

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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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 of methods 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	<p>1. After studied unit-1, the student will be able to understand the nature and importance of Agriculture</p> <p>2. After studied unit-2, the student will be able to gain knowledge of Agricultural productivity</p> <p>3. After studied unit-3, the student will be able to understand the size of Land holdings</p> <p>4. After studied unit-4, the student will be able to gain knowledge of sources of Agricultural Credits.</p> <p>5. After studied unit-5, the student will be able to understand the scope and types of Agricultural markets</p>
SEMESTER II	
MICRO ECONOMICS –II	<p>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</p> <p>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.</p> <p>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</p> <p>4. After studied unit-4, the student will be able to gain knowledge of the theories of wages and the importance of Trade unions.</p> <p>5. After studied unit-5, the student will be able to gain knowledge of the theories of Interest and profit.</p>

<p>STATISTICS FOR ECONOMICS –II</p>	<ol style="list-style-type: none"> 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
<p>2. AGRICULTURAL MARKETING</p>	<ol style="list-style-type: none"> 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
<p><u>SEMESTER I</u></p> <p>INDIAN WRITING IN ENGLISH</p>	<p>UNIT-I</p> <p>Students will be able to examine the concepts of Indian English Poetry.</p> <p>Students will be able to comment on the humor in A Very Indian Poem in English.</p> <p>Students will be able to understand the life of fishermen community.</p> <p>Students will be able to grasp the in-depth ideas about the poem Home Coming.</p> <p>Students will be able to know about Autobiographical Poem.</p> <hr/> <p>UNIT-II</p> <p>Students will be able to appreciate the poem Of Mother, among other Things.</p> <p>Students will be able to identify different images of the Mother.</p> <p>The students will be able to understand the sense of loss of identity in immigrants</p> <p>Students will be able to analyze the reality of a beggar Old Woman.</p> <p>Students will be able to understand the style of Indian Poetry.</p>

	<p>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 Bhabini Bhattachariya . Students will be able to inculcate the moral ideas of Swami Vivekananda. Students will be able to evaluate Bhabini Bhattachariya as an essayist.</p>
	<p>UNIT-IV Students will be able to analyze the plot Nagamandala. Students will be able to know about the writing style of Girish Karnad. 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.</p>

	<p>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</p>
<p>ADVANCED ENGLISH GRAMMAR</p>	<p>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.</p> <p>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.</p>

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 as writing 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 .

	<p>UNIT-IV Students will be able to understand novel's characteristics. 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</p>
	<p>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.</p>
<p>SEMESTER II</p>	
<p>BRITISH LITERATURE I</p>	<p>UNIT-I The students will be able to</p> <ol style="list-style-type: none"> 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

	<p>UNIT-V</p> <p>The students will be able to</p> <ol style="list-style-type: none"> 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
<p>AMERICAN LITERATURE</p>	<p>UNIT-1</p> <ol style="list-style-type: none"> 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.

	<p>UNIT-4</p> <ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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.

	<p>3. After studied unit-3, the student will be able to differentiate organisation structure and know the functioning</p> <p>4. After studied unit-4, the student will be able to delegate work, differentiate between power and authority</p> <p>5. After studied unit-5, the student will be able to coordinate activities in an organisation.</p>
<p>BUSINESS MATHEMATICS AND STATISTICS – II</p>	<p>After studied this course the students will be able -</p> <ol style="list-style-type: none"> 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
<p>SEMESTER II</p>	
<p>BUSINESS ENVIRONMENT</p>	<p>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.</p>

	<p>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.</p>
	<p>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.</p>
	<p>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</p>
	<p>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.</p>
<p>BUSINESS MATHEMATICS AND STATISTICS II</p>	<p>After studied this subject the student will be able to :</p> <ol style="list-style-type: none"> 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 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	<p>1. After studied unit-1, the student will be able to understand the various indicators of economic development.</p> <p>2. After studied unit-2, the student will be able to understand the importance, causes and impact of population growth.</p> <p>3. After studied unit-3, the student will be able to gain knowledge about the role of agriculture in economic development</p>	

	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	<ol style="list-style-type: none">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 work4. 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	<ol style="list-style-type: none">1. After studies the student will be able to learn the various problems in India2. After studies the student will be able to know the impact of problems in the society3. The student will be equipped to enable the students to reduce the problems in the society as social workers4. 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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.

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

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 $\cos n\theta$, $\sin n\theta$ in powers of $\cos\theta$ and $\sin\theta$ [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.

	<p>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</p>
	<p>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.</p>
	<p>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</p>
<p>CHEMISTRY – II</p>	
<p>ALLIED PRACTICAL CHEMISTRY</p>	

STATISTICS

SUBJECT	OUTCOMES
SEMESTER I	
DESCRIPTIVE STATISTICS	<ol style="list-style-type: none">1. After studied unit-1, the student will be able to know methods of data collection2. After studied unit-2, the student will be able to know various techniques of presentation of data3. After studied unit-3, the student will be able to know measures of location and dispersion4. After studied unit-4, the student will be able to know correlation and regression5. After studied unit-5, the student will be able to know association of attributes
MATHEMATICS I	
SEMESTER II	
PROBABILITY AND RANDOM VARIABLES	<ol style="list-style-type: none">1. After studied unit-1, the student will be able to know the concept of probability2. After studied unit-2, the student will be able to know Bayesian formula and its applications3. After studied unit-3, the student will be able to know random variables and its properties4. 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 <ol style="list-style-type: none">1) Recollect the Chemistry of Quantum Numbers2) 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 states7) Apply the principles of Volumetric Analysis.
1. PHYSICS I	<ol style="list-style-type: none">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

	<p>2. After studied unit-2, the student will be able to learn thermo emf using Seebeck and Peltier effects and hence understand thermoelectric circuits.</p>
	<p>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.</p>
	<p>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.</p>
	<p>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</p>
<p>MATHEMATICS – I</p>	
<p>SEMESTER II</p>	
<p>GENERAL CHEMISTRY - II</p>	
<p>1. PHYSICS II</p>	<p>1. After studied unit-1, the student will be able to study the frames of reference, Galilean transformation equations and special theory of relativity.</p> <p>2. After studied unit-2, the student will be able to describe the different atomic models and Stern and Gerlach Experiment.</p>

	<p>3. After studied unit-3, the student will be able to explain binding energy, liquid drop model, G.M counter and particle accelerators.</p>
	<p>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.</p>
	<p>5. After studied unit-5, the student will be able to understanding the basics of nanomaterial, synthesis and its applications</p>
<p>5. MATHEMATICS - II</p>	

BOTANY

SUBJECT	OUTCOMES
SEMESTER I	
PHYCOLOGY AND MYCOLOGY	<ol style="list-style-type: none">1. To learn about the general characters of algae2. To impart knowledge on various major groups of algae3. To understand the life history of various groups of algae4. To differentiate the various groups of fungi5. To know the knowledge of general distribution of fungi
ZOOLOGY I	<ol style="list-style-type: none">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 Echinoderms3. The student will be able acquire knowledge about the functional morphology of chordata, prochordatas and pisces4. 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	<p>To understand the principle of taxonomy</p> <p>To learn the general characters, classification of Invertebrates and their phylum</p> <p>To understand the morphology and their systems of various groups of Invertebrates.</p> <p>To study the economic importance of invertebrates</p> <p>To study the affinities and adaptations of Invertebrates</p>
SEMESTER II	
CHORDATA	<p>On completion of the unit the students will able to describe the salient features of phylum Chordata</p> <p>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.</p> <p>Students will able to list out the unique characters of Aves.</p> <p>To know the classification of class Mammalia up to orders.</p>
INVERTEBRATA AND CHORDATA	

MICROBIOLOGY

SUBJECT	OUTCOMES
FUNDAMENTALS OF MICROBIOLOGY	<p>At the end of the course, the student will be able to</p> <ol style="list-style-type: none"> 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	<p>At the end of the course, the student will be able to</p> <ol style="list-style-type: none"> 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
BIOCHEMISTRY I & II

I

COMPUTER SCIENCE

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

VISUVAL COMMUNICATION

SUBJECT	OUTCOMES
SEMESTER I	
FUNDAMENTALS OF COMMUNICATION	<p>Co1: Would know about factors influencing communication process</p> <p>Co2: Would understand the elements and signs of communication</p> <p>Co3: Understand Communication models and theories</p> <p>Co4: Would establish concepts of communication for development</p> <p>Co5: Effectuate the creative thinking process</p>
Writing for Media	<p>CO1: CREATE the foundations of good writing skills with a steady grasp of grammatical aspects as well as the process of writin</p> <p>CO2: GAIN knowledge and skills relating to writing techniques for various types of assignments related to print media.</p> <p>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.</p>

	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	<p>CO1 Unit 1: Gain understanding of the concept of Communication</p> <p>CO2 Unit 2: Would know the Evolution of Communication</p> <p>CO3 Unit 3: Imbibe an overview of communication discipline</p> <p>CO4 Unit 4: Render analytical capability of the elements of visual communication</p> <p>CO5 Unit 5: Skilled in conceptual thinking and creativity</p>
DRAWING	<p>CO1 Unit 1: Understand the formal language of drawing and the fundamentals of artistic expression. Understand the basic principles of linear perspectives</p> <p>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</p>

	<p>CO3 Unit3:Realistically render subjects from direct observation. Demonstrate skills of visual perception, spatial concepts, and critical thinking.</p>
	<p>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</p> <p>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.</p>
<p>Photography</p>	<p>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</p> <p>CO2Unit2: Understand the various situations during which different cameras/lenses could be used by applying the knowledge about their features.</p> <p>CO3 Unit 3: Analyse and understand the significance of lights & lighting in photography.</p>

	<p>CO4 Unit 4: Illustrate the various genres of photographs with their key features.</p> <p>CO3 Unit 5: Evaluate the merits and limitations of digital photography in comparison to traditional photography.</p>
<p>Practical Photography</p>	<p>CO1 Unit 1: Gain knowledge regarding lighting, aperture, shutter speed etc., while taking pictures of objects and the same for taking portraits.</p> <p>CO2 Unit 2: Comprehend the different lighting techniques so that they can take photographs with various effects and capture human expressions especially children.</p> <p>CO3 Unit 3: Apply the lighting techniques to advertise products and fashion shows.</p> <p>CO4 Unit 4: Demonstrate the significance of environment and the role of photographs in creating environmental awareness and sustainable development</p> <p>CO5 Unit 5: Create photo stories using elements of human interest.</p>

COMPUTER APPLICATION

SUBJECT	OUTCOMES
SEMESTER I	
CORE THEORY PAPER -1	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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:
- Interpret 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

	<ul style="list-style-type: none"> → 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	<ul style="list-style-type: none"> → The student will come to know the prominent women writers → The student will be 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	<ul style="list-style-type: none"> → 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	<ul style="list-style-type: none"> → 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

	<p>learning creative performance. Analyze and interpret texts and performances both in spoken and written form.</p> <ul style="list-style-type: none"> → 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
<p>LITERATURE FOR SOCIAL TRANSFORMATION</p>	<ul style="list-style-type: none"> → 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 be 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
<p>SEMESTER II</p>	
<p>BRITISH DRAMA</p>	<ul style="list-style-type: none"> → 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,

	<p>choreography,play-writingor dramaturgy.</p> <ul style="list-style-type: none"> → They will be able to analyze, interpret and evaluate the dramatic literature and theatrical productions.
TRANSLATION THEORY AND PRACTICE	<ul style="list-style-type: none"> → 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	<ul style="list-style-type: none"> → 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	<ul style="list-style-type: none"> → 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	<ul style="list-style-type: none"> → 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
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M.A. HISTORY

SUBJECT	COURSE OUTCOMES
SEMESTER-I	
SOCIAL AND CULTURAL HISTORY OF TAMILNADU	<p>Unit 1 : The students were enabled to understand the Physical features of Tamilnadu</p> <p>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</p> <p>III : The study enhances the students the growth of Tamil Nadu in the middle ages</p> <p>Unit IV : The students were given an insight of reestablishment of Pandiyan Empire</p> <p>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</p>
SOCIAL AND CULTURAL HISTORY OF INDIA	<p>Unit I : The students will be enlightened about the Indian culture and history and the foundation of new religious philosophy</p> <p>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</p> <p>Unit III: The revival of Hinduism and it is recorded as the Golden period in Indian History</p>

	<p>Unit IV: The students will know how the Muslim rule in Delhi was governed</p> <p>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.</p>
<p>SOCIAL AND CULTURAL HISTORY OF INDIA FROM C.E. 1526 TO C.E.1773</p>	<p>Unit I : Elaborates the insight of the Mughals regarding their contribution</p> <p>Unit II : Students will be enlightened about the rich contribution of the Mughals</p> <p>Unit III : How the Marathas established their power during the Imperial Mughal period</p> <p>Unit IV : Students will be given to understand the contribution of religious leaders</p> <p>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</p>
<p>INDIA AND HER NEIGHBOURS SINCE C.E.1947</p>	<p>Unit I : The students will be taught on why and how the partition made enmity.</p> <p>Unit II : The students were given an insight about the two great nations in the world and their relationship</p> <p>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.</p> <p>Unit IV: The ethnic problem in Srilanka and the India’s drive for peace in Srilanka and the relationship between India and Maldives</p>

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

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

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

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	<ol style="list-style-type: none"> <li data-bbox="776 1108 1416 1224">1. After studied unit-1, the student will be able to understand the basic theoretical foundation of microeconomics. <li data-bbox="776 1276 1416 1392">2. After studied unit-2, the student will be able to analyse consumer behavior based especially on market purchases. <li data-bbox="776 1444 1416 1612">3. After studied unit-3, the student will be able to analyse consumer equilibrium through the techniques of indifference curve and budget line. <li data-bbox="776 1665 1416 1822">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.

	<p>5. After studied unit-5, the student will be able to learn the nature of different market structure based on the characteristics of market.</p>
MACROECONOMICS I	<p>1. After studied Unit-1, the student will be able to get awareness on National Income components.</p> <p>2. After studied Unit-2, the student will be able to know about the classical theory of Employment and Unemployment.</p> <p>3. After studied Unit-3, the student will be able to know about the theories of Consumption Function.</p> <p>4. After studied Unit-4, the student will be able to know about the Investment function and its empirical evidences.</p> <p>5. After studied Unit-5, the student will be able to understand the General Equilibrium models.</p>
STATISTICS FOR ECONOMICS I	
INDIAN ECONOMIC DEVELOPMENT	<p>1. After studied unit-1, the student will be able to understand the workforce participation in different sectors.</p> <p>2. After studied unit-2, the student will be able to understand the importance of agriculture in economic development.</p> <p>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.</p> <p>4. After studied unit-4, the student will be able to understand the economic infrastructure and its role in economic</p>

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

<p>MICROECONOMICS II</p>	<ol style="list-style-type: none"> 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.
<p>MACROECONOMICS II</p>	<ol style="list-style-type: none"> 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 to analyse the application of monetary and fiscal policy to attain the price stability.
<p>STATISTICS FOR ECONOMICS II</p>	<ol style="list-style-type: none"> 1. After studying Unit-1, the student will be able to understand the various probability theorems.

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

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 to ponder 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	<ol style="list-style-type: none">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 leverage4. After studied Unit-4, the student will be able to gain knowledge about capital investment decision5. After studied Unit-5, the student will be able to be acquainted with on the subject of working capital Management.

<p>ACCOUNTING FOR MANAGERIAL DECISION</p>	<ol style="list-style-type: none"> 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
<p>MARKETING MANAGEMENT</p>	<ol style="list-style-type: none"> 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
<p>ADVANCED BUSINESS STATISTICS</p>	<ol style="list-style-type: none"> 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.

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

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

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

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

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

	<p>socialization process and its agents</p> <p>3. Students will understand the process of social change</p> <p>4. Students will gain knowledge about various social movements in India</p> <p>5. Students will realize various social problems existing in the society</p>
<p>Social Development : Theories and Perspective</p>	<p>1. Students will understand the link concept, process and strategies of social development.</p> <p>2. Students will identify the key development challenges confronting the society</p> <p>3. Students will understand the role of social development in addressing inequality in society</p> <p>4. Students will develop ability to link experiences around them with social development issues</p> <p>5. Students will develop skills and competencies necessary for development interventions and inculcate values of social justice and equality</p>
<p>Civil Society and Governanc</p>	<p>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</p> <p>2. Students will gain understanding of the rich terrain of contemporary issues in the context of politics and will develop as informed citizens.</p> <p>3. Students will understand the relationship between ‘politics’ and ‘the economy’</p>

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

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

M.Sc. Microbiology

SEMESTER I	
GENERAL MICROBIOLOGY AND MICROBIAL PHYSIOLOGY	
IMMUNOLOGY AND IMMUNOTECHNOLOGY	
FOOD AND DAIRY MICROBIOLOGY	
BIOSAFETY	
MOLECULAR BIOLOGY	
General Microbiolog	
SEMESTER II	
MEDICAL BACTERIOLOGY AND MYCOLOGY	
INDUSTRIAL MICROBIOLOGY	
MOLECULAR BIOLOGY AND MICROBIAL GENETICS	
MUSHROOM CULTIVATION	
INFECTIOUS DISEASES AND ITS CONTROL	
MEDICAL BACTERIOLOGY	

M.Sc. Mathematics

SUBJECT	COURSE OUTCOMES
SEMESTER I	
Algebra-1	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none">• 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	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none">• 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

	<ul style="list-style-type: none"> • Acquire the knowledge of Infinite Series and Infinite products • have knowledge of uniform convergence of sequence and series
Ordinary Differential Equations	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • solve Second order linear differential equations. • solve n th order differential equations. • solve differential equations with variable coefficients. • solve differential equations with regular singular points. • examine the existence and uniqueness of solutions of differential equations. • apply ODE problems for real time applications
Graph Theory	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • 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	<p>After the successful completion of this course, the students will be able to:</p>

	<ul style="list-style-type: none"> • Acquire the knowledge of exponential 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
Semester : II	
Algebra – II	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • 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	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • understand the concept of Fourier series and Fourier integrals • analyse the functions of several variables. • discuss the inverse function theorem and implicit function theorem • acquire the knowledge of Lebesgue measure

	<ul style="list-style-type: none"> •analyse the concept of inner and outer measure
Partial Differential Equations Credits	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • formulate and solve Partial Differential Equations (PDE) and apply PDE problems for real time applications. • 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 equations in Cylindrical and polar coordinates • discuss the existence and uniqueness of solutions and Duhamel's principle
Mathematical Statistics	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • 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	<p>After the successful completion of this course, the students will be able to:</p> <ul style="list-style-type: none">• 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.
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M.SC. STATISTICS

SUBJECT	COURSE OUTCOMES
SEMESTER I	
Mathematical Analysis	<ol style="list-style-type: none">1. After studying unit-1, the student will be able to understand concepts of metric spaces, properties related to functions and discontinuities2. 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	<ol style="list-style-type: none">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

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

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

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

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

SUBJECT	COURSE OUTCOMES
Semester: I	
Mathematical Physics-I	<ol style="list-style-type: none">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	<ol style="list-style-type: none">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. <p style="text-align: center;">9</p> <ol style="list-style-type: none">2. After studying unit-2, the student will be able to Apply Hamilton's characteristic function to solve problems

	<p>Understand Action Angle variables and solve one degree of freedom and Kepler's problem</p> <p>Acquire knowledge about oscillatory motion and stability of oscillatory motion</p> <p>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.</p> <p>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.</p> <p>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.</p>
Quantum Mechanics-1	1. The interpretation of wave function of quantum particle and quantum theory formulation is introduced through

	<p>Schrodinger equation, student gets exposed to the behaviour of quantum particle encountering a i) barrier, ii) potential well.</p> <p>2. Understand the general formulation of quantum mechanics which deal with the abstract object such as kets, bras, and operators.</p> <p>3. Acquire knowledge about unitary transformation and able to analyse Schrodinger and Heisenberg interaction pictures.</p> <p>4. Gain the knowledge of solving non-relativistic hydrogen atom, expectation value and density matrix.</p> <p>5. Gain the knowledge about spin, angular momentum states, addition rules and identical particles.</p>
COREELECTIVEPAPER- 1	<p>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</p> <p>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</p>

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

	<p>theorem</p> <p>2. After studied unit-2, the student will be able to obtain the solution for Laplace's Equations in Cartesian coordinates and also for two and three dimensional heat flow</p> <p>3. After studied unit-3, the student will be able to study the Fourier and Laplace's Integral Transforms in detail</p> <p>4. After studied unit-4, the student will be able to describe group theory and construct the character table for different point groups</p> <p>5. After studied unit-5, the student will be able to acquire theory of probability and different theoretical distributions.</p>
Electro Magnetic Theory	<p>1. After studying Unit-1, the students will be able to have a depth knowledge of electrostatics and clearly understand dielectric polarization.</p> <p>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.</p> <p>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.</p>

	<p>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.</p> <p>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.</p>
Quantum Mechanics-II	<p>1. Understand the concept of perturbation theory to solve problems in quantum mechanics.</p> <p>2. Acquire the knowledge of variation methods and able to solve harmonic perturbation step by step using mathematical methods.</p> <p>3. Formulates ideas on born approximation transformation and concepts of scattering theory.</p> <p>4. Understand the Dirac matrices and gained knowledge about spin and magnetic movement of electron.</p> <p>5. Able to understand the creation and annihilation operator and gain the knowledge about anti particle.</p>
Nanoscience	<p>1. After studied unit-1, the student will be able to understand the nanoscale and nanomaterial.</p>

	<p>2. After studied unit-2, the student will be able to learn how to synthesis the nanostructured materials</p> <p>3. After studied unit-3, the student will be able to distinguish between nanoparticles and quantum dots</p> <p>4. After studied unit-4, the student will be able to describe the different tools will be used for characterization of the nanomaterial.</p> <p>5. After studied unit-5, the student will be able explain the different applications of nanotechnology</p>
Physics for competitive Exams	<p>1. After studied unit-1, the student will be able to understand the concept of mechanics and to study the different properties of matter</p> <p>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</p> <p>3. After studied unit-3, the student will be able to study the magnetism and magnetic materials</p> <p>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</p> <p>5. After studied unit-5, the student will be able to demonstrate the atomic structure using Bohr's theory and also derive</p>

	Einstein's Mass-Energy relation. Also they acquired knowledge on fundamentals of semiconductors.
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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 and chemical means of sterilization. Know General bacteriology

	<p>and microbial techniques for isolation of pure cultures of bacteria, fungi and algae. Master aseptic techniques and be able to perform routine culture handling tasks safely and effectively</p>
<p>ORGANIC FORMING</p>	<p>The Students are able to appreciate 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 methods 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.</p>

M.Sc. ZOOLOGY

Subjects	Course outcomes
SEMESTER I	
LIFE AND DIVERSITY OF INVERTEBRATES	<p>1. After studied unit-1, the student will be able to understand</p> <ul style="list-style-type: none">• Basic Concepts of Species• Hierarchical taxonomy• Importance of Parasitic Protozoan• Economic importance of Protozoan and Porifera• Systematic position and Affinities of sponges <p>2. After studied unit-2, the student will be able to understand</p> <ul style="list-style-type: none">• Origin and evolution of Coelenterata.• Corals and Coral reefs.• Systematic position of Ctenophora.• Helminthes in human diseases.• Life cycle of Wuchereriabancrofti. <p>3. After studied unit-3, the student will be able to understand</p> <ul style="list-style-type: none">• Origin and Evolution of Annelida• Evolutionary significance of Trochophore Larva• Adaptive radiation in Annelida• Origin and Evolutionary significance of Crustacean• Economic importance of insects <p>4. After studied unit-4, the student will be able to</p>

	<p>understand</p> <ul style="list-style-type: none"> • Torsion and Detorsion in Gastropoda • Economic importance of Mollusca • Pearls production. • Water vascular system • evolutionary significance of Echinoderm larva <p>5. After studied unit-5, the student will be able to understand</p> <ul style="list-style-type: none"> • 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.
<p>LIFE AND DIVERSITY OF CHORDATES</p>	<p>1. After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • 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 <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • 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

	<ul style="list-style-type: none"> • 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
<p>CELL AND MOLECULAR BIOLOG</p>	<p>1. After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • Explain the structure of membrane and intercellular components and related to the function. • Summarizing the energy transduction in cells. <p>2. After studied unit-2, the student will be</p> <ul style="list-style-type: none"> • Exhibiting knowledge in structure and function of Nuclear membrane. • Understanding the properties of polytene chromosome. • To study the structure and function of Nucleolus. <p>3. After studied unit-3, the student will be</p> <ul style="list-style-type: none"> • 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. <p>4. After studied unit-4, the student will be</p> <ul style="list-style-type: none"> • Understand the chemistry of DNA • They acquire the knowledge of describing the structure, replication of DNA

	<ul style="list-style-type: none"> • 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
<p>AQUACULTURE AND FARM MANAGEMENT</p>	<p>1. After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • 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 <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • 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 <p>3. After studied unit-3, the student will be able to</p> <ul style="list-style-type: none"> • 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	<p>After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • 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. <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • Describe the environmental pollution and health hazards. • To study and able to understand hospital applications, health problems due to industrialization. <p>3. After studied unit-3, the student will be able to understand</p> <ul style="list-style-type: none"> • The major themes for life skill based hygiene education. • Student acquire knowledge about communicable diseases. <p>4. After studied unit-4, the student will be able to understand</p> <ul style="list-style-type: none"> • 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. <p>5. After studied unit-5, the student will be able to understand</p> <ul style="list-style-type: none"> • To know the government and voluntary organizations and their health service of India. • Understand the health programme in India

SEMESTER II	
GENETICS	<p>After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • Describe the structure of nucleic acid and polypeptide concept. • They can able to understand the bacterial genetics and family history. <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • Discuss the mechanisms of genetic regulation . • To understand the knowledge of operon systems and metabolic errors. <p>3. After studied unit-3, the student will be able to</p> <ul style="list-style-type: none"> • Describe the mutation of dosage compensation and imprinting. • To study the syndromes of sex & autosomal chromosomes in human. <p>4. After studied unit-4, the student will be able to</p> <ul style="list-style-type: none"> • To understand the genes and development ,chromosomal breakage , mutagenesis and carcinogenesis • Understand the insight into the mathematical, statistical and computational basis of genetic analysis. <p>5. After studied unit-5, the student will be able to</p> <ul style="list-style-type: none"> • 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	<p>1. After studied unit-1, the student will be able to understand</p> <ul style="list-style-type: none"> • Asses necessary scientific concepts and data. • They establish integral cultural context. <p>2. After studied unit-2, the student will be able to</p>

	<p>understand</p> <ul style="list-style-type: none"> • Acquire the knowledge and skill 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. <p>3. After studied unit-3, the student will be able to understand</p> <ul style="list-style-type: none"> • Appreciate attributes of natural resources and management. • Appreciate the ideas of unsustainable development. <p>4. After studied unit-4, the student will be able to understand</p> <ul style="list-style-type: none"> • 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. <p>5. After studied unit-5, the student will be able to understand list out major places and</p> <ul style="list-style-type: none"> • Describing the effects of air pollution and their management. • Know about the global environmental issues.
BIOTECHNOLOGY	<p>1. After studied unit-1, the student will be able to understand</p> <ul style="list-style-type: none"> • The tools and strategies used in genetic engineering. • The applications of recombinant DNA technology and genetic engineering. <p>2. After studied unit-2, the student will be able to</p>

	<p>understand</p> <ul style="list-style-type: none"> • The Bacterial plasmid vectors PBR 322 and PUL 19. • Bacteriophage vectors <p>3. After studied unit-3, the student will be able to understand</p> <ul style="list-style-type: none"> • Biotechnological techniques like embryo transfer and in vitro fertilization <p>4. After studied unit-4, the student will be able to understand</p> <ul style="list-style-type: none"> • Critically evaluate the role of micro-organisms in specific biotechnological processes <p>5. After studied unit-5, the student will be able to understand</p> <ul style="list-style-type: none"> • The applications of biotechnology in agriculture, medicine and food science
<p>LIFE AND DIVERSITY OF INVERTEBRATES AND CHORDATES AND CELL AND MOLECULAR BIOLOGY</p>	
<p>BIOCHEMISTRY</p>	<p>1. After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • Analyse buffer, electrolytes, and water balance. • Student acquire knowledge to the experiments on blood and urine samples. • Describe the transport of biological samples. <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • Describe the digestion of protein, absorption, degradation of amino acids. • Students can understand the deamination and transamination reactions. • Student will use current biochemical

	<p>techniques to plan and molecular techniques.</p> <p>3. After studied unit-3, the student will be</p> <ul style="list-style-type: none"> • Exposed to wide range carries that combine biology and medicine. • Student learn the biological significance of how macro molecules broken down into micro molecules. <p>4. After studied unit-4, the student will be able to understand</p> <ul style="list-style-type: none"> • Students were aware of tissues hormones and Synthetic hormones. <p>5. After studied unit-5, the student will be able to soluble vitamins.</p> <ul style="list-style-type: none"> • Student can be able to understand the disorders of carbohydrates metabolisms.
<p>WILDLIFE MANAGEMENT & CONSERVATION</p>	<p>1. After studied unit-1, the student will be able to</p> <ul style="list-style-type: none"> • 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. <p>2. After studied unit-2, the student will be able to</p> <ul style="list-style-type: none"> • 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. <p>3. After studied unit-3, the student will be able to</p> <ul style="list-style-type: none"> • Identify species, characteristics, habited requirement and life cycle of bird.

	<ul style="list-style-type: none">• Learn how wildlife conservation and management relates to economy both currently and in future.• Understand the structure and types of plumage. <p>4. After studied unit-4, the student will be able to</p> <ul style="list-style-type: none">• Identify the types of butterflies.• Identify the types of moths. <p>5. After studied unit-5, the student will be able to</p> <ul style="list-style-type: none">• Gain awareness and understanding of international forestry.• Develop skills geographical analysis, basic surviving, mapping.
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M.Sc. COMPUTER SCIENCE

Subject	Course outcomes
SEMESTER I	
RELATIONAL DATABASE MANAGEMENT SYSTEM	<p>CO1 - Students are able to have a broad understanding of database concepts and database management system software</p> <p>CO2 - Students are able to have a high-level understanding of major DBMS components and their function</p> <p>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.</p> <p>CO4 - Students are able to write SQL commands to create tables and indexes, insert/update/delete data, and query data in a relational DBMS.</p> <p>CO5 - Students are able to program a data-intensive application using DBMS APIs</p>
ENTERPRISE JAVA PROGRAMMING	<p>CO1 - Students are able to develop Applet Programming using various techniques</p> <p>CO2 - Students are able to develop applications using Abstract Window Toolkit and Events</p> <p>CO3 - Students are able to update and retrieve the data from the databases using JDBC ODBC</p> <p>CO4 - Students are able to develop server side programs in the form of Servlets</p> <p>CO5 - Students are able to build up Java Applications using collections and JSP Tags.</p>
PROGRAMMING USING	<p>CO1 - Students are able to know the differences between desktop application and web</p>

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

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

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

M.Sc. CHEMISTRY

SUBJECT	COURSE OUTCOMES
SEMESTER I	
ORGANIC CHEMISTRY – I	<p>The student will be able to</p> <ul style="list-style-type: none">• 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	<p>The student will be able to</p> <ul style="list-style-type: none">• Explain Isopolyacids and hetropolyacids of Vanadium, Chromium, Molybdenum and Tungsten.• Describe 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	<p>The student will be able to</p> <ul style="list-style-type: none">• Explain partial molar properties and the concept of fugacity.• Describe the phase diagrams of three

	<p>component systems involving solid-liquid and liquid-liquid equilibria.</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> 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	<p>The student will be able to</p> <ul style="list-style-type: none"> • 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	<p>The student will be able to</p> <ul style="list-style-type: none"> • Elucidate the mechanism of addition and elimination reactions • Appreciate the synthetic usage of various oxidizing and reducing reagents

	<ul style="list-style-type: none"> • Illustrate the importance of free radicals • Describe the concept of aromaticity
INORGANIC CHEMISTRY II	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Describe the rate expression for complex reactions and experimental study of fast reactions. • Describe Debye-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 C_{2v} and C_{3v}.
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	<p>The students will be able to</p> <ul style="list-style-type: none">Appreciate the importance of medicinal chemistryAcquire knowledge of classification of drugsIdentify the importance of ChemotherapyAcquire knowledge of common body ailments <p>II</p> <ul style="list-style-type: none">Illustrate the importance of health promoting drugs
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