate the sources, RDA and functions of minerals
IMMUNOLOGY	1. Outline the history and scope of Immunology.
	2. Explain the structure, functions and properties of immune cells.
	3. Compare the different types of antibodies and relate them to antigens.

IMMUNOLOGY	4. Comprehend on the complement system and Major histocompatibility complex.
	5. Familiarize with immunehaematology and hypersensitivity reaction.
BIOINSTRUMENTATION	1. appreciate the importance of instrumentation in Biology labs
	2. illustrate the design of the instruments
	3. compare different instruments
	4. make use of different instruments for analysis
	5. apply the knowledge of instruments in biological analysis
HAEMATOLOGY AND BLOOD BANKING	1. Discuss in detail the collection and processing of blood.
	2. Understand the appropriate methods of diagnosis and management of disorders.
	3. Understand how to diagnose and manage hematological disorders and blood parasites.
	4. Appreciate the various types of blood group systems.
	5. Know the methods of preservation, storage and transportation of blood to distant places.
Microbes in Human Welfare	1. Understand the scope and relevance of Microbiology in daily life
	2. Gain knowledge on the various types of microorganisms
	3. Understand the potential of microorganisms
	4. Appreciate the beneficial aspects of microorganisms
	5. Get acquainted with various ways of using microorganisms
MICROBIAL GENETICS	1. Outline the structure, replication and function of DNA
	2. Explain about mutation, types of mutation and DNA repair mechanism.
	3. Elaborate the different gene transfer methods in bacteria.
	4. Compile the gene regulation in prokaryotes and eukaryotes.
	5. Describe transposons and gene mapping.
BIOSTATISTICS	1. appreciate the importance of statistics
	2. differentiate the basic terms and formulae in statistics
	3. relate the formulae with the applications
	4. plan analysis with statistical tools
	5. apply statistical tools in biological subjects
	Understand the basic principles instruments

BIOINSTRUMENTATION PRACTICAL	Care and maintain the instruments in Biology labs
	Use different instruments for analysis
	1. Centrifuge a mixture of solution and observe sedimentation
	2. Observe the Optical density and Transmission of a coloured solution
	3. Prepare OD Vs. Conc. graph for a coloured solution
	4. Perform paper chromatography
	5. Prepare agarose gel and cast
	6. Perform DNA electrpophoresis
Biostatistics Practical	Understand the basic principles biostatistics
	Perform simple calculations
	Make use of statistical applications
	1. Construction of Univariate and Bivariate frequency distributions with samples of size not exceeding 50.
	2. Frequency distribution: Simple and Cumulative.
	3. Measures of central tendency: Arithmetic Mean, Median and Mode.
	4. Measures of Dispersion: Standard Deviation and Coefficient of Variation.
	5. Correlation analysis: Karl Pearson's, Spearman's rank and Concurrent deviation methods.
	6. Regression Analysis: Simple regression equations.
	7. Small sample: test of significance based on t, F and Chi-Square distributions with respect of mean, variance and correlation coefficients.
	8. Analysis of Variance - One way and two way classifications.
MUSHROOM CULTIVATION	1. Outline the structure, cultivation of mushroom
	2. Explain about Spawn preparation.
	3. Elaborate the Cultivation of important Mushroom varieties.
	4. Appreciate the nutritional value of mushrooms.
	5. Describe the economic aspects of mushroom cultivation.
	1. Understand the role of Microbiology in diseases
	2. Get acquainted with various diseases caused by microorganisms

MICRO BIOLOGY - UG	EMERGING MICROBIAL DISEASES	3. Gain knowledge on the various types of pathogenic microorganisms
		4. Understand the mode of disease spread
		5. Appreciate the methods of preventing diseases
	Medical Bacteriology and Mycology	1. Outline the importance of Normal microbial flora of human body and Host-Parasite relationships.
		2. Explain about the diseases caused by the bacterial pathogens, prevention and treatment.
		3. Discuss the different modes of transmission of bacterial diseases and the preventive measures.
		4. Compare the morphological classification of fungi, and perform isolation of fungi from clinical specimen.
		5. Compile the common mycotic diseases, their pathogenicity and various antifungal agents used for treatment.
	Agricultural and Environmental Microbiology	1. Outline the physical, chemical properties and microflora of soil.
		2. Explain the role of microorganisms in biogeochemical cycles.
		3. Compile the significance of microbial interactions and phytopathogens.
		4. Demonstrate the air sampling techniques and summarize on air borne pathogens.
		5. Apply the processes involved in the treatment of municipal water supplies
	FOOD MICROBIOLOGY	1. Outline the important microorganisms present in food.
		2. Elaborate the principles and methods of food preservation.
		3. Compile the contamination, spoilage and spoilage of various foods.
		4. Demonstrate and prepare fermented foods.
		5. Summarize bacterial and non-bacterial food borne diseases.
	IMMUNOTECHNOLOGY	1. understand basic concepts of Immunotechnology
		2. demonstrate Antigen - Antibody reactions
		3. express the concept of Autoimmunity
		4. explain the role of Cytokines
		5. discuss the role of vaccines in preventing diseases
		1. Explain the organs and functions of Respiratory System.

HUMAN ANATOMY AND PHYSIOLOGY	2. Outline the structure of organs of Gastro Intestinal System.
	3. Discuss about the Musculoskeletal and Nervous System.
	4. Describe the features of Circulatory system and Endocrine System.
	5. Compile the information on Reproductive and urinary System.
CELL BIOLOGY	1. understand the structures and purposes of basic components of prokaryotic and eukaryotic cells
	2. explain how the cellular components are used to generate and utilize energy in cells
	3. understand the cellular components underlying mitotic cell division.
	4. summarize the structure and function of the different cell components
	5. outline how cell ultra structure is related to cell function
BIOINFORMATICS	1. Explain Databases and Sequence analysis.
	2. Outline the process of BLAST and Gene prediction.
	3. Discuss about the concept of Comparative Genomics.
	4. Describe the Genome projects and Model Organisms.
	5. Compile the information on Proteomics.
MEDICAL VIROLOGY AND PARASITOLOGY	1. Explain the properties, classification and cultivation of viruses.
	2. Outline the zoonotic and arthropod borne diseases.
	3. Discuss about the oncogenic viruses.
	4. Describe the classification of parasites and demonstrate the laboratory diagnosis of parasitic diseases.
	5. Compile the information on common parasites, protozoan and metazoan diseases.
INDUSTRIAL MICROBIOLOGY	1. Outline the history and scope of Industrial Microbiology.
	2. Explain about the methods involved in screening and development of production strains.
	3. Elaborate on the principles, design and types of bioreactors.
	4. Compile on the fermentation process and downstream processing.
	5. Discuss on the industrial production of various products using microorganisms.
	1. understand basic concepts of Biotechnology

BIOTECHNOLOGY	2. demonstrate the uses of enzymes
	3. express the importance of plant biotechnology
	4. explain the role of animal biotechnology
	5. discuss the role of microorganisms in environment
HERBAL TECHNOLOGY	1. Get acquainted with the basics of Pharmacognosy
	2. Gain knowledge of medicinal plants
	3. Understand the use of various medicinal plants
	4. Appreciate the Herbal medicines used to treat human ailments
	5. Understand the Propagation methods of medicinal plants
GENETIC ENGINEERING	1. Get acquainted with the basics of Genetic Engineering
	2. Understand the role of various enzymes acting on DNA
	3. Gain knowledge of Cloning vectors
	4. Understand the Gene / DNA transfer techniques
	5. Appreciate the applications of rDNA technology
BIOINOCULANTS TECHNOLOGY	1. Understand the role of Plant Growth Promoting Rhizobacteria
	2. Get acquainted with production and field application of Rhizobium and Frankia
	3. Gain knowledge of Cyanobacteria as N2 fixers
	4. Understand the Phosphate solubilizing microbes
	5. Appreciate the role of Mycorrhiza in plant growth promotion
CLINICAL MICROBIOLOGY	1. Collect various clinical specimens for microbiological examination.
	2. Gain knowledge on infections of different organ and organ system.
	3. Comprehend the different modes of transmission of infection, prevention and its control.
	4. outline the importance of immunoprophylaxis, genetic disorders and gene therapy.
	5. Perform laboratory tests to detect infection and diseases.
FOOD ANALYSIS AND QUALITY CONTROL	1. Understand the Techniques used in food analysis
	2. Get acquainted with various food analysis methods
	3. Gain knowledge on the various methods of food quality assessment
	4. Understand the Food quality management procedures
	5. Appreciate the role of Food Safety organizations

	MEDICAL LABORATORY TECHNIQUES	1. Outline the general laboratory procedures for collection of various specimens.
		2. Explain the mechanism of coagulation and procedures carried out in estimation of blood cells.
		3. Describe about chemical and microbiological examination of CSF, Urine, semen, stool and vaginal fluids.
		4. Elaborate on the collection and testing of amniotic fluid, gastric juice, lymph, sputum and synovial fluid.
		5. Apply the theoretical knowledge in practice.
	Mathematical Physics-I	1.The student will be able to explain linear vector spaces and matrices and can solve the problems.
		2. The student will be able to describe tensors in detail.
		3.The student will be able to solve the differential equations.
		4.The student will be able to formulate the differential equations for special functions.
		5. The student will be able to understand Dirac-Delta function, Introduction on Green functions and Green's function for one dimensional and three dimensional cases.
	Classical and Statistical Mechanics	The student will havedepth knowledge about Lagrangian and solve problems in mechanical systems using Lagrangian formulation. Understand conservation theorems and its relevance in classical formulation. Learn Hamiltonian formulations and solve problems using Hamiltonian formulation.
		The student will be able to Apply Hamilton's characteristic function to solve problems
		The student will have knowledge about fundamentals of rigid body motion. Explain Moment of inertia tensor. Derive and solve Euler's angles Euler's
		The student will be able to Explain different statistical ensembles, their distribution functions, ranges of applicability and the corresponding thermodynamic potentials. Calculate basic thermo dynamical quantities in classical and quantum statistical models. Understand and solve problems on partition and translational partition function.

	The student will be able to Apply quantum distribution laws an Photon gas. Signify the results of Planck's law of radiation and its limitation. Explain Thermionic emission and Pauli's theory of Para magnetism.
Quantum Mechanics-1	1. The interpretation of wave function of quantum particle and quantum theory formulation is introduced through Schrodinger equation, student gets exposed to the behaviour of quantum particle encountering a i) barrier, ii) potential well.
	2. Understand the general formulation of quantum mechanics which deal with the abstract object such as kets, bras, and operators.
	3. Acquire knowledge about unitary transformation and able to analyse Schrodinger and Heisenberg interaction pictures.
	4. Gain the knowledge of solving non-relativistic hydrogen atom, expectation value and density matrix.
	5. Gain the knowledge about spin, angular momentum states, addition rules and identical particles.
Electronics Devices & Applications	understand the characteristics and significance of logic families Identify different types of logic families describe fundamental and applied aspects of optoelectronic device physics and its applications to the design and
	Understand the significance of Op-amps and their importance understand various linear/non-linear applications to solve simultaneous equations and second order differential equations
	Understand about the 555 timer and applications explain the working of multivibrators using IC 555 Illustrate the function of application of PLL and its applications
	Know the principle and working of transducers explaindifferent types of transducers
	able to compare different modulation schemes with their advantages, applications.disadvantages and Use modulation and demodulation
Fiber Optic Communication	1.The student will be able to explain basics and electromagnetic wave and can derive the Maxwell's equations.
	2.The student will be able to describe waveguides and sources
	3.The student will be able to demonstrate the different characteristic of optical fibers

	4.The student will be able to design the fabrication and connection of optical fibers.
	5.The student will be able to understand nonlinear effects in fibers and solitons and applications.
Electronics Communication System	1.The student will be able to know the principle of antenna and its types.
	2.The student will be able to explain error detection, parity check etc.
	3.The student will be able to understanding the satellite the principle of GEO,MEO and LEO.
	4.The student will be able to learn the cellular networks like TDMA.
	5.The student will be able to know the wireless LAN applications and its types.
Energy Physics	1.The student will be able to explain thermal conversion
	2.The student will be able to describe performance of flat-plate collectors
	3.The student will be able to design the thermal energy storage devices
	4.The student will be able to understand the principles of photovoltaic conversion
	5.The student will be able to know other forms of renewable energy sources.
Basic Physics	1.The student will be able to know the fundamental quantities and its units
	2.The student will be able to learn about heat and its measurements.
	3.The student will be able to distinguish between positive and negative charges and they can Ohm’s law
	4.The student will be able to study the basics of sound and its properties and
	5.The student will be able to understand the basic phenomenon of light and learn about the optical instruments like telescope, microscope etc.
	1.The student will be able to understand the different types of modulation will be used in radio transmission and reception.

Communication Physics	2.The student will be able to know the basics of fiber optics and its types
	3.The student will be able to learn the principle of radar communication
	4.The student will be able to describe the satellites and its importance,
	5.The student will be able to demonstrate the different types of mobile phones and updating the knowledge about Wi-Fi and fourth generation of communication system.
Mathematical Physics-II	1.The student will be able to learn analytic functions, derive an equation forCauchy-Riemann Differential equations in different forms about Taylor, Laurent's series and Cauchy Residue theorem
	2.The student will be able to obtain the solution for Laplace's Equations in Cartesian coordinates and also fortwo and three dimensional heat flow
	3.The student will be able to study the Fourier and Laplace's Integral Transforms in detail
	4.The student will be able to describe group theory and construct the character table for different point groups
	5.The student will be able to acquire theory of probability and different theoretical distributions.
Electro Magnetic Theory	1.The students will be able to have a depth knowledge of electrostaticsand clearly understand dielectric polarization.
	2.The students will be able to know the fundamental laws to find the magnetic field of a source. have depth knowledge of magnetic potential. apply the magnetic scalar and vector potentials to find the magnetic field due to localized source.
	3.The students will be able to use Maxwell's equations for a system of charge and electromagnetic field. Obtain homogeneous equations for a
	4.The students will be able to Understand about the oscillating dipole. Know how the power radiated from a linear antenna. Understand clearly antenna
	5.The students will be able to Know the propagation of electromagnetic waves in free space, dielectric medium andConductingmedium. Have a

Quantum Mechanics-II	1. Understand the concept of perturbation theory to solve problems in quantum mechanics.
	2. Acquire the knowledge of variation methods and able to solve harmonic
	3. Formulates ideas on born approximation transformation and concepts of scattering theory.
	4. Understand the Dirac matrices and gained knowledge about spin and magnetic movement of electron.
	5. Able to understand the creation and annihilation operator and gain the knowledge about anti particle.
Nanoscience	1.The student will be able to understand the nanoscale and nanomaterial.
	2.The student will be able to learn how to synthesis the nanostructured materials
	3.The student will be able to distinguish between nanoparticles and quantum dots
	4.The student will be able to describe the different tools will be used for characterization of the nanomaterial.
	5.The student will be able explain the different applications of nanotechnology
Electronics Instrumentation	1.The student will be able to know the principle, working and types of transducers.
	2.The student will be able to demonstrate the principle, function of different digital instruments like digital multimeter.
	3.The student will be able to explain the working and applications of Photoelectron Spectroscopy (XPS) ,Auger Electron Spectroscopy, Atomic Absorption Spectroscopy.
	4.The student will be able to describe the operation of ECG,EEG and EMG biomedical instrumentations.
	5.The student will be able to know the classification of printers, function of hard disk, CD and DVD.
	1.The student will be able to understand the laser and its types
	2.The student will be able to know the fundamentals of non-linear optics.

PHYSICS - PG	Non-linear optics	3.The student will be able to study the multiphonon process in nonlinear optics.
		4.The student will be able to learn the basic requirements for nonlinear optical materials like borates, organics etc.
		5.The student will be able explain the principle, construction and working of fiber modes.
	Spectroscopy and Lasers	1.The student will be able to learn more about microwave spectroscopy and its applications.
		2.The student will be able to know the fundamentals of vibrational spectroscopy and can assign normal modes of vibrations for different type of molecules.
		3.The student will be able to distinguish the classical and quantum theory of Raman spectroscopy and it will be applied for structural confirmation of a molecule.
		4.The student will be able to derive the expression for Einstein Coefficients for Stimulated emission of Radiation and learn about three level and four level systems.
		5.The student will be able describe the different types of Laser and know the condition for population inversion and can study the Laser applications.
	Physics for competitive Exams	1.The student will be able to understand the concept of mechanics and to study the different properties of matter
		2.The student will be able to learn about First and second law of thermodynamics and also provided basics of entropy
		3.The student will be able to study the magnetism and magnetic materials
		4.The student will be able to explain the phenomenon of interference, diffraction and polarization and also to describe the fundamentals of laser
		5.The student will be able to demonstrate the atomic structure using Bohr's theory and also derive Einstein's Mass-Energy relation. Also they acquired knowledge on fundamentals of semiconductors.
		1.The student will be able to understand basics of semiconductors and able

Analog and Digital Electronics	2.The student will be able to design rectifier circuits using diodes and amplifier circuits using transistors.
	3.The student will be able to perform the various mathematical operations using OP-AMP.
	4.The student will be able to understand the different number systems and to know how to convert one number to another number system.
	5.The student will be able to demonstrate the basic logic gates AND,OR and NOT gates using diodes and transistor and also explain the Universal logic gates using NAND and NOR gates.
General Practical	
CONDENSED MATTER PHYSICS	1.The student will be able to know the types of lattices and crystal structures.
	2.The student will be able to explain lattice dynamics like Einstein's model and Debye's model of specific heat.
	3.The student will be able to studyBand theory of metals and semiconductors and also able to explain Kronig-Penny model.
	4.The student will be able to understand the quantum theory of paramagnetism and ferromagnetism.
	5.The student will be able to basics of superconductors and its applications.
NUCLEAR PHYSICS	1.The student will be able to understand the concept of nuclear energy levels, nuclear angular momentum, parity and isospin. Also able to explain nature and properties of nuclear forces.
	2.The student will be able to describe Gamow's theory, Fermi's theory of beta decay and kinematics of gamma decay. Also able to derive the Breit Wigner single level formula.
	3.The student will be able to differentiate different nuclear models.
	4.The student will be able to know the principle and working of G.M.
	5.The student will be able to obtain Gell-mann--Nishijimaformula and Gell – Mann Okubo mass formula. Also able to explain the classification of elementary particles.
	1.The student will be able to know various interrupts, timing diagram for memory read/write cycle and able to write assembly language programs.

MICROPROCESSORS & MICROCONTROLLERS	2.The student will be able to describe the different interfacing devices and can demonstrate the interfacing of DAC/ADC and stepper motor with 8085.
	3.The student will be able to understand the hardware of 8051, memories, Counter and Timer.
	4.The student will be able to explain the interrupts, addressing modes and arithmetic operations.
	5.The student will be able todescribe PUSH-POP, jump and call instructions and able to know how to interface the peripheral devices with 8051.
RESEARCH METHODOLOGY	1.The student will be able to know the basics of research theories, approaches and design.
	2.The student will be able to demonstrate what do you mean by review of literature and know how to proceed the research work based on review of literature.
	3.The student will be able to explain the importance of internet in the field of research.
	4.The student will be able to how to write a thesis or a research paper. Also students will be able to learn how to present a research article in a seminar/conference or how to publish the article in e-journals.
	5.The student will be able to formulate the Euler's method, Range Kutta method,Trapezoidal rule and Simpson's 1/3rd rule of numerical methods.
MATERIAL SCIENCE	1.The student will be able to know the concepts of phase diagrams and phase transformations.
	2.The student will be able to explain the property of ceramic materials and also able to learn polymerization mechanism.
	3.The student will be able to explain the chemical structure and property of biomaterials.
	4.The student will be able to understand the properties NLO materials and its harmonic generation.
	5.The student will be able to design the energy conversion and storage materials.

NUMERICAL METHODS & C PROGRAMMING	1.The student will be able to get the solutions using different numerical methods.
	2.The student will be able to explain the fundamentals of research and know how to write a thesis or paper.
	3.The student will be able to understand the basic structure of C programming.
	4.The student will be able to learn the one, two and multidimensional arrays and also know the reading and writing strings.
	5.The student will be able to write different programs after learning the structure of C programming.
ELECTRICAL AND ELECTRONICS APPLIANCES	1.The student will be able to identify the given discrete components like resistors using color coding method.
	2.The student will be able to understand the theory of household electrical connections.
	3.The student will be able to know the principle and working of some household electrical appliances.
	4.The student will be able to acquire knowledge about theory of semiconductors.
	5.The student will be able to know the principle and working of some household electronics appliances.
PHYSICS OF MATERIALS	1.The student will be able to learn the basics of crystal structure and various types of bond exists in the crystals
	2.The student will be able to know the statement of Bragg's law and to study the Diffraction of X-ray by different methods
	3.The student will be able to understand the classical and quantum theory of free electrons in metals
	4.The student will be able to distinguish between intrinsic and extrinsic semiconductor and can determine the Hall coefficient of a material
	5.The student will be able to describe the properties of superconductors and hence the students can distinguish Type I and Type II superconductors

GEOPHYSICS	1.The student will be able to explain about solar system and atmosphere, ionosphere etc.
	2.The student will be able to demonstrate geo referencing using GIS software and to test the contamination of ground water using geochemical method.
	3.The student will be able to describe about earthquakes and natural disaster Tsunami and its impacts
	4.The student will be able to learn about the earth in the presence of magnetic field and gravity
	5.The student will be able to know the radioactivity of the earth, can calculate the radioactive dating of rocks and minerals and thermal properties of the earth.
SPECTROSCOPY	1.The student will be able to study the rotational spectra of diatomic and polyatomic molecules using rotational/ microwave spectroscopy.
	2.The student will be able to distinguish between the rigid rotator and non-rigid rotator and students can calculate normal modes of vibrations for H2O and N2O molecules.
	3.The student will be able to derive the expression for classical and quantum theory of Raman effect and also to study the molecular structure of water and CO2 molecules.
	4.The student will be able to understand the qualitative idea of UV-spectroscopy and also to learn the electronic spectra of poly atomic molecules.
	5.The student will be able to know qualitatively the principle, theory, instrumentation and applications of NMR, ESR, AAS and Mössbauer spectroscopy.
CRYSTAL GROWTH AND THIN FILMS	1.The student will be able to learn the different theories of crystal growth and able to formulate Gibbs - Thomson equation.
	2.The student will be able to demonstrate the Bridgman technique,
	3.The student will be able to understand the symmetry operations,
	4.The student will be able to explain the basics of thin film deposition techniques like, spin coating, chemical bath deposition, spray pyrolysis etc.

	5.The student will be able to know the principle, working and applications of different characterization techniques.
MEDICAL PHYSICS	1.The student will be able to study the different sources of non-ionizing radiations.
	2.The student will be able to know the various types of optical radiations like UV,IR etc.
	3.The student will be able to explain the laser and fiber optic instruments for mediphotonics.
	4.The student will be able to learn the properties and propagation of
	5.The student will be able to understand the applications of radio frequency and microwaves.
MATLAB AND PYTHON PROGRAMMING	1.The student will be able to understand the basics of MATLAB
	2.The student will be able to develop skills for writing a program using MATLAB
	3.The student will be able to learn the fundamentals of Python programming
	4.The student will be able to know the concepts of OOPs in Python
	5.The student will be able tolearn how to develop graphical user interfaces
NANOPHYSICS	1. To know the fundamentals of nanotechnology.
	2. To learn about carbon nanostructures and its properties.
	3. To study the preparation of nanomaterial by different methods.
	4. To analyse the synthesized nanomaterial by various characterization techniques.
	5. To understand the various applications of nanotechnology.
ASTRO PHYSICS	1.The student will be able to know the principle and working of astronomical instruments.
	2.The student will be able to explain big bang theory and galaxies
	3.The student will be able to demonstrate variety of stars.
	4.The student will be able to describe the complete details of solar system including comets.
	5.The student will be able to the units to be used for the measurements celestial distance and coordinates.

	WEATHER FORECASTING	1.The student will be able to study the atmosphere and its physical structure and also to know the variation of pressure and temperature with height
		2.The student will be able to describe the measurement of wind speed,
		3.The student will be able to explain the global wind systems and able to know thunderstorms and cyclones
		4.The student will be able to conceptualize the classification of climate, ozone depletion, acid rain and environmental hazards due to climate change
		5.The student will be able to understand the analysis and historical background of weather forecasting and know the predictability, probability of forecasts
	MECHANICS	1.The student will be able to know fundamentals of vectors and able to formulate the expression for projectiles.
		2.The student will be able to study the dynamics of rigid bodies in terms of moment inertia and also able to find the moment of inertia of different systems.
		3.The student will be able to define work, energy and also able to understand the oblique impact between smooth spheres.
		4.The student will be able to learn the elastic property of the solid materials
		5.The student will be able to explain the concept of gravitation and able to know the principles of rocket and satellite.
	HEAT AND THERMODYNAMICS	1.The student will be able to know fundamentals specific heat capacity and able to explain the kinetic theory of gases.
		2.The student will be able to describe the conduction and radiation of heat and also able to study the Joule-Kelvin effect based on the low temperature phenomena and its applications.
		3.The student will be able to cite the laws of thermodynamics and their applications.
		4.The student will be able to explore the equations governing second law of thermodynamics and entropy.
		5.The student will be able to explain Phase-space, micro and macrostates and able to distinguish MB,FD and BE statistics.
	CORE PRACTICAL-1	

Electricity, Magnetism & Electromagnetism	1.The student will be able to know fundamentals coulomb's law and Gauss's law and also able to derive the expression for electric potential, capacitance of a parallel plate capacitor.
	2.The student will be able to derive the expression for temperature coefficient resistance of a coil using Carey Foster's Bridge and able to know how to calibrate the ammeter and voltmeter. Also able to learn the thermo electricity concept.
	3.The student will be able to explain the concepts of self and mutual inductance using electromagnetic induction phenomenon.
	4.The student will be able to distinguish the dia, para and ferro magnetic materials based on different theories.
	5.The student will be able formulate the expression for displacement current and Maxwell's equations.
MATHEMATICS - I	To Explore the Fundamental Concepts of Mathematics
Basic Electrical Technology	1.The student will be able to know principle of Voltage, Current, Resistance, Ohm's law and Electrical safety.
	2.The student will be able to distinguish between cells and batteries and able to explain the different types of batteries.
	3.The student will be able to understand the Wheastone's bridge, Thevenin and Norton's theorem and also able to describe the function of DC generator and motor.
	4.The student will be able to know the fundamentals of alternating currents and voltages and able to differentiate the single phase and three phase connections.
	5.The student will be able to acquire the principle and construction of transformers and its types and also able to demonstrate the function of AC generator.
ENVIRONMENTAL PHYSICS	1.The student will be able to basic concepts of atmosphere and also able to know how it can be measured and study the characteristics of cyclones.
	2.The student will be able to explain the details of climate, greenhouse effect and global warming.
	3.The student will be able to describe the different renewable energy sources and its applications.

	4.The student will be able to know how to detect the nuclear radiation with different instruments.
	5.The student will be able to know how to saveourselves from nuclear radiation hazards.
Waves and Optics	1.The student will be able to formulate the equation for plane progressive wave and able to understand the concept of simple harmonic motion and other types of waves
	2.The student will be able study the property of surface tension of a liquid and know how the surface tension varies with temperature and also able to explain the property of viscosity of a liquid.
	3.The student will be able to describe the different optical of a lens system and able to design the eyepieces. Also able to know the phenomenon of interference and its applications.
	4.The student will be able to distinguish between Fresnel class of diffraction and Fraunhofer class of diffraction. Also formulate the expression for resolving power of telescope, microscope, prism and grating.
	5.The student will be able to explain the phenomenon of polarization and able to study the double refraction in uniaxial crystals. Also they can define optical activity, specific rotation and know the applications of polaroids.
MATHEMATICS - II	To Explore the Fundamental Concepts of Mathematics
Physics Workshop Skills	1.The student will be able to test the instruments with specific skills
	2.The student will be able to express the functions and working of Linear power supply.
	3.The student will be able to know the basics of analytical instruments and how to calibrate it.
	4.The student will be able to explain mobile communication and radar communication system.
	5.The student will be able to demonstrate the principle and working of various biomedical equipment.
	1.The student will be able to know the fundamental quantities and units and able to some basic ideas of mechanics.
	2.The student will be able to demonstrate the construction and working of

Everyday Physics	3.The student will be fundamental principles applied in our day today life electrical appliances.
	4.The student will be able to know the basic properties of laser and characteristics and able to design solid and gas lasers.
	5.The student will be able to demonstrate the principle and working of biomedical equipment will be used in our daily life.
Core Practical -2	
Atomic and Molecular Physics	1.The student will be able to know the properties of cathode rays and positive rays. Also will be able to study the determination of specific charge of an electron.
	2.The student will be know the different atom models and can get an idea about coupling schemes.
	3.The student will be able to study the Zeeman effect, Paschen Back effect and Stark effect.
	4.The student will be able to know the basic idea of photoelectric effect and can able to derive the equation for Einstein's photoelectric equation.
	5.The student will be able to study the rotational and vibrational energy of a molecule and also learn the Infrared spectra, Raman Effect and Laser.
Relativity and Quantum Mechanics	1.The student will be able to know the frames of reference and able to formulate the Galilean Transformation equations and Lorentz Transformation equations.
	2.The student will be understand the matter waves and can derive an equation for de Broglie wavelength. Also able to distinguish between phase velocity and group velocity and demonstrate Davison &Germer experiment.
	3.The student will be able to state the Heisenberg's Uncertainty Principle and able to derive the time dependent and time independent Schrödinger's equations.
	4.The student will be able to know the basic idea of photoelectric effect and can able to derive the equation for Einstein's photoelectric equation.

		5.The student will be able to learn postulates of quantum mechanics, operators and also able to acquire knowledge on Dirac's bra and ket notations.
	Basic and Applied Electronics	1.The student will be able to classification of solids on the basis of band theory and know the construction, working and applications of semiconducting diodes and transistors.
		2.The student will be able to design the RC-coupled amplifier and to study its frequency response curve. Also students will be able to classify the power amplifiers, to learn the h-parameters and to able to design oscillator circuits.
		3.The student will be able to understand the multivibrators using transistors and can able to study the different wave shaping circuits.
		4.The student will be able to know the basic idea of integrating circuits and able to fabricate diode, transistors, resistor and capacitors. Also students will be study the structure of operational amplifier and its parameters.
		5.The student will be able to analyze the different applications of op-amp circuits like adder, subtractoretc.and also able to demonstrate 555 Timer and its applications.
PHYSICS - UG	Cell Phone Technology	1.The student will be able understand the cellular communication system.
		2.The student will be able to study the smart phones and various mobile standards like 1G,2G, etc.
		3.The student will be able to learn chip level information and soldering and desoldering the various components.
		4.The student will be able to understand the network problems and SIM card
		5.The student will be able to know how to use the ultrasonic cleaner, mobile virus and other service tools.
	Nuclear and Particle Physics	1.The student will have a clear idea about the fundamentals of nucleus and its structure.
		2.The student would have understood the concept of radioactivity.
		3.The student will be having a clear understanding of the design and working of particle accelerators and detectors.

	4.The student will be having a thorough understanding about the nuclear reactions and nuclear reactors.
	5.The student would have gained adequate knowledge about the elementary particles like pions, muons, hyperons etc.
Solid State Physics	1.The student will be able to Distinguish between crystalline and amorphous solids, Classify the crystal systems and able to understand the crystal structure
	2.The student will be able to Relate the X-ray diffraction with crystal structure and explain the various differences in properties of solids due to crystal imperfections
	3.The student will be able tounderstand the different types of bonding in crystals, apply this to understand the optical , specific heat capacity of solids
	4.The student will be able togain the knowledge of magnetism in materialsand able to distinguish different magnetic materials. Also able to understand the phenomena of superconductivity and their applications
	5.The student will be able to explain the electric polarization in dielectric materials and also gain the knowledge in dielectric breakdown mechanisms in a dielectric material.
Weather forecasting	1.The student will be able to study the atmosphere and its physical structure and also to know the variation of pressure and temperature with height.
	2.The student will be able to describe the measurement of wind speed,
	3.The student will be able to explain the global wind systems and able to know thunderstorms and cyclones.
	4.The student will be able to conceptualize the classification of climate, ozone depletion, acid rain and environmental hazards due to climate change.
	5.The student will be able to understand the analysis and historical background of weather forecasting and know the predictability, probability of forecasts.

Digital Electronics	1.The student will be able to gain knowledge between different types of number systems, and their conversions. Also able to study the various Binary codes and to design basic logic gates.
	2.The student will be able to describe laws of Boolean Algebra, De Morgan's theorems. Also able to demonstrate K-Map and simplification of logic expressions and to design universal gates using NAND and NOR gates.
	3.The student will be able to explain the Multiplexer, Demultiplexer and Decoder. Students can know the functions of various Flip-Flop circuits.
	4.The student will be able to conceptualize the classification of registers and counters.
	5.The student will be able to know how to convert digital to analog and analog to digital using different methods.
Fundamentals of Microprocessor-8085	1.The student will be able to know the evolution of microprocessor, pin and architecture of 8085 microprocessor in detail.
	2.The student will be able to describe different types of instructions like data transfer, arithmetic, logical and branching instructions with examples and it will be used for writing the assembly language programs.
	3.The student will be able to write assembly language programs for simple arithmetic operations and hence they can apply it for interfacing applications.
	4.The student will be able to learn the memory interface and peripheral interface devices.
	5.The student will be able to know how to interface the peripheral device with microprocessor 8085 and they are able to write the programs for LED and Temperature control interface system.
	1.The student will be able to know the origin and emergence of
	2.The student will be able to describe carbon nanostructures and its fabrication. Also they can know the electrical, vibrational and mechanical properties of carbon nanostructure and its applications.

Nanophysics	3.The student will be able to know how to fabricate the nanomaterial by electrochemical method, lithographic techniques, atomic layer deposition method etc.
	4.The student will be able to learn the characterization techniques like SEM,TEM etc for the synthesized nanostructures.
	5.The student will be able to know the applications of nanotechnology in different field.
Digital Electronics	1.The student will be able to gain knowledge between different types of number systems, and their conversions. Also able to study the various Binary codes and to design basic logic gates.
	2.The student will be able to describe laws of Boolean Algebra, De Morgan's theorems. Also able to demonstrate K-Map and simplification of logic expressions and to design universal gates using NAND and NOR gates.
	3.The student will be able to explain the Multiplexer, Demultiplexer and Decoder. Students can know the functions of various Flip-Flop circuits.
	4.The student will be able to conceptualize the classification of registers and counters.
	5.The student will be able to know how to convert digital to analog and analog to digital using different methods.
Materials Science	1.The student will be able to know the origin engineering materials and its classification. Also students will be able to learn the bonding character and its Properties
	2.The student will be able to describe mechanical properties like elastic behavior and thermal properties like heat capacity, thermal conductivity etc.
	3.The student will be able to know the basics of polymers, ceramics and nanomaterial.
	4.The student will be able to explain definition and types of smart materials.
	5.The student will be able to conceptualize the energy storage materials.

Medical Physics	1.The student will have a clear idea about the fundamentals of the production and characteristics of X-rays.
	2.The student would have understood the concept of radiation units and radiation detectors.
	3.The student will have a clear understanding of the design and working of Medical imaging techniques and computer tomography scanner.
	4.The student will be having a thorough understanding about the diagnostic nuclear medicine and some medical instrumentation.
	5.The student would have gained adequate knowledge about the protective measures to be undertaken in radiation therapy.
Digital Electronics	1.The student will be able to gain knowledge between different types of number systems, and their conversions. Also able to study the various Binary codes and to design basic logic gates
	2.The student will be able to describe laws of Boolean Algebra, De Morgan's theorems. Also able to demonstrate K-Map and simplification of logic expressions and to design universal gates using NAND and NOR gates.
	3.The student will be able to explain the Multiplexer, Demultiplexer and Decoder. Students can know the functions of various Flip-Flop circuits.
	4.The student will be able to conceptualize the classification of registers and counters.
	5.The student will be able to know how to convert digital to analog and analog to digital using different methods.
Radiation Safety	1.The student will be able to study the basics of atomic structure and nuclear composition.
	2.The student will be able to describe properties of alpha, beta and gamma rays and also to study the interaction of charged particles.
	3.The student will be able to explain radiation qunatities and units and also able to know the principle and working of radiation detectors.
	4.The student will be able to conceptualize the radiation safety management.

		5.The student will be able to know the application of nuclear techniques in medicinal science.
	Astrophysics	1.The student will be able to study the different types of optical instruments like telescopes and spectrographs will be used for observing/recording the space objects.
		2.The student will be able to describe big bang theory, different types of galaxies, milky way and astronomical unit.
		3.The student will be able to explain about stars, constellations, asteroids, meteorites and comets.
		4.The student will be able to know the details of solar system and able to know the formation eclipse due to sun, moon and earth.
		5.The student will be able to understanding the different space programmers/missions carried out by our Indian Space Research Organization (ISRO) and also to study the lunar and solar calendars.
PSYCHOLOGY - UG	PRINCIPLES OF MANAGEMENT	To enable the students understand the principles of management and how to acquire skill to become a good Manager.
	ORGANISATIONAL BEHAVIOUR	To familiarize the students with behavioral pattern of human beings at individual and group level in the context of an organization, which in its turn is influenced by the environmental enveloping it.
		To enhance the students well regard to knowledge, production and control of human behavior.
	HUMAN RESOURCE MANAGEMENT	The objective of the course is to familiarize students with different aspects of managing human resources in the organization through the phases of acquisition, development and retention.
	MARKETING MANAGEMENT	To enable the students to understand the elements of the complex world of Marketing.
		To impart the students the need for marketing science in the modern business world.
	BASICS IN COMPUTER APPLICATIONS	To know the fundamentals of computers
		To understand how to use computer application in day to day business.
	TRAINING AND DEVELOPMENT	The purpose of this paper is to provide and in-depth understanding of the role of Training in the HRD, and to enable the course participants to manage the Training systems and processes.

PUBLIC ADMN - PG	PROGRAMME EDUCATIONAL OBJECTIVES (PEO)	To induce the thirst of knowledge in the field of Public Administration
		To Equip the students to write the civil service Examinations in the Public Administration discipline.
		To gain interdisciplinary knowledge
		To make comprehensive understanding of the administration at different levels of governance
		To utilize the knowledge of the discipline to proceed further in the Activity
	PROGRAMME OUTCOMES (PO) FOR POST GRADUATE DEGREE IN PUBLIC ADMINISTRATION	Students are expected to get broader understanding of theoretical
		Students are expected to grasp the functioning of national level, state level and local level governments.
		Students will be able to imbibe with the administrative system in India
		Students will come to know the issues and challenges in the Personnel and Financial administrations.
		Students will Gain knowledge on the Constitution of India
		Students will obtain the knowledge on the basic principles of Public Administration
		Students will come to know the contribution of various administrative
		Students will gain knowledge on the Indian Administrative System
		Students will come to know the various administrative systems of the world
		Students will get clear idea on International Organizations and their functioning.
	SOCIAL WORK PROFESSION AND PRACTICE	The students will gain knowledge in the basic social work concepts.
		The students will develop thorough knowledge in the evolution of social work and as a profession.
		The students will gain knowledge in the significance social work education and training
		The students will become aware of the various models of professional practices and its applications
		The students develop gain insight into various reform movements and welfare programmmes.
		The students will gain knowledge about the primary method of social work practice with individuals

Social Work practice with Individuals	The students understand the case work process
	The students develop skills in professional relationship
	The students will become aware of the various models of professional practices and its applications
	The students gain insight into various settings
Social Work Practice with Groups	1. Students will gain knowledge about the social group and social group work
	2. Students will understand the group process and group dynamics
	3. Students will recognize the importance of group work process
	4. Students will develop programme planning skills
	5. Students will acquire the skill in recording in group work and techniques of recording
Concurrent Field Work-I	
Sociology for Social Work Practice	1. Students will gain knowledge about the society and its dynamism
	2. Students will understand the socialization process and its agents
	3. Students will understand the process of social change
	4. Students will gain knowledge about various social movements in India
	5 Students will realize various social problems existing in the society
Social Development : Theories and Perspectives	1. Students will understand the link concept, process and strategies of social
	2. Students will identify the key development challenges confronting the society
	3. Students will understand the role of social development in addressing inequality in society
	4. Students will develop ability to link experiences around them with social development issues
	5. Students will develop skills and competencies necessary for development interventions and inculcatevalues of social justice and equality.
	1. Student will develop insight into basic political and Economic concepts and political environments and how do national and international, economic and political forces shape the lives and future of citizens, ,business and civil society

Civil Society and Governance	2. Students will gain understanding of the rich terrain of contemporary issues in the context of politics and will develop as informed citizens.
	3. Students will understand the relationship between 'politics' and 'the economy'
	4. Students Will get acquainted to the social dimension of key political challenges by exploring issues such as social inequalities, marginalization,and political principles of the statecraft
	5. Students will become critical analysts and innovative designers by linking, theory and action in the domain of statecraft, grassroots governance and political participation
Environmental Social Work	1. Students will learn basic facts about Ecology, Environment and Energy resources.
	2. Students will create environmental consciousness and various movements
	3. Students will gain knowledge on various issues on Environment and the
	4. Students will become aware of the various environment protection laws and role of social workers
	5. Students will understand the roles and responsibilities of NGO's in environment protection
Social Entrepreneurship	1. Students will understand the importance and performance of voluntary sector
	2. Students will develop understanding about social entrepreneurship
	3. Students will get exposure to the social enterprises.
	4. Students will strengthen the competence in social entrepreneurship
	5. Students will apply the principles of social entrepreneurship in various fields
Project Management	1. Students will understand monitoring and evaluation systems and their use in project cycle management
	2. Students will learn methods and skills to carry out monitoring using log-frame matrix
	3. Students will understand various types of monitoring

	4. Students will gain knowledge to plan and carry out evaluation studies and measure the results of the project
	5. Students will gain skill in evaluating the government schemes and programmmes and reporting
SOCIAL WORK PRACTICE WITH COMMUNITIES	1. Students will develop an understanding of the concepts related to working
	2. Students will understand the use and practice of community organization in various fields of social work.
	3. Students will gain knowledge about the role of social worker in social change and social development.
	4. Students will familiarize the emerging trends and experiments in community organization.
	5. Students will judge and apply various aspects of social action.
Social Work Research and Statistics	1. Students will understand major research strategies, meaning, scope, and importance of social work research.
	2. Students will develop an ability to see the linkage between the practice, research, theory, and to adopt suitable design
	3. Students will study the various facets of data collection and scaling techniques
	4. Students will hone the skills in undertaking research and in writing about the same.
	5. Students will understand statistics and its application in social work
Social welfare administration	1. Students will gain knowledge of polices in India and planning process in India
	2. Students will know about the concept of welfare state
	3. Students will gain knowledge about social welfare administration of service organizations.
	4. Students will understand welfare administration process and gain essential skills
	5. Students will acquire the skill of establishing a human service organization.
	1. To practice the primary methods of social work in different settings

Concurrent Filed Work II	2. To Understand the applicability of the methods and techniques of Social Work in the fields of social work
	3. To Enhance their skills of Social Work practice
Psychology for Social Work Practice	1. Students will gain basic knowledge on psychology and its relevance in social work
	2. Students will understand the behavior of human beings
	3. Students will understand the nature and development of human behaviour in socio-cultural context.
	4. Students will develop a critical perspective of the theories of human behaviour.
	5. Students will acquire the skill of using psychological testing tools in dealing with individuals.
HUMAN GROWTH AND PERSONALITY DEVELOPMENT	1. Students will develop an overall understanding of the principles of growth
	2. Students will understand the role of hereditary and environmental influences in growth and development.
	3. Students will understand interactional nature of growth and behaviour at various stages in of learning
	4. Students will develop appropriate attitude in their life as a social worker.
	5. To understand and apply theories of personality in social work practice in general and individuals, groups, and communities in particular.
Perspectives in Psychology	1. Students will develop knowledge base and understanding of the role of social environment in shaping the individual –growth, development and personality
	2. Students will understand how social groups develop and maintain identity
	3. Students will develop an understanding of the basic mental processes and their role in influencing behaviour
	4. Students will understand growth and development of the person
	5. Students will learn to apply concepts and theories of personality development in social work practice.
	1. Students will develop a holistic understanding of counselling as a tool for help.

Theory and practice in counselling	2. Students will acquire knowledge of various approaches, their theoretical
	3. Students will develop skills of application to real life situations.
	4. Students will develop the ability to recognise and synthesise attitudes and values that enhance investment of self in the counsellor's role.
	5. Students will develop the ability to use the tools/scales in various settings.
Peace Building and Conflict Mitigation	1. Students will develop conceptual understanding about conflict
	2. Students will understand situations of conflict, violence and conflict zones from across the world
	3. Students will analyze the conflict and develop strategies for social work intervention
	4. Students will develop skill in social analysis for peace and development
	5. Students will understand the peace building process
Personal and Professional Development	1. To understanding the process of self-awareness and relevance of self-
	2. To develop practice based skills and positive life skills for competence in personal life and professional practice.
	3. To understand and uphold professional values and ethics.
Field Study	
Summer Placement (optional)	1. Students will gain experience in a social work field by being in different settings.
	2. Students will understand the techniques and approaches adopted by the organization.
	3. Students will apply the knowledge gained, in the field of social work.
HUMAN RESOURCE MANAGEMENT	1. Students will gain knowledge about the management of human resources.
	2. Students will gain knowledge about the management of human resource planning.
	3. Students will gain knowledge about employee retention and separation.
	4. Students will understand the programmes and activities of management of human resources.

SOCIAL WORK - PG		5. Students will acquire the skills of working with recent trends and human resource development.
	RURAL COMMUNITY DEVELOPMENT	1. Students will be able to understand rural realities.
		2. Students will understand various facets of rural community development
		3. Students will develop sensitivity and commitment for working with rural communities.
		4. Students will gain knowledge about the governmental and voluntary efforts towards rural community development.
		5. Students will equip with specific knowledge of various rural community development programmmes
	PSYCHIATRIC SOCIAL WORK PRACTICE	1. Students will understand the concepts and historical development of the field of Psychiatry
		2. Students will gain knowledge about various assessment methods
		3. Students will gain knowledge on the various psychiatric disorders
		4. Students will gain knowledge on behavioural and emotional disorders
		5. Students will acquire skill in understanding the challenges of Psychiatric Social Work practice in various settings
	LABOUR LEGISLATIONS AND LABOUR WELFARE	1. Students will gain knowledge about labour legislations and labour welfare
		2. Students will understand the legal provisions of labour welfare
		3. Students will understand the historical development of labour laws
		4. Students will gain knowledge in wage and industrial relations
		5. Students will acquire the skills of working with corporate sector
	URBAN COMMUNITY DEVELOPMENT	1. Students will understand the unique nature of urban community.
		2. Students will develop sensitivity and communication for working with urban poor.
		3. Students will gain knowledge on the government and voluntary efforts towards urban development.
		4. Students will equip with specific skills and the techniques of working with urban communities.
		5. Students will equip with knowledge of various urban development schemes and programmes.

MEDICAL SOCIAL WORK	1. Students will understand the historical developments of Social Work in
	2. Students will gain knowledge on the Holistic and Integrated approach to Social Work Practice in the field of Health.
	3. Students will understand the various roles of a medical social worker
	4. Students will understand the common Diseases and Health problems of the Community.
	5. Students will gain essential skillsas a medical social worker in different settings
COMPUTER APPLICATION IN SOCIAL WORK	1. Students will understand the fundamentals of computing and word processing.
	2. Students will understand the fundamentals word processing
	3. Students will gain knowledge in using SPSS in social work researches
	4. Students will familiarize in using SPSS in social work researches
	5. Students will gain knowledge and familiarity in using SPSS in social work researches
CONCURRENT FIELD WORK III	1. To gain experience by applying the theoretical knowledge in the field
	2. To understand the functions and activities of field placement organization
	3. To acquire of the skills of applying the class learning into practice
SOCIAL POLICY AND SOCIAL LEGISLATIONS	1. Students will understand social policies in India in terms of themes, trends and deliveries.
	2. Students will gain knowledge in social legislation and procedure
	3. Students will understand and explore the Social Legislation for Marraige and Family
	4. Students will understand and explore the Social Legislation for Women and Children
	5. Students will explore and understand the Social Legislation for Weaker Sections and Special Groups in India and significance of various Social Legislations
	1. Students will develop a theoretical understanding of different approaches towards social justice.

SOCIAL JUSTICE & HUMAN RIGHTS	2. Students will apply human rights framework for understanding issues and understand empoweringprocesses for the marginalized sections of the society
	3. Students will develop knowledge, attitude and skills required for working with marginalized andvulnerable constituencies and o create just society
	4. Students will develop critical understanding of institutional mechanisms and systems for attainment ofsocial justice and protection of human rights
	5. Students will develop knowledge of the code ethics of professional social workers.
SOCIAL POLICY AND PLANNING	1. Students will understand the structure of social policy.
	2. Students will understand social policies in India in terms of themes, trends and deliveries.
	3. Students will gain knowledge of polices in India and planning process in India.
	4. Students will develop understanding of social policy in the perspective of National goals as stated in the Constitution and well as human rights and Development Goals.
	5. Students will gain knowledge about the policy formulation process and acquire skills in critical analysis of the policies.
UNDERSTANDING MARGINALITIES	1. Students will be able to locate marginality of major communities which is deeply embedded in Indian social structure.
	2. students will understand the social structure of India
	3. Students will familiarise students with the divergent discourses prevalent particularly in Dalit studies and its implications on social movements among marginalised.
	4. Students will equip with skill of intervention of State in the development of marginalised communities, and also the role of NGOs and CSOs, especially in the current context of LPG reforms in India.
	5. Students will understand their role in the current context of marginality

GENDER DEVELOPMENT	1. Students will understand the concept of gender and the social construction of feminity and masculinity
	2. Students will develop sensitivity towards the existing practices leading to
	3. Students will develop ability to identify social, economic and political systems that adversely affect the wellbeing and functioning of women.
	4. Students will suggest affirmative action in planning to promote gender equity, equality and safety for women
	5. Students will discuss the major theoretical and empirical issues and best practices that emerge in gender research
CHILD RIGHTS AND ACTION	1. Understand the concept of child, child protection, as also the needs, situations and problems faced by children.
	2. Gain knowledge about the Constitutional and legal safeguards with regard to child rights
	3. Critically understand the polices, programmes and services related to children, as also the national and international mechanisms to deal with issues of child protection
	4 Develop sensitivity and skills for working with children through an
	5 To gain a familiarity with best child right practices for the protection and promotion of child rights in India.
ORGANIZATIONAL BEHAVIOUR	1. Students will gain knowledge about organizational behaviour.
	2. Students will understand the functions and activities of organizational behavior.
	3. Students will acquire the skills of working with organized sectors and human resources.
	4. Students will gain knowledge about current trends in OB practices
	5. Students will understand the relevance of OB in social work practice
DEVELOPMENT STRATEGIES	1. Students will gain knowledge about Self Help Groups and their problems.
	2. Students will gain knowledge about the economic benefit of water shed management.
	3. Students will gain knowledge about development strategies.

	4. Students will understand the functions and activities of different developmental strategies.
	5. Students will acquire the skills of using the developmental strategies in different sectors.
CLINICAL SOCIAL WORK PRACTICE	1. Students will understand of the concepts related to working in clinical set up and processes involved in it.
	2. Students will understand the use and practice in clinical setting among various fields of social work.
	3. Students will gain knowledge about the role of social worker in mental health centers and hospitals.
	4. Students will become familiarized with the emerging trends and experiments in mental health interventions
	5. Students will understand the uniqueness of social workers role in clinical settings.
INDUSTRIAL RELATIONS	1. Students will gain knowledge about trade unions
	2. Students will understand the functions and activities of trade unions
	3. Students will acquire the skill of working with the workers and unions
	4. Students will understand the functions of trade unions
	5. Students will gain knowledge about ILO
LIVELIHOOD AND SOCIAL AUDIT	1. Students will understand the concept, need, importance and principles of rural livelihood
	2. Students will gain knowledge on livelihood programmes
	3. Students will gain knowledge on rural livelihood and the various methods involved in social auditing
	4. Students will gain knowledge on social audit
	5. Students will acquire skills to practice social accounts and audit
THERAPEUTIC INTERVENTIONS IN SOCIAL WORK	1. Students will understand the various forms of Therapeutic Interventions in
	2. Students will understand the skills in practicing various psychosocial interventions while working with patients, their families and communities.

	3. Students will integrate indigenous and holistic therapeutic practices in keeping with the principles and the code of ethics of Professional Intervention.
CONCURRENT FIELD WORK IV	1. Students will gain experience by applying the theoretical knowledge in the field
	2. Students will understand the functions and activities of field placement organization
	3. Students will acquire of the skills of applying the class learning into practice
PROJECT WITH VIVA VOCE	1. Students will gain research methodology knowledge by undertaking a research project
	2. Students will understand the steps of research by its application
	3. Students will acquire the skills of undertaking a research project
	4. Students will gain skill in working with a research supervisor. The students have to get the guidance and carryout the following steps and complete the research project within a semester.
DISASTER MANAGEMENT	1. Students will understand the dynamic factors of disasters and their impact at an individual and societal level.
	2. Students will understand various phases of disaster management
	3. Students will develop an understanding of the process of crisis and emergency management
	4. Students will understand the impact of disaster and the skills to participate in disaster management
	5. Students will develop an understanding of the social worker's role in the team for disaster management.
CORPORATE SOCIAL RESPONSIBILITY	1. Students will gain knowledge about corporate social responsibility
	2. Students will understand the functions and activities of social audit &entrepreneurship
	3. Students will acquire the skills of promoting and working with social entrepreneurship
HOSPITAL ADMINISTRATION	1. Students will gain basic knowledge on Hospital Administration
	2. Students will understand the functions of Hospital
	3. Students will acquire the skill of administering Hospitals.
	1. Students will understand the basic concepts of Social work

	CONTEMPORARY SOCIAL WORK PERSPECTIVES AND CONCERNS	2. Students will understand the various methods of social work
		3. Students will gain knowledge about the social work responses
		4. Students will know about various avenues of social work
		5. Students will study the emerging areas of social work practices
	DYNAMICS OF HUMAN BEHAVIOUR	1. Students will understand the fundamental components of human behavior.
		2. Students will gain insight into factors contributing to development of personality.
		3. Students will understand growth and development of individual at various stages in the life span.
		4. Students will understand the social basis of behavior and adjustment
		5. Students will understand the processes of adjustment and not-adjustment and its impact on human behavior
	INDUSTRIAL PSYCHOLOGY	1. Student will understand role of Industrial Psychology as a tool of the social work profession.
		2. Student will acquire Psychological knowledge and skills.
		3. Student will become familiar with some of the basic Psychological technique and their application in field of social work as applicable to the Organizational / Industrial setting
	BLOCK FIELD WORK	1. Students will gain experience in a social work field by being in an open or closed setting.
		2. Students will understand the techniques and approaches adopted by the organization.
		3. Students will apply the knowledge gained in the field of social work .
		4. Students will get a placement of their choice and to get into their career.
		1.The student will be able to understand concepts of metric spaces, properties related to functions and discontinuities
		2.The student will be able to understand concepts of Riemann integral and its properties, method of optimizing functions and concepts of derivatives.

Mathematical Analysis	3.The student will be able to understand various properties of matrices.
	4.The student will be able to understand the methods of reducing and decomposing matrices.
	5.The student will be able to understand matrix inversion, quadratic forms and its applications.
Measure and Probability Theory	1.The student will be able to understand concepts of class, field and measurable space.
	2.The student will be able to understand concepts of measure integrals and convergence.
	3.The student will be able to understand various approaches for finding probability, concept of random variables and moments, results related to various inequalities.
	4.The student will be able to understand the concept of independence, characteristic function and convergence of random variables.
	5.The student will be able to understand various limit theorems and laws of large numbers.
Distribution Theory	1.The student will be able to understand concepts and applications of univariate distributions.
	2.The student will be able to understand concepts of and applications of bivariate, truncated and convoluted distributions.
	3.The student will be able to understand various sampling distributions and their properties.
	4.The student will be able to understand the concept of order statistics and their distributions.
	5.The student will be able to understand life distributions and its applications.
Programming in R	1.The student will be able to perform operations on matrices, lists and data frames.
	2.The student will be able to plot diagrams and graphs in R.
	3.The student will be able to perform statistical analysis in R.
	4.The student will be able to perform matrix operations and manipulations in R.
	5.The student will be able to fit linear models in R.

Sampling Theory	1.The student will be able to understand concepts related to census, sampling schemes and surveys.
	2.The student will be able to understand concepts of simple random sampling scheme and its associated results.
	3.The student will be able to understand stratified random sampling scheme and its associated results.
	4.The student will be able to understand different systematic sampling schemes and its associated results.
	5.The student will be able to understand different probability sampling
Estimation Theory	1.The student will be able to understand properties of estimators and concept of sufficient statistic and different ways of obtaining sufficient statistic.
	2.The student will be able to understand concepts results pertaining to unbiased estimators and minimum variance unbiased estimators.
	3.The student will be able to understand inequalities related to variance of unbiased estimators.
	4.The student will be able to understand the methods of moment and maximum likelihood estimation and its associated properties.
	5.The student will be able to understand the method of performing interval estimation and Bayes estimation.
Statistical Practical-1	
Statistical Software Practical-1(Using R)	1. Using R command-Operations on vectors, logical vector, index vector and matrices. Creating and Manipulation of data frames, using various user defined functions.
	2. Matrix addition, multiplication, inverse, transpose, determinant and trace of matrix.
	3. Construction of table with one or more variables.
	4. Graphical procedures– Pie chart, Bar chart, Histograms and Boxplots.
	5. Computation of various descriptive measures such as Measures of central tendency, measures of dispersion, skewness and kurtosis.
	6. Sample selection under various sampling methods.
	7. Calculations of probability functions and generation of random samples for various discrete and continuous distributions.

		8. Computation of correlations and regression co-efficient. Fitting of Linear and non linear models.
	Official Statistics	1.The student will be able to know Different organizations
		2.The student will be able to know Methods of Data Collection
		3.The student will be able to know Crop forecasting
		4.The student will be able to know Index numbers
		5.The student will be able to know measures of national income.
	Advanced Operations Research	1.The student will be able to know Inter programming problem
		2.The student will be able to know Dynamic programming
		3.The student will be able to know Non-Linear Programming
		4.The student will be able to know Stochastic programming
		5.The student will be able to know Inventory models.
	Linear Regression Analysis	1.The student will be able to know Estimation (BLUE)
		2.The student will be able to know Residual Analysis
		3.The student will be able to know Multicollinearity
		4.The student will be able to know Robust estimators
		5.The student will be able to know GLM.
	Actuarial Statistics	1.The student will be able to know Present values and annuities
		2.The student will be able to know Insurance sectors
		3.The student will be able to know Mortality table and LIC table
		4.The student will be able to know Premiums and Profits
		5.The student will be able to know Net Premium and Surplus.
	Basic Statistics	1.The student will be able to know various methods of data collection
		2.The student will be able to know various methods of classification
		3.The student will be able to know various presentations of data
		4.The student will be able to know measure of central tendency
		5.The student will be able to know measure of variation
STATISTICS - PG	Operations Research	1.The student will be able to know solving graphical and simplex programming problems
		2.The student will be able to know solving transportation and assignment problems
		3.The student will be able to know solving network models
		4.The student will be able to know solving various queueing models.

	5.The student will be able to know decision theory and games.
Probability and Statistics	1.The student will be able to know basics of probability
	2.The student will be able to know various distributions
	3.The student will be able to know estimation of parameters and testing of hypothesis
	4.The student will be able to know time series analysis.
	5.The student will be able to know various statistical quality control charts
Indian Official Statistics	1.The student will be able to know functioning of statistical organization in India.
	2.The student will be able to know concept of official statistics
	3.The student will be able to know agricultural and industrial statistics
	4.The student will be able to know index numbers and its usages.
	5.The student will be able to know national income and its measures
TESTING STATISTICAL HYPOTHESES	1.The student will be able to know Testing of hypotheses
	2.The student will be able to know Neyman-Pearson fundamental lemma
	3.The student will be able to know Likelihood ratio (LR) test
	4.The student will be able to know Test for randomness
	5.The student will be able to know SPRT
DESIGN AND ANALYSIS OF EXPERIMENTS	1.The student will be able to know Basics of ANOVA
	2.The student will be able to know Factorial Experiments
	3.The student will be able to know BIBD and PBIBD
	4.The student will be able to know ANACOVA
	5.The student will be able to know RS methodology
MULTIVARIATE ANALYSIS	1.The student will be able to know Multivariate distributions
	2.The student will be able to derive Characteristic function
	3.The student will be able to know Moments of the distribution
	4.The student will be able to understand dimension reduction
	5.The student will be able to know Canonical Correlation.
STATISTICAL METHODS OF EPIDEMIOLOGY	1.The student will be able to know Models of Infection
	2.The student will be able to know measures of association
	3.The student will be able to know Analysis of Data

	4.The student will be able to know Clinical trials
	5.The student will be able to know Simulation.
DATA MINING	1.The student will be able to know Machine Learning
	2.The student will be able to know Client and Server Data Storage
	3.The student will be able to know Data Mining Techniques
	4.The student will be able to know KDD
	5.The student will be able to know Fuzzy and Relational tables.
BUSINESS STATISTICS	1.The student will be able to know basic statistics
	2.The student will be able to know various statistical measures
	3.The student will be able to know parametric methods and it usage
	4.The student will be able to know methods of time series analysis
	5.The student will be able to know methods of index numbers
RESEARCH METHODOLOGY	1.The student will be able to know basics of research and its formulation
	2.The student will be able to know sampling design, sampling techniques and scaling techniques
	3.The student will be able to know methods of data collection and visualization
	4.The student will be able to know parametric tests and its usage
	5.The student will be able to know report writing
STATISTICAL QUALITY CONTROL	1.The student will be able to know Process Control
	2.The student will be able to know Control Charts
	3.The student will be able to know Acceptance Sampling Plans
	4.The student will be able to know Variable Sampling Plans
	5.The student will be able to know Parameters and Reliability Determination
STOCHASTIC PROCESSES	1.The student will be able to understand Markov process, concept of transition probability matrix and derivation of Chapman – Kolmogorov equations.
	2.The student will be able to understand concepts of continuous time Markov process and its applications.
	3.The student will be able to understand the concept of branching process and its variants.

		4.The student will be able to understand the concept of renewal process and its properties.
		5.The student will be able to understand the concept of stationary process and its application to time series modeling.
	STATISTICAL PRACTICAL-II	To enable students to solve problems related to hypothesis testing, analysis of experimental designs, multivariate data analysis, and statistical quality control techniques.
	Statistical Software Practical-II(Using SPSS)	To enable students to utilize the theoretical knowledge gained in the core papers and to develop computational and technical skills for real life applications emphasizing the importance of SPSS programming.
	ECONOMETRICS	1.The student will be able to know Econometric models
		2.The student will be able to know Tools for Multicollinearity
		3.The student will be able to know Stochastic Linear Regression
		4.The student will be able to know Simultaneous Eq. Models
		5.The student will be able to know Two Stages LS techniques.
	BIOSTATISTICS AND SURVIVAL ANALYSIS	1.The student will be able to know Clinical Trials
		2.The student will be able to know Regression Models
		3.The student will be able to know life time distributions
		4.The student will be able to know Survival Analysis
		5.The student will be able to know hazard rate and functions.
	DESCRIPTIVE STATISTICS	1.The student will be able to know functions of statistics
		2.The student will be able to know various statistical measures
		3.The student will be able to know concept of probability
		4.The student will be able to know random variable and its usage
		5.The student will be able to know correlation and regression
	STATISTICAL METHODS FOR RESEARCHERS	1.The student will be able to know descriptive statistics
		2.The student will be able to know various distributions
		3.The student will be able to know correlation and regression
		4.The student will be able to know parametric tests and its usage
		5.The student will be able to know non-parametric tests and its usage
		1.The student will be able to know methods of data collection

DESCRIPTIVE STATISTICS	2.The student will be able to know various techniques of presentation of data
	3.The student will be able to know measures of location and dispersion
	4.The student will be able to know correlation and regression
	5.The student will be able to know association of attributes
MATHEMATICS I	To Explore the Fundamental Concepts of Mathematics
PROBABILITY AND RANDOM VARIABLES	1.The student will be able to know the concept of probability
	2.The student will be able to know Bayesian formula and its applications
	3.The student will be able to know random variables and its properties
	4.The student will be able to know moment generating function and computation of moments
	5.The student will be able to know bivariate distributions and related features
CORE PRACTICAL-1	1. Construction of Uni-variate, bi-variate frequency distributions.
	2. Diagrammatic and graphical representations, Ogives, Lorenz curves.
	3. Measures of location and dispersion.
	4. Measures of skewness and kurtosis for both grouped and ungrouped data.
	5. Principle of least squares and fittings of first, second degree and exponential curves.
	6. Computation of correlation co-efficient. Rank correlation, and fitting regression equations.
	7. Construction of contingency table. Association of Attributes.
	8. Join Probability mass function, Join probability density function, Marginal probability mass and density functions. Expectation, variance and Correlation coefficient.
MATHEMATICS II	To Explore the Fundamental Concepts of Mathematics
DISTRIBUTION THEORY	1.The student will be able to know various discrete distributions
	2.The student will be able to know various continuous distributions
	3.The student will be able to know random variables and its properties

	4.The student will be able to know Limiting distribution and convergence concepts
	5.The student will be able to know the concept of order statistics
NUMERICAL METHODS	1.The student will be able to know how to solve problem of interpolation with equal intervals
	2.The student will be able to know how to solve problem of interpolation with unequal intervals
	3.The student will be able to know the concept of central differences formula and its usage of solving problem
	4.The student will be able to know how to solve problem with inverse interpolation
	5.The student will be able to know the concept of numerical differentiation
ELEMENTARY MATHEMATICS	1.The student will be able to know basics of differential calculus
	2.The student will be able to know the various methods solving differential calculus
	3.The student will be able to know solving asymptote problems
	4.The student will be able to know solving problems using reduction formula
	5.The student will be able to know solving double integral problems
STATISTICAL METHODS - I	1.The student will be able to know visualization of data
	2.The student will be able to know computations of various statistical measures of data
	3.The student will be able to know sample selection and various sampling procedures
	4.The student will be able to know relationship among variables and fitting of simple regression model
	5.The student will be able to know computation of interest calculations
SAMPLING THEORY	1.The student will be able to know the concept of sample survey and its features
	2.The student will be able to know simple random sampling procedure
	3.The student will be able to know stratified random sampling procedures

	4.The student will be able to know systematic sampling procedure
	5.The student will be able to know ratio and regression estimators
STATISTICAL PRACTICAL-II	1. Distribution Theory (problems related to fitting of various distributions such as binomial, poison, normal, computation of correlation, partial and multiple correlation coefficients)
	2. Sampling Theory (problems related to estimates of population mean and variances, under simple random sampling, stratified random sampling, systematic random sampling, ration and regression estimators)
PROGRAMMING IN 'C'	1.The student will be able to know the basic data types of programming in c
	2.The student will be able to know the various control structures and its usage
	3.The student will be able to know the concept of arrays and pointers
	4.The student will be able to know the concept of structures and unions.
	5.The student will be able to know to file structures and its manipulations
NUMERICAL METHODS AND PROGRAMMING IN C	1. Summation of Series: Sin(x), Cos(x), Exp(x), (Comparison with built in
	2. String Manipulation: Counting the no. of vowels, consonants, words, white spaces in a line of text and array of lines. Reverse a string & check for palindrome. Substring detection, count and removal - Finding and replacing substrings
	3. Solution of polynomial equation - Newton Raphson method
	4. Solution of system of simultaneous equation - Gauss elimination method.
	5. Interpolation - Lagrange interpolation.
	6. Numerical integration by Trapezoidal, Simpson's and Weddle's rules - Calculate the value of π (up to five decimal places).
	7. Check the accuracy of the built in functions Sin(x), Cos(x),(x in radians) ex, e-x Generation of Fibonacci Sequence.

		8. Matrix addition, multiplication, inverse, transpose, determinant of square matrix. Solution of simultaneous equations by Iterative methods and by using inverse.
	STATISTICAL DATA ANALYSIS-I (USING R PROGRAMMING)	1. Using R command-Operations on vectors and matrices. Creating and
		2. Matrix addition, multiplication, inverse, transpose, determinant and trace of matrix.
		3. Construction of table with one or more variables. Graphical procedures– Pie chart, Bar chart, Histograms and Boxplots.
		4. Computation of various descriptive measures such as Measures of central tendency, measures of dispersion, skewness and kurtosis. Computation of correlations and regression co-efficient.
	STATISTICAL METHODS - II	1.The student will be able to know computation of population growth rate
		2.The student will be able to know the concept of mortality and its calculations
		3.The student will be able to know the concept of estimation of parameter
		4.The student will be able to know various parametric testing procedures
		5.The student will be able to know various non-parametric testing procedures
	ESTIMATION THEORY	1.The student will be able to know sampling distributions and its applications
		2.The student will be able to know point estimation
		3.The student will be able to know properties of estimators and related results
		4.The student will be able to know various methods of estimation
		5.The student will be able to know interval estimation and test of significance
STATISTICS - UG		1.The student will be able to know the need of statistical quality control techniques
		2.The student will be able to know control charts for variables and its applications in industries

STATISTICAL QUALITY CONTROL	3.The student will be able to know control charts for attributes and its applications in industries
	4.The student will be able to know acceptance sampling plans for attributes
	5.The student will be able to know the concept of variable sampling plans and it features.
OPERATIONS RESEARCH	1.The student will be able to know the basics of optimization techniques
	2.The student will be able to know procedures of solving linear programming problems.
	3.The student will be able to know solving transportation and assignment problems.
	4.The student will be able to know game theory and solving sequencing problems
	5.The student will be able to know critical path method of solving network problems.
APPLIED STATISTICS	1.The student will be able to know time series and its components
	2.The student will be able to know measuring seasonal variations in the data
	3.The student will be able to know index numbers and its usage
	4.The student will be able to know cost of living index and its applications
	5.The student will be able to know theory and applications of demand analysis
DEMOGRAPHY	1.The student will be able to know the concept of demography and its sources
	2.The student will be able to know computation of mortality rates and its variants
	3.The student will be able to know computation of fertility rates and its variants
	4.The student will be able to know construction of life tables
	5.The student will be able to know statistical tools for projection of populations
	1.The student will be able to know structure of DBMS.

DATA BASE MANAGEMENT SYSTEM	2.The student will be able to know the concept of entity relationship models
	3.The student will be able to know relational data based designs
	4.The student will be able to know standard query language
	5.The student will be able to know the concept of PL/SQL
INDIAN OFFICIAL STATISTICS	1.The student will be able to know functioning of statistical organization in India.
	2.The student will be able to know concept of official statistics
	3.The student will be able to know agricultural and industrial statistics
	4.The student will be able to know index numbers and its usages.
	5.The student will be able to know national income and its measures
TESTING STATISTICAL HYPOTHESES	1.The student will be able to know Neyman-Pearson Lemma and its applications in hypothesis testing
	2.The student will be able to know uniformly most powerful tests
	3.The student will be able to know sequential probability ratio test and its applications.
	4.The student will be able to know various nonparametric tests
	5.The student will be able to know the concept of decision theory.
DESIGN OF EXPERIMENTS	1.The student will be able to know the principles of experimental designs.
	2.The student will be able to know ANOVA and multiple comparison tests.
	3.The student will be able to know various design procedures
	4.The student will be able to know missing plot techniques
	5.The student will be able to know the concept of factorial experiments.
STOCHASTIC PROCESSES	1.The student will be able to know random processes and its classification.
	2.The student will be able to know Markov chain and its applications.
	3.The student will be able to know limiting distribution of transition probability
	4.The student will be able to know Poisson process and its applications

	5.The student will be able to know the concept of branching processes.
STATISTICAL PRACTICAL-III	1. Estimation theory (problems related to estimation of parameters under various methods, confidence intervals for mean, variance and proportions)
	2. Statistical Quality Control (Control charts for variables and attributes).
	3. Testing of Statistical Hypotheses (problem related to test of significance of mean, variances, one sample, two samples and more than two samples, Non-parametric tests)
	4. Design and Analysis of Experiments (problem related to CRD, RBD, LSD, Missing Plot Techniques, Factorial experiments 23, 32 and BIBD)
MATHEMATICAL ECONOMICS	1.The student will be able to know basics of mathematical economics
	2.The student will be able to know relationship between supply and demand
	3.The student will be able to know to execute cost analysis
	4.The student will be able to know market structure
	5.The student will be able to know production function and its properties
REAL ANALYSIS	1.The student will be able to know the concept of set theory and applications
	2.The student will be able to know the concept of real numbers and sequences
	3.The student will be able to know the concept of series of real number and its convergence and divergence
	4.The student will be able to know functions and extreme value theorem and it usage
	5.The student will be able to know mean value theorems and its applications
	1.The student will be able to know the basics of genetics
	2.The student will be able to know estimation of parameters using probit models

	STATISTICAL GENETICS	3.The student will be able to know estimation of parameters using logit models
		4.The student will be able to know various computational method indices
		5.The student will be able to know applications of exponential and weibull distribution.
	ACTUARIAL STATISTICS	1.The student will be able to know computation of interest and its variants
		2.The student will be able to know computation of annuities
		3.The student will be able to know various related features of annuities
		4.The student will be able to know computation of stochastic interest rates
		5.The student will be able to know computation of mortality
	STATISTICAL DATA ANALYSIS -II (Software based)	1. Tabulation and diagrammatical representation of data.
		2. Measures of Central Tendency, Dispersion, Skewness and Kurtosis
		3. Correlation and Regression, simple and multiple linear regression.
		4. Parametric tests - t-test, F-test, chisquare test.
		5. Analysis of variance: One way Classification, Two way Classification.
		6. Non-parametric tests: Sign test, Wilcoxon test, Mann-Whitney U test, Median test, Run test, Kolmogorov Smirnov test, Kruskal Wallis test.
		7. Statistical Quality control charts for variables
		8. Statistical Quality control charts for attributes
	FUNDAMENTALS OF COMMUNICATION	1. Would know about factors influencing communication process
		2. Would understand the elements and signs of communication
		3. Understand Communication models and theories
		4. Would establish concepts of communication for development
		5. Effectuate the creative thinking process
		1. Understand the formal language of drawing and the fundamentals of artistic expression. Understand the basic principles of linear perspectives

DRAWING	2. Demonstrate a basic understanding of the principles of composition, proportion & texture. Understand the effect of light on three-dimensional forms as it applies to drawing
	3. Realistically render subjects from direct observation. Demonstrate skills of visual perception, spatial concepts, and critical thinking.
	4. Demonstrate an understanding of classification of the different types with their names and character, mode, weight, orientation, position & sizes. Understand scale and ratio of letter forms. Present phonetic expressions in visual forms. Depict monograms using text and sound. Demonstrate ability to use calligraphy to draw objects – apply calligraphy techniques
	5. Show basic proficiency in use of Application Software. Demonstrate ability to transition hand drawing to digitized design, Modify, compose and present hand-illustrated art as digital images.
Writing for Media	1. CREATE the foundations of good writing skills with a steady grasp of grammatical aspects as well as the process of writing.
	2. GAIN knowledge and skills relating to writing techniques for various types of assignments related to print media.
	3. UNDERSTAND and BUILD the skills required to writing for the ears so as to be able to produce written scripts for various types of radio programmes.
	4. DEVELOP the skills to write for visual medium by learning to write scripts in various formats for different types of programmes for television and for films.
	4. ENHANCE the skills required to write various types of content required in the realm of New Media.
Introduction to Visual Communication	1. Gain understanding of the concept of Communication
	2. Would know the Evolution of Communication
	3. Imbibe an overview of communication discipline
	4. Render analytical capability of the elements of visual communication
	5. Skilled in conceptual thinking and creativity
	1. Get conversant with the concept of photography as a language of light

Photography	2. Understand the various situations during which different cameras/lenses could be used by applying the knowledge about their features.
	3. Analyse and understand the significance of lights & lighting in photography.
	4. Illustrate the various genres of photographs with their key features.
	5. Evaluate the merits and limitations of digital photography in comparison to traditional photography.
Allied Practical	
Photography	1. Gain knowledge regarding lighting, aperture, shutter speed etc., while taking pictures of objects and the same for taking portraits
	2. Comprehend the different lighting techniques so that they can take photographs with various effects and capture human expressions especially children.
	3. Apply the lighting techniques to advertise products and fashion shows.
	4. Demonstrate the significance of environment and the role of photographs in creating environmental awareness and sustainable development.
	5. Create photo stories using elements of human interest.
TELEVISION AND RADIO PROGRAMMING	1.Acquisition of basic knowledge about the origin, growth and development milestones/events/issues in the field of electronic media (Television and Radio).
	2.Acquaintance of the skills in various stages of Radio and Television Programme Production Process
	3.Students would be able to develop the knowledge of various Programme Formats and Sources of Radio Television Programming
	4.Students can analyse and demonstrate the ability to recognize Broadcast program structure elements
	5.Students (Radio & Television Programming) are assigned to analyze various policies/structure/formats and elements of radio and television programme in audience perspective/appeals and application of program development principles.

BASICS OF NEWS PRODUCTION	1.The students acquire basic learning outcome in process of news writing for Radio and Television Broadcasting in India.
	2.The students get acquainted with the skills in various techniques of reporting and sources of news for Radio and Television News Production Process
	3.Students would be able to develop the knowledge of various writing
	4.Students will be abe to analyse and gain the ability to recognize and finalise structure elements the news for Broadcast is Student Learning Outcomes
	5.Students (Radio & Television Programming) are assigned to Managing and Allocating Editorial Resources, Team work to create news bulletins for radio and television.
Design Principles I	1Students comprehend the Photo-editing Software Environment and learn to set up customized workspaces
	2. Demonstrate an understanding of image types and the need for manipulation of images for inclusion in composite design
	3. Practice in-depth skills of various tools available for image manipulation.
	4. Demonstrate ability to comprehensively use Photo-editing Software to prepare images for composite use
	5. Show proficiency in use of Photo-editing Software to create various image-
EVENT MANAGEMENT	1Would know the basics of event management
	2. Would understand the elements of event
	3. Would get overview of various types of events
	4. Would organize events in a better way with the background knowledge gained
	5.Would understand the event management process on the whole
ADVERTISING	1Would learn the adverting concepts and types
	2. Would understand the contemporary trends
	3. Would gain knowledge on agencies and their roles
	4. Would get an overview of campaigns
	5. Would understand the impacts of advertising
	1.The students acquired basic knowledge about the Understanding the

VISUAL COMMUNICATION - UG	AUDIOGRAPHY AND VIDEOGRAPHY	2.The students acquaintance the skills in the Sound Production Equipments and Aesthetics Radio and Television Programme Production Process
		3.Students would be able to develop the knowledge of important aspects of Videography for various TV Programme Formats
		4.Students to develop the analytical knowledge skills about the use of Lenses, Filters and Lighting for Television media as a Learning Outcomes
		5.Students are assigned to analyze of the Psychological Composition of Videography for producing various formats of television programme.
	ADVERTISING AND PUBLIC RELATIONS	1.Holistic understanding of the organization and structure of advertising industry and its influence on other social institutions.
		2. Analyse the tone, appeal and message of print advertisements through deconstruction.
		3. Critical analysis of advertising campaign and define the process of its production.
		4. Comprehend the concept of Public Relations and Illustrate the role of advertising in public relations.
		5. Apply the knowledge of Public Relations to analyse PR activities of Contemporary companies.
	TELEVISION AND RADIO PRODUCTION	1DETERMINE radio production skills by producing various programme formats.
		2. PRACTICE radio news writing, scripting, editing and sound recording.
		3. PRODUCE a radio news bulletin, documentary/drama, jingles, live
		4. ARTICULATE a theoretical and practical understanding across a range of skills in radio production.
		5. ASSEMBLE a variety of practical skills in areas including sound design in radio production.
		6. DESCRIBE the core concepts associated with film and television.
		7. PRODUCE a full-fledged Television News Bulletin that requires reporting, editing, sound mixing and other journalistic and non-journalistic aspects of news production.

	8. CONSIDER the Journalistic and Technical quality of Television news production.
	9. PRODUCE a meaningful and compelling documentary with an emotional connection to subject matter.
	10 ADMINISTER a social and emotional learning by interacting with real-life
	11. INTEGRATE literacy with connections to a source, to self, and to the world through a short documentary story.
	12. FACILITATE newly learned ideas through reflective writing for documentary.
COMMUNICATION AND PRESENTATION SKILLS	1. Learn the tools and elements of communication and its importance.
	2. Comprehend language and its importance in visual communication
	3. Develop writing and listening skills among students
	4. Orient students in public speaking skills through debates and talk shows.
	5. Overcome the fear of writing skills and develops their thoughts by gathering, collecting and organizing the assignments.
PHOTOGRAPHY	1.Imbibe the basics of photography
	2. Understand lighting and its techniques
	3. Would gain knowledge on composition
	4. Gain an overview of various types of photography
	5. Evolve ways to apply the industry technicalities
FILM STUDIES	1. Understand film perception with aesthetics and ability to interpret films.
	2. Understand and appreciate the film forms and their narratives.
	3. Appreciate the tools and techniques involved in film making along with the film editing and special effects.
	4. Understand the categories of film festivals and film awards and the process of film censorship.
	5. Appreciate the economics, and finance involved in film business.
INTERNET AND SOCIAL MEDIA APPLICATIONS	1. Obtain a holistic understanding of the evolution of the internet in India
	2. Make a critical study of the impact of the internet on the society.
	3. Thorough knowledge of the use of artificial intelligence and its pros and cons.

	4. Analyse laws and ethics applicable to online media
	5. Become adept at the different aspects of social media applications.
MARKET STUDY AND SURVEY TECHNIQUES	1. Identify needs of market research in the competitive world.
	2. Identify research problem and prepare the research design.
	3. Understand and implement ways of preparing the survey and its methods.
	4. Relate and validate the data to evolve the results.
	5. Ability to realize the importance of market study and various brands and their market analyses.
BASICS OF JOURNALISM	1. Develop instincts for news formulation.
	2. Gain a thorough knowledge of the working of news organisations
	3. Evolve clear understanding of the newspaper pages and their classifications.
	4. Imbibe methods of news production in radio and television mediums.
	5. Effectuate news editing methods systematically.
DESIGN PRINCIPLES II	1. Students will comprehend the basics of publishing software work spaces
	2. Will demonstrate ability to flow text into documents, define text
	3. Will learn how to apply paragraph, object and character styles in publishing layouts, include tables, apply colour to the document to enhance focus for key information.
	4. Will learn skills of using / incorporating images and graphics to stories and merge text and images in the layout
	5. Will demonstrate competence in being able to complete a publishing document including preparation of the document for printing and e-publishing
INTERNSHIP	1. Explore various career possibilities in Media Industry.
	2. Opportunity to learn the essential self-discipline, teamwork, skills, attitudes, responsibility, and initiative.
	3. Further develop practical skills in a real-world context
	4. Provide an opportunity to strengthen the portfolio or resume with practical experience.

	5. Provide a learning experience for the student which can lead to entry level job opportunities within the company.
MEDIA LAWS AND ETHICS	1. Inculcate the evolution and making of the Constitution of India, by discussing the context in which the Constituent Assembly discussions are held.
	2. Demonstrate the understanding of the basic structure and the salient features of Indian constitution.
	3. Comprehend the laws related to press, communication and media.
	4. Critically analyse the status of press freedom and copyrights issues
	5.Establish the ideas related to RTI and other rights.
MANAGING MEDIA BUSINESS	1.Identify and understand the media management in print and broadcast media.
	2.Understand the significance of advertising in media business.
	3.Understand the digital transition in advertising and the content marketing.
	4.Understand the concept of mobile marketing and familiarize with digital indepth understanding.
	5.Appreciate the business models in media management in both online and offline media.
PRODUCTION MANAGEMENT	1. Students will be sensitized to how a typical advertising agency functions and comprehend the role of a Studio manager in the scheme of things.
	2. Will develop skills in being able to identify the traffic flow in a graphic design studio and will reflect deeper understanding of inputs required for optimum delivery of desired output in advertising collaterals
	3. Will provide students with a deeper understanding of various printing processes available and comprehend processes involved in the process of delivering a printed output.

	4. Will introduce students to the various Audio Visual media opportunities available for creating of advertising and help them understand the need for and the role played by various participants in the content creation process
	5. Will be able to play the role of a production manager for an adfilm production and enumerate various steps and stages involved in the production process.
COMPULSORY PROJECT	1. Demonstrate an understanding of the entire film production process
	2. Ability to handle film production crew
	3. Trained to write script, screenplay and story board for a feature/short film/documentary.
	4. A deeper understanding of the concept of the reality associated with documentary making.
Marketing Communication	1Identify the components of marketing communication and the relevance of Integrated Marketing Communication in the contemporary society.
	2. Determine how marketing objectives are converted to advertising objectives, advertising strategies and in turn communicated to the target
	3. Understand the notion of Public Relations and its association with other components of marketing communication.
	4. Analyse the strength and limitations of personal selling and sales promotion tools.
	5. To analyse and evaluate how companies have responded to the internet to go about conducting online marketing.
LIGHT AND COLOUR	1. Experience, transparent, water ad opaque colors.
	2. Gain knowledge of color properties
	3. Ability to differentiate primary, secondary and tertiary colors
	4. Experience the color harmonies
	5. Evolve an understanding of optic illusion
	1. Aware of the evolution of visual merchandising with an insight into the basics of display practices along with the fundamentals of design and design principles.

	VISUAL MERCHANDISING	2. Understand strengths and limitations of visual display structures by developing an understanding of the organization of a retail store - both interior and exterior.
		3. Relate the display techniques to the contemporary retail display structures and window display construction.
		4. Illustrate the procedure of store planning with the creation of a planogram.
		5. Apply the knowledge to evaluate the local/regional retail showroom visual merchandising activities.
	LIFE AND DIVERSITY OF INVERTEBRATES	1. The student will be able to understand
		Basic Concepts of Species
		Hierarchial taxonomy
		Importance of Parasitic Protozoan
		Economic importance of Protozoan and Porifera
		Systematic position and Affinities of sponges
		2. The student will be able to understand
		Origin and evolution of Coelenterata.
		Corals and Coral reefs.
		Systematic position of Ctenophora.
		Helminthes in human diseases.
		Life cycle of Wuchereria bancrofti.
		3. The student will be able to understand
		Origin and Evolution of Annelida
		Evolutionary significance of Trochophore Larva
		Adaptive radiation in Annelida
		Origin and Evolutionary significance of Crustacean
		Economic importance of insects
		4. The student will be able to understand
		Torsion and Detorsion in Gastropoda
		Economic importance of Mollusca
		Pearls production.
		Water vascular system
		evolutionary significance of Echinoderm larva
		5. The student will be able to understand

	Structural peculiarities and affinities of Acanthocephala
	Structural peculiarities and affinities of Nematomorpha, Brachiopoda
	Structural peculiarities and affinities of Chaetognatha and Echiuroidea
	Invertebrate fossils: Trilobites, Brachiopoda
	Invertebrate fossils: Mollusca and Echinodermata.
LIFE AND DIVERSITY OF CHORDATES	1. The student will be able to …..
	Understand the principles of taxonomy
	Acquire knowledge on nomenclature
	Realize the importance of suffix used in taxonomy
	Know the trends in taxonomy
	Understanding the different taxonomical keys used for identifying the species
	2. The student will be able to …..
	Know the primitive forms of chordates
	Understand the systematic position of the primitive forms
	Acquire knowledge on Silurian and Devonian Chordates
	Realize the importance evolutionary significance
	Understanding the origin of Jaw and structural peculiarities of the species
	3. The student will be able to …..
	Understand the fossil history of Chondrichthyes
	Know the tendencies of elasmobranch evolution
	Acquire knowledge on origin and evolution of Actinopterygii
	Understand the adaptive radiation and evolution of bony fishes
	Know the origin and evolution of Amphibia
	4. The student will be able to …..
	Acquire knowledge of evolution of Reptilia and adaptive radiations and the evolution of Saurischian and Ornithischian Dinosaurs
	Know the fossil history of birds and why it is called as glorified reptiles?.
	Understand the adaptive radiation of birds and palate in birds
	Acquire knowledge on evolution of Mammals

	Grasping the structural peculiarities of Prototheria, Metatheria and Eutheria
	5. The student will be able to …..
	Acquire knowledge on Comparative anatomy of vertebrates
	Understand the origin and evolution of vertebrate integuments
	Know the evolution of paired fins and limbs
	Acquire knowledge on the evolution of heart and aortic arches
	Grasping the development of brain in vertebrates
CELL AND MOLECULAR BIOLOGY	1. The student will be able to
	Explain the structure of membrane and intercellular components and related to the function.
	Summarizing the energy transduction in cells.
	2. The student will be
	Exhibiting knowledge in structure and function of Nuclear membrane.
	Understanding the properties of polytene chromosome.
	To study the structure and function of Nucleolus.
	3. The student will be
	Demonstrate the knowledge of cell cycle and M-Cdk inactivation.
	To understand the creating G1 phase and cell cycle progression.
	To acquire the knowledge in hormonal activity and cancer.
	4. The student will be
	Understand the chemistry of DNA
	They acquire the knowledge of describing the structure, replication of DNA
	To explain the post of transcriptional and transduction of DNA.
	5. The student will be
	To know the information transfer in prokaryotic and eukaryotic.
	The student can able to understand the about the specificity of exon and introns.
	1. The student will be able to …..
	Know what are Aquaculture and their importance?
	Gain knowledge on Global scenario and Indian status
	Understand the prospects and scope of aquaculture

AQUACULTURE AND FARM MANAGEMENT	Acquire knowledge on farm design, structure and construction
	Realize the importance of farm management
	2. The student will be able to …..
	Acquire knowledge on cultivable species
	Understand the culture system of the species
	To gain the knowledge of culture practice of seaweeds, prawns, molluscs and fishes
	Realize the importance of physico-chemical parameters in the culture
	Gain knowledge on management aspects of farm
	3. The student will be able to …..
	Understand the seed resource availability in the natural system
	Know the methods of How to collect seeds from wild environment?
	Acquire knowledge on artificial breeding techniques and induced breeding methods
	Gain knowledge on packing and transportation of seeds
	Learn information on the culture of live feed organisms and feed formulations
	4. The student will be able to …..
	Know the traditional culture system followed in our country
	Understand the intensive culture system practices in our country
	Realize the importance of culture system of fishes
	Why the integrated aqua farming of fishes practiced?
	Understand the employment opportunity in the aquaculture industry
	5. The student will be able to …..
	Understand the role of environmental factors in the culture system
	Gain knowledge on feed management in the culture system
	Acquire knowledge on Control of parasites and predators in the culture system
	Know the eradication techniques of weeds in the farm
	Procure knowledge on disease diagnosis and the methods used for diagnosis.
	1. The student will be able to …..

BIOSTATISTICS AND BIOINFORMATICS	Compute basic probabilities as used in statistical applications by demonstrating the elementary rules of probability
	prove an understanding of discrete probability distributions by assembling a discrete probability distribution
	Solving binomial distribution problems that require the use of a discrete binomial distribution
	Planning and proposing the uses of the Poisson distribution for solving problems
	2. The student will be able to …..
	Show a working knowledge of sampling, sampling distributions, and confidence intervals by constructing a sampling distribution of the sample mean.
	The use and application of hypothesis testing
	Understand the applications of Chi-square
	3. The student will be able to …..
	Understand how to apply linear regression to analyze problems
	Understand how to design an experiment by ANOVA.
	4. The student will be able to …..
	Understand the basic concepts of Bioinformatics and its significance in Biological data analysis.
	Understand various techniques used in genomics and proteomics
	5. The student will be able to …..
	Understandthe various techniques, algorithms and tools used for Phylogenetic Analysis
Apiculture (Bee keeping)	1. The student will be able to
	Identify different types of species.
	Ascertain different roles played in different species of bees.
	Ascertain importance of economic aspects of honeybees.
	2. The student will be able to
	Identify the need of improving efficiency of bee keepers.
	Understanding the biology and the behavior.
	Manage insect’s diseases and nuisances in beehive.
	3. The student will be able to
	Identify common Indian tests stored in combs built by bees.

Apiculture (Bee keeping)	Enable to learn the management techniques.
	4. The student will be able to
	Learn and understand the local skills, knowledge and traditions.
	Acquire knowledge of integration into forming system.
	To learn different types of products and its uses.
	5. The student will be able to
	To Acquire the knowledge of beekeeping industries.
	To learn and understand the natural climate condition, natural enemies, pest and diseases, human activities.
	To study and learn the apiary and hive hygiene.
PUBLIC HEALTH AND HYGIENE	1. The student will be able to
	Describe under connected relationships among physical social and environmental health and diseases.
	Students comes to know the about the role of multiple determination of health across diverse population.
	2. The student will be able to
	Describe the environmental pollution and health hazards.
	To study and able to understand hospital applications, health problems due to industrialization.
	3. The student will be able to understand
	The major themes for life skill based hygiene education.
	Student acquire knowledge about communicable diseases.
	4. The student will be able to understand
	How to take precautionary steps for communicable diseases and sporadic diseases.
	Student can able to learn the demerit's and alcoholism and drug dependence.
	To learn the remedy for obesity mental illness and health problems.
	5. The student will be able to understand
	To know the government and voluntary organizations and their health service of India.
	Understand the health programme in India.
	1. The student will be able to

GENETICS	Describe the structure of nucleic acid and polypeptide concept.
	Tthey can able to understand the bacterial genetics and family history.
	2. The student will be able to
	Discuss the mechanisms of genetic regulation .
	To understand the knowledge of operon systems and metabolic errors.
	3. The student will be able to
	Describe the mutation of dosage compensation and imprinting.
	To study the syndromes of sex & autosomal chromosomes in human.
	4. The student will be able to
	To understand the genes and development ,chromosomal breakage , mutagenesis and carcinogenesis
	Understand the insight into the mathematical, statistical and computational basis of genetic analysis.
	5. The student will be able to
	To analyse the function of applied genetic research in technology, nature, and society.
	They access the impact of genomics, proteomics and bioinformatics on society.
ENVIRONMENTAL BIOLOGY	1. The student will be able to understand
	Asses necessary scientific concepts and data.
	They establish integral cultural context.
	2. The student will be able to understand
	Acquire the knowledge and still to view the self and social situation in the ecological and cultural and social context.
	Acquire the knowledge skill necessary to achieve and understanding environmental problems.
	3. The student will be able to understand
	Appreciate attributes of natural resources and management.
	Appreciate the ideas of unsustainable development.
	4. The student will be able to understand

	Competent in basic forest management principles and evaluation of forest stands for health, wild life habitat.
	Identifying soli type how they are formed and ways to modify soil structure and improved soil fertility.
	5. The student will be able to understand list out major places and
	Describing the effects of air pollution and their management.
	Know about the global environmental issues.
BIOTECHNOLOGY	1. The student will be able to understand
	The tools and strategies used in genetic engineering.
	The applications of recombinant DNA technology and genetic engineering.
	2. The student will be able to understand
	The Bacterial plasmid vectors PBR 322 and PUL 19.
	Bacteriophage vectors
	3. The student will be able to understand
	Biotechnological techniques like embryo transfer and in vitro fertilization
	4. The student will be able to understand
	Critically evaluate the role of micro-organisms in specific biotechnological processes
	5. The student will be able to understand
	The applications of biotechnology in agriculture, medicine and food science.
LIFE AND DIVERSITY OF INVERTEBRATES AND CHORDATES AND CELL AND MOLECULAR BIOLOGY	
GENETICS, ENVIRONMENTAL BIOLOGY AND BIOTECHNOLOGY	
	1. The student will be able to understand
	Understanding the function of endocrine organs, metabolisms and their effects on their body.
	Knowledge the pharmacology and use of insulin.
	Understand the endocrine problems.
	2. The student will be able to understand

ENDOCRINOLOGY	Ability to analyse the related to hormone
	Ability to analyse pituitary disorders.
	Learning the deficiency hypothalamus.
	3. The student will be able to understand
	Learning and acquiring the
	Studying hypo and hyper thyroidsism.
	Understanding the diagnosis of thyroid gland function.
	4. The student will be able to understand
	Acquiring knowledge about reproduction system.
	Learning the reproduction anatomy of physiology.
	Acquire the knowledge of gonadal hormones of physiology.
	5. The student will be able to understand list out major places.
	Enable them to understand child disorders.
	Learning the athletic performance by hormone test.
	Learning about different types of neoplasma and learn about multimodality cancer therapy.
BIOCHEMISIRY	1. The student will be able to
	Analyse buffer, electrolytes, and water balance.
	Student acquire knowledge to the experiments on blood and urine samples.
	Describe the transport of biological samples.
	2. The student will be able to
	Describe the digestion of protein, absorption, degradation of aminoacids.
	Students can understand the deamination and transmination reactions.
	Student will use current biochemical techniques to plan and molecular techniques.
	3. The student will be
	Exposed to wide range caries that combine biology and medicine.
	Student learn the biological significance of how macro molecules broken down into micro molecules.
	4. The student will be able to understand
	Students were aware of tissues hormones and Synthetic hormones.

		5. The student will be able to soluble vitamins.
		Student can be able to understand the disorders of carbohydrates metabolisms.
	VERMICULTURE	1. The student will be able to
		Understand the worm forming in modern forming.
		Understand potential vermin compost as an alternative to chemical fertilizer.
		Acquire knowledge about the maintaining health of soil and humans.
		2. The student will be able to
		Understand a important role in Economics.
		Understand the role of vermiculture in protecting the environment.
		Student can learn and get the knowledge of composting.
		3. The student will be
		By using vermicompost in their field can incrase the crop yield.
		Student reriding near by the cities using vermicompost used in small scale for garden.
		By propogating vermicopostion.
		4. The student will be
		The student enables to generate income by supplying worms, vermiwash and vermicompost.
		By developing propogating vermicomposting technology to present environmental pollution.
		Learn towords organic forming and healthy food.
		5. The student will be
		To study the interaction of earthworm in the organisms.
		To learn the production of vermicompost for Agriculture.
		To understand the financial support of the Governments.
		1. The student will be able to
		Understand the factors affecting the need to find sustainable practices for producing food.
		How the environment influences plant growth and crop field?
		Learn to modify soil structure and drainage to reduce erosion to reduce the soil erosion.

ZOOLOGY - PG	WILDLIFE MANAGEMENT & CONSERVATION	2. The student will be able to
		Students can evaluate the current status of endangered mammals.
		Students learn the information of project tiger and project elephant.
		Apply knowledge to solve problems related to wildlife conservation.
		3. The student will be able to
		Identify species, characteristics, habited requirement and life cycle of bird.
		Learn how wildlife conservation and management relates to economy both currently and in future.
		Understand the structure and types of plumage.
		4. The student will be able to
		Identify the types of butterflies.
		Identify the types of moths.
		5. The student will be able to
		Gain awareness and understanding of international forestry.
		Develop skills geographical analysis, basic surviving, mapping.
		1. The student will be
		Able to understand clearly about the nutrient materials.
		Able to understand clearly about digestion.
		Able to understand clearly about absorption of proteins
		Able to understand clearly about carbohydrates and lipids
		Able to understand gastro intestinal hormones in digestion
		2. The student will be
		Able to understand clearly about physiology of respiration.
		Able to understand clearly about respiratory pigments.
		Able to understand clearly about nervous, chemical and BMR
		Able to understand types of Heart, Heart beat in vertebrates
		Able to understand clearly about blood coagulation and theories.
		3. The student will be
		Able to understand about excretion.
		Able to understand about metabolic waste products.

	ANIMAL PHYSIOLOGY	Able to understand about metabolic waste products in relation to environment
		Able to understand osmoionic regulation in invertebrates and vertebrates.
		Able to understand clearly about physiology of excretion of man.
		4. The student will be
		Able to understand about neuromuscular coordination.
		Able to understand about types of neuron, transmission of nerve impulse and reflex action.
		Able to understand about muscle fiber and physiology of muscle contraction.
		Able to understand about endocrine glands in mammals.
		Able to understand about physiology of mammalian reproduction and hormonal control of reproduction.
		5. The student will be
		Able to understand bioluminescence.
		Able to understand the functional importance.
		Able to understand the different types of behavior.
		Able to understand the trophism, taxis, kinesis, reflex, learning.
		Able to understand poikilotherms, homeotherms and heterotherms.
		1. The student will be
		Able to understand clearly about the different developmental stages.
		Able to understand gastrulation movements on the egg cortex.
		Able to understand cell communication.
		Able to understand chemotactic induced aggregation in sponges.
		Able to understand clearly development of echinoderms, amphibians and birds.
		2. The student will be
		Able to understand Organ rudiments
		Able to understand development of Heart
		Able to understand development of Kidney in different mammals.
		Able to understand about organiser.

	DEVELOPMENTAL BIOLOGY	Able to understand about tissue interactions in development
		3. The student will be
		Able to understand nuclear transplantation in amphibians.
		Able to understand the results at the end of nuclear transplantation experiments.
		Able to understand role of genome in the transcription and translation levels.
		Able to understand genetic defects.
		Able to understand role of cell death during development.
		4. The student will be
		Able to understand metamorphic changes.
		Able to understand metamorphic changes in amphibians
		Able to understand insect metamorphosis.
		Able to understand biochemistry of metamorphosis.
		Able to understand hormonal action during metamorphosis.
		5. The student will be
		Able to understand nutritional requirements of embryo.
		Able to understand modes of embryonic nutrition.
		Able to understand transfer of food preserve from mother to embryo.
		Able to understand physiology of placenta.
		1. The student will be able to understand
		Major targets of defence system.
		Phagocytic cells.
		Polymorpho nuclear neutophils.
		Lymphoid organs.
		Antigens.
		2. The student will be able to understand
		Immunoglobulins.
		Antigenic determinant.
		Isotopes and biological function.
		Monoclonal and polyconal antibodies.
		Immunoglobulin and disorders.
		3. The student will be able to understand

IMMUNOLOGY	Antigen-antibody reaction.
	Cytolysis.
	Complement fixation.
	Immuno assay.
	Harmful effects of antigen.
	4. The student will be able to understand
	Antigen-antibody interaction.
	Major Histocompatibility Complex.
	Genetics of HLA.
	Hypersensitivity.
	Tumour Immunology.
	5. The student will be able to understand
	Transplantation immunology.
	Graft acceptance and rejection.
	Immuno deficiency.
	Immuno techniques.
	Biosynthesis of Antibody.
BIO-ETHICS AND BIO-SAFETY	1. The student will be able to understand
	Study the positive and negative effects of Bio-ethics.
	Able to define Bio-ethics and explain the fundamental of ethical rights and principles that apply to
	Student learn the ethics in rice, vegetable, fruits, resistance crops, consumer traits.
	Environment and eco-safety makes the student to understand food school.
	2. The student will be able to understand
	To understand the production of secondary metabolites.
	To understand the biotechnical food preparations.
	To explain the microbial degradation pesticides and bio-fertilizer.
	To know the practical use of biotechnology application medicine, agriculture, and food production.
	3. The student will be able to understand
	To describe the regulatory frameworks in India and USA.
	To gain knowledge of the good laboratory practice.

	To understand the awareness of the clinical trials.
	4. The student will be able to understand
	To understand the guide lines for laboratory animal handling.
	To know the concerns of animal welfare.
	To learn the condition and treatments which avoid mental suffering of test animals.
	To learn the facilities, provide for the experimental animals.
	5. The student will be able to understand
	To encourage research scholarship and spirit of inquiry by generating new knowledge.
	To facilitate the transfer of knowledge and technology to intending users to
	To create respect for other people IPR among the members of the institute.
	To learn the awerness on IPR through conducting seminars.
BIOPHYSICS	1. The student will be able to understand
	Electron configuration.
	Bonds.
	Electrostatic force.
	Hydrophobic and hydrophilic.
	Kinetic energy.
	2. The student will be able to understand
	Laws of Thermodynamics.
	Concept of free energy.
	Rate of reactions.
	Bioluminescence.
	Fick's Laws.
	3. The student will be able to understand
	Light microscope and Electron microscope.
	Polarising microscope and Fluorescent microscope.
	Phase contrast microscope and Dark field microscope.
	Interference microscope.
	X-ray microscope.
	4. The student will be able to understand
	Electromagnetic spectrum.

	Principles involved in Photoelectric colorimetry.
	Principle of Spectroscopy and UV & IR Spectroscopy.
	GM tubes and Liquid Scientillation counters.
	Effects of radiation.
	5. The student will be able to understand
	Biophysical aspects of vision, hearing and nerve.
	Application of Radioimmuno assay.
	Magnetic Resonance Imaging.
	Nuclear Medicine for Therapy.
	Mammography.
AQUARIUM FISH KEEPING	1. The student will be able to
	a) Acquire basic knowledge about aquarium
	b) Learn about the exotic and endemic aquarium fish species
	c) Know about the construction of home aquarium
	d) Understand the materials requirement for setting up home aquarium
	e) Know the usage of minor equipment used in the aquarium
	2. The student will be able to
	a) Acquire knowledge on freshwater and marine water aquarium fishes
	b) Know the fresh water aquarium plants used in the tank
	c) Learn their secondary sexual characters
	d) Know the breeding and spawning behavior of aquarium fishes
	e) Understand the parental care present in the aquarium fishes
	3. The student will be able to
	a) Know the different kinds of feeds used for aquarium fish
	b) Understand how to cultivate live feed organisms?
	c) Learn the techniques of preparation of formulated feed
	d) Acquire knowledge on feed conversion ratio of feeds
	e) Know the feeding behavior of aquarium fishes
	4. The student will be able to
	a) Understand the aquarium fish habitat
	b) Know the method of collection of aquarium fishes form wild
	c) How to handle the aquarium fishes?

	d) Acquire knowledge on packing of aquarium fishes
	e) Learn techniques used for transportation of aquarium fishes
	5. The student will be able to
	a) Know the procedure of cleaning the aquarium tank
	b) Understand the water quality parameters and its importance
	c) Comprehend the control of snail and algal growth in the aquarium tank
	d) Acquire knowledge on disease diagnosis
	e) Get an idea of treatment of disease in aquarium fishes.
MEDICAL LABORATORY TECHNOLOGY	1. The student will be
	To perform the basic analytical techniques.
	To demonstrate the appropriate use of laboratory instrumentations.
	To select the appropriate troble-shooting procedure.
	2. The student will be
	To perform routine analysis of blood and body fluid samples.
	To demonstrate the ability to proper for the proper procedure for laboratory analysis.
	To learn and to understand the knowledge and skill in major areas of clinical laboratory diagnosis.
	3. The student will be
	To understand and test the blood glucose estimation in diabetic patients.
	To study the process of immunohaematology trials.
	To learn and to understand the lab operations in blood culture, blood uric acid, etc.
	4. The student will be
	To perform the analysis of Urine and blood.
	To understand the laboratory test diagnose treat the disease.
	To identify the immune haematology test.
	5. The student will be
	To understand the clinical chemistry of CSF,SF, and amniotic fluid.
	To study the pathology conditions of the patients.
	To demonstrate a commitment to patients to the performance.

RESEARCH METHODOLOGY	1. The student will be learning statistical methods.
	The student can able to works on Computers for Projects and Research.
	Student can able to understand search engines ,Boolean searching, file formats etc.
	By learning data base, student can analyses the sequence similarities of the FAST and BLAST etc.
	2. The student will be able to
	understand the different types of Spectrometers.
	They learn the principles of Nuclear Magnetic Resonance to identify the atomic elements of chemicals.
	3. The student will be
	Understand to the different types of Spectrometer.
	Able to understand the separation of protein and DNA through Elecrophoretic apparatus.
	4. The student will be
	To understand principles, construction of different Microscope.
	Student can be able to understand the staining techniques.
	Student can be able to understand the diseases with live tissue by SEM and TEM microscopes.
	5. The student will be
	To learn the principles of academic writing for scientific journals.
	To understand the knowledge of writing process selection of publication forum tips for writing .
	Student can be able to prepare their own scientific manuscripts.
	1. The student will be
	Able to understand classification of insects.
	Able to understand about orders.
	Able to understand clearly about resemblances and difference between insects.
	Able to understand economic importance of insects.
	2. The student will be
	Able to understand the biology of honeybees.
	Able to understand about lac insects

ENTOMOLOGY	Able to understand the management of beneficial insects.
	3. The student will be
	Able to understand biology of silk worm
	Able to understand about nutrition of silk worm
	Able to understand the genetical importance
	Able to understand endocrinology of silk worm
	Able to understand the reproduction, pest and diseases of silk worm
	4. The student will be
	Able to understand different pest crops.
	Able to understand types of injuries.
	Able to understand the causes of plants in general.
	Able to understand the pest control.
	Able to understand the integrated pest management.
	5. The student will be
	Able to understand the victor borne diseases.
	Able to understand the method of transmission of parasitic agent.
	Able to understand the special reference to mosquitoes and housefly.
SERICULTURE	1. The student will be
	To know the general development of sericulture research.
	Modern trends and Concepts in sericulture research.
	2. The student will be
	The student will be involved in various aspects of egg production.
	3. The student will be
	Able to understand silk health diagnosis, identification of deficiency symptoms.
	4. The student will be
	The student involved in various product of silk.
	5. The student will be
	The student involved in various product of silk.
	To develops highly qualified protein and profession and manpower in silk and
	sericulture.

MICROBIOLOGY	1. The student will be able to
	define the microbial organisms of the virus, bacteria, and fungi.
	Student can be able to explain the scope of microbiology.
	2. The student will be
	Able to demonstrate the practical skill in sterilization and pasteurization techniques.
	Student can be able to explain the technical basis of tools, technological methods
	methodology.
	3. The student will be
	Describe the basic concepts of legal, ethical, economical and regulatory dimention of health
	line and public health.
	To understand the interaction of microorganisms and organisms of soil.
	4. The student will be
	Student will understand the anti-microbial interactions.
	Student will learn about the Pathogenic microbes and diseases.
	5. The student will be
	Student can be able to gain knowledge in several field of applied microbiology.
	Student can work in research and development unit in microbial industries.
SERICULTURE	1. The student will be
	To know the general and development of sericulture research.
	Modern trends and Concepts in sericulture research.
	2. The student will be
	(1) The student will be involved in various aspects of egg production.
	3. The student will be
	able to understand silk health diagnosis, identification of different system.
	4. The student will be
	the student involved in various product of silk.
	5. The student will be

		The student involved in various product of silk.
		To develops highly qualified protein and profession and manpower in silk and
		sericulture.
	PEARL CULTURE	1. The student will be
		Identify the characteristics of molluscs.
		Understand the how pearls are formed.
		Understand the role of pearl culture techniques.
		2. The student will be
		Perform implantation.
		Learning the chemical composition.
		To know about culturing of pearls.
		3. The student will be
		Understand the how to conserve the habitat of molluscs.
		Student will be able to understand the collection of oysters, theoretical based implantation.
		The student will be able to acquire the knowledge to perform surgical procedure of implantation.
		4. The student will be
		Monitor the health of pearl oyster by provide sampling and maintaining hygienic condition of culture.
		To understand the disease of Pearl oysters.
		5. The student will be
		Student will understand and apply the skill needed to achieve academic success.
		Student will understand the economical and moral values.
		Student will learn the workmanship to serve the society.
	INVERTEBRATA	To understand the principle of taxonomy
		To learn the general characters, classification of Invertebrates and their phylum
		To understand the morphology and their systems of various groups of Invertebrates.
		To study the economic importance of invertebrates
		To study the affinities and adaptations of Invertebrates

CHEMISTRY I	Basic knowledge on Metallurgy, Cycloalkanes, Polarising Effects, Stereochemistry, Chemical Kinetics, Catalysis, Photochemistry, VSEPR Theory, Fuels, Osmosis, Nuclear Chemistry, Petroleum Chemistry, Chemistry of Naphthalene, Conductors and Applications wherever necessary are to be taught for I- Semester.
BOTANY - I	
ECONOMIC ENTOMOLOGY – I	Learner would understand basis of classification.
	Learner would be able to understand the difference in the life cycles of insects
	Learner would understand life processes of certain harmful insects
	Learner would understand the various ecological importance of
CHORDATA	On completion of the unit the students will able to describe the salient features of phylum Chordata
	After completion of this unit the students will able to
	Observe the diversity in class pisces and their classification
	It provides the way of identifying different orders of Amphibians.
	Students will able to list out the unique characters of Aves.
	To know the classification of class Mammalia up to orders.
INVERTEBRATA AND CHORDATA	
CHEMISTRY II	Basic knowledge on Coordination Chemistry, Industrial Chemistry, Carbohydrates, Aminoacids, Proteins, Electrochemistry, Paints and Pigments,
CHEMISTRY	
BOTANY – II	
ECONOMIC ENTOMOLOGY – II	To understand the economic, ecological, and sociological benefits of IPM.
	To Distinguish positive and negative impacts of pesticide use.
	To Understand problems resulting from misuse, overuse, and abuse of chemical pesticides.
	To Define and describe pesticide resistance and how it develops.
	To Identify ecological and biological characteristics important in development of pest populations.
ECONOMIC ENTOMOLOGY – I & II	
	1. Acquire knowledge about the history basic techniques in cytology and molecular biology.

CELL AND MOLECULAR BIOLOGY	2. Get an in depth knowledge about the cell structure.
	3. Learn about the cell organelles and their functions.
	4. Understand the cell cycle and learn about cancer biology.
	5. Learn about the nucleic acid and protein synthesis.
VERMICULTURE	1. Learn about the characteristics and biology of earthworm.
	2. Get an in depth knowledge about the culture techniques.
	3. Understand about the methods of composting.
	4. Learn the factors for proper maintenance of the vermicomposting beds.
	5. Learn about the application and marketing of the compost.
SINGLE CELL PROTEIN CULTURE	1. Acquire knowledge about the scope and organisms used in SCP.
	2. Get an in depth knowledge about the Algal SCP.
	3. Understand about the culture and extraction of Bacterial SCP.
	4. Understand the culture techniques of Fungal SCP.
	5. Learn about the application of SCP.
PUBLIC HEALTH AND HYGINE	1. T he student will be able to understand Scope of Public Health and Hygiene - Nutrition and health - classification of foods.
	2. T he student will be able to understand Environment and Health Hazards
	3. T he student will be able to understand Communicable diseases and their control measures
	4. T o acquire the knowledge about Non - communicable diseases and their preventive measures
	5. T he student to acquire the knowledge Health Education and Health programmes in India and WHO programmes
POULTRY FARMING	1) The Students will have a Knowledge about the Prospects Of Poultry Industry
	2) The Students will have a Knowledge about the poultry production systems, housing, automation and equipments
	3) The Students will have a Knowledge about the food and feeding of poultry farming
	4) The Students will have a Knowledge about the incubation and hatchery management

	5) The Students will have a Knowledge about the environment, poultry production and diseases
GENETICS AND BIOTECHNOLOGY	1. T he student will be able to study effectively, and enable to understand the difference between dominance and epistasis, to enable the students understand types of blood groups in humans.
	2. T he student will be able to describe gene linkage and explain the genetic anomalies caused by changes in chromosome number and structure. To understand the fine structure of genes and gene regulations.
	3. T he student will be able explain DNA mutation and repair mechanisms and different kinds of mutagens and kinds of mutagens. To understand the animal breeding techniques, population structure and genetic polymorphisms.
	4. T he student will be able to determine the applicability of difference kinds of cloning vectors, techniques of genetic engineering, illustrating the use of genomic libraries in gene detection and characterization.
	5. T he student will be able to analyse the function of applied genetic research in technology, nature and society, understanding the applications of rDNA technology, and identifying the ethical issues related to gene manipulation.
SERICULTURE	The Students will have a Knowledge about the economic importance and silkworm biology
	The Students will have a Knowledge about the moriculture
	The Students will have a Knowledge about the silkworm reproduction and genetics
	The Students will have a Knowledge about the pathogenic diseases and pest
	The Students will have a Knowledge about the silkworm rearing and silk reeling
APICULTURE	The students will be able to understand the Basics of beekeeping
	The students will be able to understand the role of Bee hive
	The students will be able to understand the Bee enemies, diseases, pesticide poisoning

		The students will be able to understand the Products of bee keeping
		The students will be able to understand the Economics and Marketing
	BIO FERTILLIZER PRODUCTION	To make students ready for industry as entrepreneurs.
		To improve the professional competencies and upgrade the knowledge and develop technical skills of biofertilizer production
		Use of Composite Bio fertilizers with different Methods for enhancing soil fertility.
		The Renewable properties of bio fertilizers.
		The cost and benefit analysis of production and application of bio fertilizers.
	AQUARIUM FISH KEEPING	The student will be able to understand the basic knowledge of Aquarium fish keeping.
		The students will be able to know how to maintain an aquarium .
		The student will be able get knowledge about different varieties of ornamental fish.
		The student will be able to acquire knowledge about disease management in aquarium fish culture.
		The students will acquire knowledge about the feeding techniques of aquarium fishes.
	CELL AND MOLECULAR BIOLOGY, GENETICS AND BIOTECHNOLOGY	
ZOOLOGY - UG	BIOSTATISTICS AND BIOINFORMATICS	On completion of the course the students will able
		To Define Biostatistics and list out the Scopes of Biostatistics
		To determine the value of mean, the median, the mode of grouped data, identifying the relationship among the three measures of central tendency
		They could be able to do File Operations New, Save & Print - Editing: Cut, copy, Paste, Find and Replace - Insert: Page numbers and Pictures - Format: Font, Bullet & Numbering etc.
		To get introduced to the basic concepts of Bioinformatics
		They could able to outline the application areas for multiple sequence Pair wise sequence Alignment
		1. The student will be able to study ontogenesis, the development of animals

DEVELOPMENTAL BIOLOGY AND IMMUNOLOGY	2. The student will be able to study embryonic adaptations, human reproduction and reproductive technology in man.
	3. The student will be able to study the process of immune response and mechanism.
	4. The student will be able to understand the advances in Immunology.
	5. The student will be able to understand the role of development in defining biological process.
ANIMAL PHYSIOLOGY	1. T he student will be able to understand macromolecules of food and their
	2. T he student will be able to understand important and mechanism-respiration,
	3. T he student will be able to understand Excretion and Osmoionoregulation
	4. T o acquire the knowledge about nervous system muscles and muscle contraction
	5. T he student to acquire the knowledge about Receptors Endocrine system and disorders,
NANO TECHNOLOGY IN LIFE SCIENCE	1. Understand the basics of nanotechnology.
	2. Get knowledge about the levels and devices in nanotechnology.
	3. Acquire knowledge about nanotechniques at molecular level.
	4. Learn the evaluation of nanomaterials.
	5. Learn about the application of nanomaterials in various fields.
HUMAN ENDOCRINOLOGY	1. Learn about the structure and function of Pituitary.
	2. Understand the biological actions of the thyroid and parathyroid.
	3. Know about the emergency hormones.
	4. Learn the Mechanism of action and regulation of pancreatic hormones.
	5. Understand about the function of the male and female reproductive hormones.
ANIMAL BEHAVIOUR	Student should be capable of understanding and identify behaviour in a variety of taxa.
	Competently discuss the evolutionary origins of various behaviours.
	Designing and implementing experiment to test hypothesis relating to animal behaviour.

	To demonstrate knowledge of key concepts in animal behaviour.
	To exhibit quantitative research skills.
VEGETABLE MEAT CULTURE	1) Students will understand the principles of mushroom cultivation,
	2) acquire the practical knowledge to grow several species of fungi,
	3) will have the confidence to approach the mushroom industry for potential employment opportunities.
	4) The Student will be able to procure knowledge about the nutritive values of mushroom.
	5) The student will be able understand the medicinal values of mushrooms
ENVIRONMENTAL BIOLOGY	1. T he student will be able to understand Scope, concept, Branches in ecology and Environmental factors (soil, light, temperature, water and air).
	2. T he student will be able to understand fundamental units of ecosystem, Tropic levels of ecosystem and Food chain.
	3. T he student will be able to understand Bio geochemical cycles and importance of inter relationship between every organism and environment
	4. T o acquire the knowledge about population and community ecology, ecological succession, aims of wild life conservation and Natural resources.
	5. T he student to acquire the knowledge environmental hazards, Environmental ethics and laws.
ECONOMIC ZOOLOGY	1) Understanding the role of worm farming in modern farming,potential of vermicompost,maintaining health of the soil,economic importance of Vermiculture and role of Vermiculture in protecting the environment.
	2) They could able to understand Techniques of induced breeding,Commercial culture of catla & cat fish
	3) They could understand about area of poultry production including nutrition,health welfare and product quality

	4) To provide basic input to students about production, planning and management of diary farms Milch breeds. Draught breeds, Dual purpose breeds and New Cross breeds of Cows and Buffaloes in India.
	5) The students could able to learn the Future strategies for Livestock Development
EVOLUTION	The students will understand the basic concepts of evolution
	The students will understand various theories of evolution
	The students will have a comprehensive knowledge regarding various Sources of Variations and their role in evolution
	The students will have an adequate knowledge about Micro-evolutionary changes, Speciation and Adaptive Radiation.
	The students will have a descriptive knowledge regarding Origin and Evolution of Man.
MICROBIOLOGY	The students will understand the importance of Microorganisms.
	The students will understand the Technology innovations of Microbial genetics and its Application.
	The students will understand the general morphology of micro organism
	The students will understand the epidemology of various infectious diseases
	The students will understand the role of micro organisms in Agriculture,Industry and environment
BIOCHEMISTRY	To learn and understands the various properties of water
	To understand the bioenergetics
	To know about classification, metabolism and biological significance of carbohydrate, protein and lipids
	To learn properties, classification, nomenclature and action of enzymes
	To learn biochemistry of antibiotics
	To learn about principles and application of instruments
	1. T he student will be able to understand the insect morphology and types of pest.

	APPLIED ENTOMOLOGY	2. T he student will be able to understand insect species causing damage to the crops in the field as well as under storage condition and the effective control measure against them.
		3. T he student will be able to understand the awareness of pest in relation to public health-Houseflies diseases and their control measures,
		4. T o acquire the knowledge about the effective control measure against insect pest.
		5. T he student to acquire the knowledge Recent trends in pest control and Integrated pest management, its importance &applications
	MEDICAL LAB TECHNOLOGY	1.The student will be able to understand the sterilization techniques .
		2.The student will be able to apply and analyse the haematalogical parameters.
		3. The student Will be able to diagnose different diseases.
		4. The student will be able to analyse the physical examination of urine and faeces.
		5. The student will be able to get a thorough knowledge about cerebro-spinal fluid.
	INDUSTRIAL FISHERY MANAGEMENT	The students will get the basic information about the scope of aquacultures in India.
		The student will acquire knowledge about fish farming.
		The students will acquire knowledge about various culture techniques.
		The students will acquire knowledge about feed formulations
		The students will acquire knowledge about disease management in fish farming.

INDUSTRIAL CHEMISTRY DEGREE COURSE - UG	INDUSTRIAL CHEMISTRY – II	Elaborate study of Fuels Introduction - classification - preparation - properties - their sources of energy - storage - alternate fuels - applications
	INDUSTRIAL CHEMISTRY - IV	Corrosion, control of corrosion, surface coating, paints and pigments, varnishes semiconductors - Introduction - cause of corrosion - classification - preparation - properties - Need - Composition - Mechanism - applications.