

Learning Outcomes of the Courses offered across various Programmes

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Format given- Title and Learning Outcomes of each course for a Programme.

POLITICAL SCIENCE UG

INTRODUCTION TO POLITICAL THEORY

Learning Outcomes:

- a) The students would be able to explain different approaches to politics and build their own understanding of politics.
- b) They will be able to answer why the state plays so much central place in the discourses on politics.
- c) They will be able to make a distinction between nation and state.
- d) They will come to know about different concepts in Political Science

POLITICAL INSTITUTIONS AND POLITICAL PROCESS

Learning outcomes:

Students can get the skills to analyse contemporary events in broader institutional, political and social context, to evaluate political institutions in a comparative perspective. The expected learning outcomes of the course include familiarity with the conceptual tools and theoretical approaches to the normative study of political institutions, and with the main normative problems of political rule.

POLITICAL SOCIOLOGY

Learning Outcomes:

Students can able to understand the meaning and significance of the study of Political sociology. Can able to compare and contrast the major sociological theories in sociology. Will be competent to apply social theories correctly to the historical and current events. It describes the role that culture plays in affecting group as well as individual behaviours. Explains how various social locations such as class, race, gender, age and sexuality are vital to the study of sociology and apply them to specific sociological topics.

MODERN POLITICAL ANALYSIS

Learning Outcomes:

It will enable students to understand contemporary and inter-disciplinary approaches. Students can explain easily the behavioral and post-behavioral revolution. They will be thorough with the system and communication analysis. They will have the knowledge of Elite theory to address the system of governance in the global level.

POLITICAL ECONOMY OF INDIA

Learning Outcomes:

- Students will be able to understand how national and domestic politics influences and shape economic factors.
- They will be able to track down the history of planning in India.
- They will come to know about agricultural reforms in India, farmer movements and their terms of trade.
- They will be able to differentiate between large scale and small-scale industries.
- They will come to know about taxation in India.

NATIONAL MOVEMENT AND CONSTITUTIONAL DEVELOPMENT IN INDIA

Learning Outcomes:

- Students will learn about Mahatma Gandhi, the development of nonviolent mass action, and the Indian movement for independence. Students will retain strong mental images of Gandhi and the origins of non-violent mass action.
- Rationale: Knowledge of nonviolent mass action and of the Indian independence movement is important for any student of modern world history. Students will learn about how the Indian Constitution evolved.

ENVIRONMENTAL STUDIES

Learning Outcomes:

- Understand core **concepts** and methods from ecological and physical sciences and their application in environmental problem-solving.
- Appreciate key concepts from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.

COMPARATIVE POLITICAL SYSTEMS: UK, USA, SWITZERLAND, FRANCE AND CHINA

Learning Outcome:

- Students will be able to understand the constitution of different Governments across the world.
- Enhance students' comprehension of the Constitution of India through comparative study.
- They will come to learn the tenure and compositions of heads of state, head of the government, parliament, etc.
- One will understand the procedures of election in the developed countries.

WESTERN POLITICAL THINKERS

Learning outcomes:

Students will be able to understand the features of Ancient Greek and Roman political thought. The renaissance period brought in lot of changes like ethics, good governance controversy. The industrial revolution brings in major remarkable changes in society like relevance of social welfare socialism, communism. Students will also be educated on the modern contemporary theory like justice, distributive justice which is so relevant, in this century.

HISTORY OF FREEDOM STRUGGLE AND CONSTITUTIONAL DEVELOPMENT IN INDIA

LEARNING OUTCOMES:

- Students will learn about Mahatma Gandhi, the development of nonviolent mass action, and the Indian movement for independence. Students will retain strong mental images of Gandhi and the origins of non-violent mass action.
- Rationale: Knowledge of nonviolent mass action and of the Indian independence
- movement is important for any student of modern world history
- Students will learn about how the Indian Constitution evolved.

COMPARATIVE GOVERNMENT AND POLITICS

Learning Outcomes:

- The students will be able to understand and apply different approaches to explain the functioning of different types of governing regimes.
- Students will be able to compare democratic regimes and evaluate their functioning.
- Students will be able to critically reflect on critical aspects of electoral democracy that includes functioning of parties and the relation between representation and democracy.
- Students will be able to explain how media has changed the contours of elections and electoral democracy.

INDIAN POLITICAL THOUGHT

Learning outcomes:

Students can understand clearly ancient governing system in India. it will give them a clear picture of the evolution of the concept of governance from ancient to modern. It will help the students to understand the social policies adopted by India when studying the political thought of Indian philosophers who were active during the Indian freedom movement.

PRINCIPLES OF PUBLIC ADMINISTRATION

Learning outcomes:

- ❖ The student will understand the nature and scope of public administration.
- ❖ The students will be able to acquaint with the theories approaches, concepts and principles of public administration.
- ❖ They will be able to grasp the administrative theories, concepts and principles to make sense of administrative practices with emerging trends.

POLITICAL IDEOLOGIES

Learning Outcome:

- The student will understand the origin time and place of various ideologies.
- The students will be able to differentiate between left, right and centre ideologies.
- The students will learn the basic tenets of all the ideologies included in the course.
- The students will be able to analyse the circumstances on how it influenced the founder on forming those ideologies.

GOVERNMENT AND POLITICS OF TAMIL NADU

Learning Outcome:

- The study will create a deep and intense feeling of nationalism and love for Mother India.
- They will learn how Brahmins emerged as superior class.
- The student will learn about formation and achievements of Dravidian parties in Tamil Nadu.
- They will learn about the social oppression and empowerment of depressed.

INTERNATIONAL RELATIONS: THEORIES AND PRACTICES

Learning Outcomes:

- a. Familiarization with the key concepts of the discipline of IR.
- b. Understanding of linkages between classical realism and classical geopolitics.
- c. Comprehensive understanding of the key assumption and argument of the mainstream IR.
- d. Appreciation of what is global IR and why non- western perspectives are needed.
- e. Greater appreciation of the important role played by non- western countries in building post- war norms and institution in key area such as universal sovereignty, human right, development, and regionalism.
- f. Understanding the agency of the global south in these areas is key to countering IR's ethnocentrism and developing new concepts, theories, and method.

POLITY IN THIRUKKURAL

LEARNING OUTCOMES:

- After complete of the paper students will able to know the importance of ethics values in administration.
- To know the impartiality justice, welfare, friendly relation with other state elucidated by Thiruvalluvar.
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INDIAN CONSTITUTION

Learning Outcomes

- Students will be able to understand the terms of partition and how princely states were integrated.
- They will be able to answer how princely states of Junagarh, Hyderabad, Goa, and Kashmir were integrated into India.
- They will come to know the importance of the Preamble in the constitutional design of India.
- They will be able to answer how constituent assembly decided about our National

UNDERSTANDING OF THE INDIAN CONSTITUTION

Learning Outcomes:

Students will be able to explain the salient features of the Constitution of India. They will be able to differentiate between various organs of the government i.e., the executive, legislative and Judiciary. Students will know the difference between the head of state and head of government. They will understand the procedure of different types of elections and learn about the powers and compositions of Lok Sabha and Rajya Sabha.

Common to all UG Courses VALUE EDUCATION

Course Outcome:

- Students will understand the importance of value based living.
- Students will gain deeper understanding about the purpose of their life.
- Students will emerge as responsible citizen with clear conviction to practice values and ethics in life.
- Students will contribute in building a healthy nation.

DECENTRALISATION AND PANCHAYAT RAJ INSTITUTIONS IN INDIA

Learning Outcomes:

- The course will enable students to – Develop a comprehensive understanding of the philosophy, logic and operation of local governments
- Assess the challenges confronting local administration.
- Have a sense of belonging to the neighbourhood Block.

DISASTER MANAGEMENT IN INDIA

Learning Outcomes:

- Students will be able to differentiate disasters in various heads i.e., natural and man-made disasters.
- They will learn about the machinery of disaster management in India.
- The most important outcome of the subject is that students will be able to prepare themselves during any disaster.
- They will understand the vulnerabilities and risks during a disaster

E-GOVERNANCE IN INDIA

Learning Outcomes:

- Students will understand, what is E-Governance and understand the various stages of development and its process.
- They can differentiate between government and governance.
- They will know about data warehouse and government web services.
- They will know about cyber law and e-governance

INDIA'S FOREIGN POLICY

Course Outcomes:

- Understand the intricacies of the making of Indian foreign policy
- Assess the nature and implications of India's relation with global institutions, different regions and nations
- Develop a capacity to reflect on new issues emerging in international relations and India's response.
- Analyse and critically think on various issues confronting India's external relationship.
- Evaluate the implications of recent developments in India's foreign policy.

INTRODUCTION TO HUMAN RIGHTS

Learning Outcomes:

- Upon completing this course, students should
- Understand the key historical, political, legal and moral influences that have shaped the idea of "human rights" and be able to analyse the contemporary challenges and trends in human rights theory and practices
- Understanding the major international declaration, treaties and conventions governing human rights
- Understanding the nature and scope of Human rights in India

POLITICAL SCIENCE - PG

PRINCIPLES OF POLITICAL THEORY

Learning Outcomes:

- They will know the functions and theories of State.
- students can understand the inter-links between rights and liberties.
- They will be in a position to evaluate the different concepts in political science
- students will get opportunity to explore the related debates and controversies in Political theory.
- They can analyze critically the new issues such as globalization and multiculturalism.

COMPARATIVE POLITICAL ANALYSIS

Learning Outcomes:

- ❖ Students would be able to explain different approaches to politics and build their own understanding of Political Analysis.
- ❖ They will be able to understand the different forms of governments and their organizations.
- ❖ They will come to know about the importance and the means of political participation.

SOCIETY IN INDIA

Learning Outcomes:

- Sociological perspective on Indian Society presented in this course will enable students to gain a better understanding of their own region and situations. Students can be able to understand the basic knowledge of Indian Society.
- Students can understand the religious organizations and the economics and political institutions of Indian Society.
- They will be in a position to explain the functions of the Indian Social System

POLITICAL PROCESS IN TAMIL NADU

Learning Outcome:

- ❖ They will learn about provincial politics in Tamil Nadu and its impact on state politics.
- ❖ It will also help students to understand linguistic and regional politics, the importance of State autonomy, self respect movement and welfare development programmers are few highlights of this course.
- ❖ Students will be able to explain the emergence of Dravidian politics and the success of regional party system.

PRINCIPLES OF PUBLIC ADMINISTRATION

Course outcomes:

1. Know the significance of Public Administration
2. Comprehend Traditional and Modern approaches to Public Administration
3. Evaluate the various theories of Administration
4. Acquire knowledge on Civil Services in India
5. Critically appraise the financial administration procedure.

COMPARATIVE GOVERNMENTS (UK, USA, FRANCE, SWITZERLAND, CHINA)

Learning Outcome:

- Students will be able to understand the constitution of different Governments across the world.
- Enhance students to understand the Constitution of India through comparative study.
- They will come to learn the tenure and compositions of head of the state, head of the government parliament, etc.
- One will understand the procedures of election in the top countries of the world.

HUMAN RIGHTS IN INDIA

Learning Outcomes:

- ❖ The student will be able to explain the meaning of Human Rights and examine Human Rights issues in different social, Political, and Cultural context.
- ❖ They will come to know the ideologies which seek to create hegemony; religious or political, that pose threats to the Human Rights of individuals.
- ❖ Students will be able to examine and explain issues of Human Rights.

WESTERN POLITICAL THINKERS- I

Course Outcomes:

1. Students can understand the Political ideologies of western Philosophers and can learn the distinctive features of western Political Thought.
2. it will enable students comprehend political structure of the society in the medieval period.
3. It helps to examine the inter-links between ethics and politics.
4. enables students to understand the contribution of political and social theorists to the development of political thinking.

MODERN POLITICAL ANALYSIS

LEARNING OUTCOMES:

- ✓ The course seeks to provide a theoretical as well as critical perspective in understanding some of the major debates in Political Science and Political Sociology over the last several decades.
- ✓ The structure of the course is designed in such a way as to enable the students to develop analytical skills in understanding the contemporary political issues and challenges.
- ✓ The course is expected to offer adequate theoretical knowledge in broad areas of state, society, power, development, culture, etc.

POLITICAL DYNAMICS IN INDIA

Learning Outcomes:

- Students will understand the nature of Indian Politics.
- They can understand the factors that influence politics in India, such as caste, class, gender etc.
- They will be able to understand the party system and various electoral reforms in India.
- They can know about the development process of various strategies, policies and schemes in India.

GENDER AND POLITICS

Learning Outcomes:

1. Appreciate the role and contribution of women in politics
2. Understand gender equality enshrined in the Constitution
3. Evaluate critically the participation of women in current political scenario.
4. Debate on issues regarding gender equity and empowerment.
5. Capacity to analysis and do research on the field of gender politics.

ADMINISTRATIVE SYSTEM IN INDIA

Course outcomes:

1. Acquire knowledge on Evolution of Indian Administration
2. Understand features and working of Indian Administration
3. Evaluate Administrative Reforms since Independence in India
4. Examine critically the various Law and order Administrative system
5. Identify institutional framework and programmes of Centre and State Governments for the Social Welfare

WESTERN POLITICAL THINKERS II

Learning Outcomes:

1. To understand the ideologies like Fascism Socialism and the changes in world Political Order.
2. To Learn Revisionist Theories, which set right Negatives of Communism.
3. To Provoke thinking on cultural Hegemony, origins of Totalitarianism and Feminism.
4. To highlight the importance of Justice, Distributive Justice and Free will.
5. To gain insight into Phenomenology and existentialism.
6. To equip students to understand the modern theories and their relevance in the modern world.

INTERNATIONAL RELATIONS; THEORY AND PRACTICES

Learning Outcomes:

- Students will understand the nature and scope of international relations.
- They will learn what is power and various methods used to acquire power.
- They will come to understand diplomacy and explain various tools of diplomacy and also will learn the various factors affecting foreign policy.
- They will come to understand the effect of third world in international relations.

SOCIAL MOVEMENTS IN INDIA

Learning Outcomes:

- Students will understand what is social movement , significance and the classification of social movements.
- They will learn about various theories of social movements such as Marxist, Weberian etc.
- They will able to trace down the evolution of social movements in India such as peasant movements, trade unions etc.
- They will also know about modern social movements in India such as environmental movements, anti-corruption movements etc.

INTRODUCTION TO THE INDIAN CONSTITUTION

Learning Outcomes:

- ❖ Students will be able to explain the salient features of the Constitution of India.
- ❖ They will be able to differentiate between various organs of the government i.e., the executive, legislative and Judiciary.
- ❖ Students will know the difference between the head of state and head of government.
- ❖ They will understand the procedure of different types of elections and learn about the powers and compositions of Lok Sabha and Rajya Sabha.

INDIAN POLITY FOR COMPETITIVE EXAMINATIONS

Learning Outcomes:

- ❖ Students will be able to explain the salient features of the Constitution of India.
- ❖ They will be able to differentiate between various organs of the government i.e., the executive, legislative and Judiciary.
- ❖ Students will know the difference between the head of state and head of government.
- ❖ They will understand the procedure of different types of elections and learn about the powers and compositions of Lok Sabha and Rajya Sabha.

INDIA AND THE WORLD

Learning Outcomes

- Students will learn the origin and historical development of Indian Foreign Policy.
- They will come to understand about India and how it evolved with Non-Alignment Movement.
- They will come to know about the conflicts and cooperation with neighboring nations and Asian countries.
- They will understand the role of India in United Nations Organisation.

INDIAN POLITICAL THINKERS

Learning outcomes

- Students will be able to understand the features of renaissance, equality, Liberalism, Non - violence, Socialism and secularism.
- The course is designed to illuminate the students, the political thought interlinked with Indian philosophy, which shaped the independence movement and policies of the Indian government after independence.

RESEARCH METHODS IN SOCIAL SCIENCES

Learning Outcomes:

- Students will come to understand the various research methods involved in the study of social sciences.
- They will know about how to study social science in a scientific method.
- They will learn to measure attributes and attitudes and all other measuring strategies in political science.
- They will learn how to organize research survey and interview and data collecting techniques.
- They will learn how to observe the collected data for the research.

DISASTER MANAGEMENT

Learning Outcomes:

- Students will be able to differentiate disasters in various heads i.e., natural and man-made disasters.
- They will learn about the machinery of disaster management in India.
- The most important outcome of the subject is that students will be able to prepare themselves during any disaster.
- They will understand the vulnerabilities and risks during a disaster

ENVIRONMENTAL POLITICS

Learning Outcomes

- Know the basic concepts in environmental issues.
- Have an insight about the environmental development.
- Understand the various policies and committees for environmental governance.
- Examine the policies relating to environment.
- Evaluate various environmental movements.

TELUGU - PG

CLASSICAL POETRY

Outcomes:

- How to compile a poem
- Improve the style of writing
- To analyze classical Literature and Language
- Identify Sanskrit words in Telugu Language
- To know how to apply chandassu and Alankaram in poetry

DRAMATURGY

OUTCOME :

- To revise the origin of Ancient Drama
- How to apply Natakalakshanalu in Drama
- How to use the methods of Dasarupakalu
- To create drama his / her own style

HISTORY OF TELUGU LITERATURE – I

Outcome :

- Co 1 - The Development of Telugu Literature Images
- Co 2 - Compare with other South Indian Litt
- Co 3 - Outline of Litt is get mind Peace, Fresh etc
- Co 4- more useful in Individual Life

BALAVYAKARNAMU –I

Outcome :

- To Communicate the Skills
- Identify the Words From Panini Sutras

EVOLUTION OF TELUGU LANGUAGE

Outcome :

- To analyze Telugu language
- Compare other south Indian Language words
- Evaluate Ancient language by ages

PRABANDHA POETRY

Outcome:

- co1 - Revise prabhandha poets through ages
- co2 - Demonstrate their writing style in lectures/seminars/conference etc.
- co3 - Give critique analysis of their works
- co4 - It gives mind relax and enjoyable in their life.

HISTORY OF TELUGU LITERATURE – II

Outcome :

- It gives a comprehensive outlook of Telugu Lit in Particular
- To analyze and Dakshinadrayarga and modern Period.
- most useful to political and social conditions.

BALAVYAKARANAMU - II

OUTCOME :

1. To Communicate the skills
2. Identify the words from panini sutras

INTRODUCTION TO SANSKRIT LITERATURE

Outcome :

- It is Most useful to identify ancient Literature in Sanskrit
- Apply the methods in Kavya Rachanas
- Discuss the great Writers in Sanskrit Literature

COMPARATIVE STUDY OF DRAVIDIAN LANGUAGES

Outcome :

- To Identify the features phonology, vowel & consonant changes in dravidian languages
- To Apply Dravidian roots, Gender, Number, Case etc while speaking dravidian languages
- To compare phonology in Dravidian Languages
- To analyze Research about the Indian Languages families and their Characteristics.

ANDHRA HISTORY AND CULTURE
(To be offered to other Department Students)

Outcome:

- The Culture of Andhra Pradesh State in India as many aspects.

MODERN TRENDS IN TELUGU LITERATURE

Outcome :

- To get outline for Research
- Select good Topics / writing to do Research
- great plan in future
- To Prepare good information in Modern Literature

LINGUISTICS

Outcome :

- Prepare of dialects Atlas
- Analyze of immediate Constituents
- Plan of making of is glasses
- Outline of the Study of phones organs of Speech
- Types of Phonemes analysis
- Discuss the classification the Languages of the

PROSODIAL SYSTEM IN TELUGU

Outcome :

- Design the Essential elements of the poetry
- Identify the beauty of the poetry
- Helps for better analysis of classical poetry.
- outline of the study of phone, organs of speech
- Types of phonemes Analysis
- Discuss the classification of the Languages of the word

ELEMENTARY STUDY OF SANSKRIT

Outcome:

- Outline of the Sanskrit grammar
- Design the kalidasa works
- To utilize the panchathantra Stories in our daily life

BALLAD POETRY

Outcome:

- To demonstrate the folk arts
- Revise the trend in the veeragadha kavithvam
- create the folk poetry

TELUGU AND MASS MEDIA (To be offered to other Department Students)

Outcome :

- Mass Communication Provides a freedom to express our thoughts globally and representing a large number of peoples.
- It is also provide a freedom to learn multiple things and also present into a public platform

LITERARY CRITICISM

Outcome :

- Identify the methods of Literary criticism
- Outline of the indigenous types of drama such as Yakshagana etc,
- Compile with poetry and function, the various types and its function, the various types of novel, Short Story and other forms of fiction, Biography and Essay

FOLKLORE

Outcome :

- Revise the tradition of folk Literature
- Select the component of folk Lyrics
- Explain the beauty of Songs and prose in folk
- Identify the old Culture and tradition in folk – Literature

JOURNALISM

Outcome :

- Job Oriented Subject
- To Develop the communication skills
- Helps to think Creativity
- Analyze the present situation in the society.

PROJECT - VIVA - VOCE

Outcome :

Opportunity to carry an independent work in Telugu Literature.

METHODS OF TRANSLATION

OUTCOME :

- Job oriented in Mass Media
- Communicate the Media skill
- Utilize the fields of knowledge
- Use the translation skills in comparative skills.

FINANCIAL ACCOUNTING – I

Course outcomes: Students will be able to

1. Discuss and apply fundamental accounting concepts, principles and conventions
2. Record basic accounting transactions and prepare annual financial statements for a sole proprietorship business.
3. Calculate depreciation to be charged to assets under different methods.
4. Calculate the amount of fire insurance claim to lodged to an insurance company.
5. Students will be able to prepare trading, profit and loss account and balance sheet from incomplete records derived from single entry system.

BUSINESS MANAGEMENT

Course outcomes: Students will be able to

1. Illustrate the theory and practice of management and its development phases till date.
2. Discover, nourish and nurture managerial traits and talents among the students.
3. Know about business management and its development through the functions of planning, organizing, staffing, leadership and control.

ELEMENTS OF MERCANTILE LAW

Course outcomes: Students will be able to

1. Apply basic elements required to enter into a valid contract under the Indian Contract Act 1872
2. Outline the remedies available to individuals in case of breach of contract.
3. Analyze the relationship between agent and principal and its legalities.
4. Understand legal provisions relating to Indemnity, Guarantee, Bailment and Pledge.
5. Gain knowledge on the main principles which govern trade and business under the Sale of Goods Act 1930.

FINANCIAL ACCOUNTING – II

Course outcomes: Students will be able to

1. 1 Prepare ledger accounts for inland branch transactions and calculate profit or loss.
2. Allocate and apportion the expenses among the departments and calculate profit or loss for each department.
3. Pass journal entries and prepare ledger accounts for the transactions relating to a partnership firm.

MARKETING MANAGEMENT

Course outcomes: Students will be able to

1. To develop an idea about marketing and its functions
2. To enhance the students on consumer behavior.
3. To familiarize students about product and its classifications.
4. To make them understand pricing policies.
5. To introduce the concept of sales forecast motives

BUSINESS COMMUNICATION

Course outcome: Students will be able to

- Understand the Grammatical background and presentation competencies which aid effective communication in business.
- Prepare, proof read and Edit business reports, enquiries, orders, complaints and claims.
- Compose effective and accurate business documents through e-mails and social networks.

CORPORATE ACCOUNTING

Course Outcome: Students will be able to

1. Analyze the accounting treatment of issue of shares and redemption of preference shares.
2. Prepare accounts relating to issue and redemption of debentures.
3. Prepare Statement of Profit & Loss and Balance Sheet of Joint Stock Companies as per Schedule III, Companies Amendment Act 2017.
4. Appreciate the accounting practices followed in alteration or reduction of share capital.
5. Apply accounting methods to value goodwill and shares..

COMPANY LAW AND SECRETARIAL PRACTICE – I

Course Outcomes: Students will be able to

1. Plan for formation of company right from promotion to commencement of business stage.
2. Illustrate the procedure involved in raising capital by way of issue of shares and debentures.
3. Illustrates the main charter of a company and the raising of capital in a Company

CORPORATE ACCOUNTING –II

Course Outcome: Students will be able to

1. Develop the skill of preparation of statement showing liability of underwriters
2. Develop a conceptual logic behind preparing financial statements relating to profit prior to and after incorporation
3. Acquire the skill of preparation of accounts for companies which are going for acquisition, merger and reconstruction as per legal requirements.

COMPANY LAW AND SECRETARIAL PRACTICE –II

Course outcomes: Students will be able to

1. Illustrate the role of Company secretary as per secretarial standard 1 and 2 under the Companies Act of 2013.
2. Illustrate the duties and responsibilities of director as per compliances under companies Act of 2013.
3. Learn different ways of obtaining membership in a company and its termination and the procedure for transfer and transmission of shares.
4. Understand the provisions regarding conduct of meetings of the board of directors and Share holders, voting rights and resolutions and procedure for winding up of companies

MANAGEMENT ACCOUNTING

COURSE OUTCOMES: After completion of the course the students will be able to

1. Illustrate the role of a Management Accountant in the present scenario.
2. Evaluate the financial statement analysis for strategic decision making of firm.
3. Examine the solvency, turnover/performance and Liquidity of a business by using live data.
4. Evaluate the magnitude and pattern of sources and application of fund under different head of account.

5. To understand the break- even level in volume and units to make managerial decisions competently on cost volume and profit.

INCOME TAX LAW AND PRACTICE – I

Course outcomes: Students will be able to

1. Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.
2. Assess the residential status of an assessee & the incidence of tax.
3. Compute income of an individual under the head salaries.
4. Ability to compute income from house property.
5. Evaluate income from a business carried on or from the practice of a Profession.

BANKING THEORY AND PRACTICE

Course Outcomes Students will be able to

1. Illustrate knowledge on banking and financial system in India
2. Provide knowledge about commercial banks and its products
3. Familiarize banking system in India
4. Understand better customer relationship
- 5.. Know about modern banking services like e-banking, m-banking and internet banking

FINANCIAL SERVICES

Course Outcome

- I. To give an idea about fundamentals of financial services and players in financial sectors.
2. To create an awareness about merchant banking, issue management, capital markets and role of SEBI.
3. To provide knowledge about leasing and hire purchase concepts.
4. To make them understand about different types of insurance and IRDA Act..

HUMAN RERSOURCE MANAGEMENT

Learning outcomes: Students will be able to

1. Analyze about the various processes of HR planning and compensation structure.
2. Aware about the various employee training and development methods.
3. Select the various methods of recruitment and safety measures to be employed by the employees.
- 4 Assess about employee welfare and grievance handling.

BASIC LAWS OF BUSINESS

Course outcomes: Students will be able to

1. Elements of a valid contract: agreement, consideration, capacity, legality, and satisfaction of the statute of frauds.
2. Recognize a valid, enforceable contract, and identify reasons why an agreement may not be enforceable.
3. By the end of this module, you will have a basic understanding of some of the fundamental rules that govern the employer-employee relationship.

PRACTICAL AUDITING

Course out comes: Students will be able to

1. Apply the concept of Audit, its principles and objectives.
2. Gain knowledge on the Importance of Internal Audit, Internal Check and Internal Control .
3. Apply the techniques of Vouching and Valuation of Assets and Liabilities in Auditing.
4. Acquire knowledge on the duties, rights and responsibilities of Auditor.
5. Prepare Audit report.

INCOME TAX LAW AND PRACTICE – II

Course outcomes: Students will be able to

1. Compute short term & long term capital gains.
2. Evaluate income under the residuary head and apply the provisions of clubbing of income.
3. Demonstrate an understanding of set off & carry forward of losses and also identify the incomes exempt from tax.
4. Identify the different deductions available to an individual from total income and the process of e-filing.
5. Assess taxable income & tax liability of an individual

COST ACCOUNTING

Course outcome: Students will be able to

1. Outline the basic principles and concepts of cost accounting.
2. Prepare the statement of Cost and Provide insight into control of cost.
3. Prepare the statements relating to material purchase, issue and losses.
4. Compute the Labour cost under various remuneration schemes.
- 5 Analysis the different methods to compute overhead cost.

CORPORATE LAWS

Course outcomes: Students will be able to

1. Develop an understanding of the Nature of SEBI, Amendments, corporate governance.
2. Understand the various kinds of acts passed.

GOODS AND SERVICES TAX

Course outcomes: Students will be able to

1. Outline the basic concepts of taxation.
- 2 .Assess the framework of time, place of supply, reverse charge mechanism & related provisions.
3. Acquire the knowledge on the basis of assessment & returns to be filed.
4. Acquire knowledge on the basis of levy & provision relating to the supply of IGST & SGST.
5. Gain knowledge on Customs Act & related provisions.

HINDI - UG
HINDI VYAKARAN

OUTPUT :

Through this paper students will get the knowledge of grammar, so with this they can improve their language power to read and write grammatically good.

PRAYOJAN MOOLAK HINDI

OUTPUT: THIS PAPER WILL BE VERY MUCH BENEFICIAL FOR THE STUDENTS BECAUSE THROUGH THIS THEY CAN EASILY TACKLE BANKING AND CENTRAL GOVERNMENT EXAMS.

UPANYAS AUR KATHA SAHITYA

OUTPUT: Students can Learn important Kahani from Hindi Literature which show values of life and how to face challenges in life.

TAMIL BHASHA KE SANTH KAVI THIRUMOOLAR

OUTPUT: WITH THE HELP OF THIS PAPER STUDENTS WILL COME KNOW ABOUT TAMIL LITERATURE.

BASIC HINDI

OUTPUT: STUDENTS CAN LEARN BASIC HINDI KNOWLEDGE OF WRITING AND SPOKEN SKILLS.

GADYA SAHITHYA

OUTPUT: Students will get the experience of learning Hindi Prose Literature and values. Not Only About prose but they will get the knowledge of Humour, Autobiography, Travel, Essay, and Various fields of Literature.

JEEVANI

OUTPUT: Students can inspire After learning the life history of Subhanibhara and Harivansh Bachchan. Learning life of great authors students life can change in good path.

BHARATIYA BHASHAVO KE SAHITHYO KI KATHA

OUTPUT: Students Can get the knowledge of our Culture and Heritage of India ,where language plays Impotant Role ,which was seen lacking in our youngsters.

NATAK AUR EKANKI

OUTPUT:STUDENTS WILL GET THE KNOWLEDGE OF OLD CULTURE AND IMPORTANCE OF NATAK AUR EKANKI.

RAJBHASHA HINDI

OUTPUT: Students can enjoy the Depth knowledge of Rajbhasha Hindi.

BHARATHIYA KAVYA SASTRA

OUTPUT: Students will get the knowledge of all the Indian kavya sastra which help then to their higher studies.

MADHYA UGEEN KAVYA

OUTPUT: Students will learn about ancient authors and their works.

PATRAKARITA

Output: Students will get the knowledge of Journalism which can be useful for their future jobs offers in Media Related field.

THULANATMAK SAHITHYA KABIR AVAM THIRUVALLVAR

OUTPUT:Students will get the knowledge of comparative studies of works which can be useful for their Future Research work.

AADHUNIK KAVYA

OUTPUT: Students will get the knowledge of modern time, and some Modern Authors and their Works.

HINDI BHASHA KA ETHIHAS EVAM DEVANAGARI LIPI

OUTPUT: Students learn about the Hindi Language and Devanagari Script and their uses.

BHASHA VIGYAN

OUTPUT: Students get the study of linguistics.

AADUNIK KAL

OUTPUT: Students learn about Modern Literature and their works.

PAASCHATYA KAVYA SASTRA

OUTPUT: STUDENTS WILL GET THE KNOWLEDGE OF FOREIGN LITERATURE AND THEIR WORKS.

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ENGLISH - UG

BRITISH POETRY

COURSE OUTCOME

After the completion of the course students will be able to –

CO1: Identify different forms of poetry. K1

CO2: Interpret the representative poems in the larger contexts of literary movements.

K3

CO3: Distinguish poetic techniques like figures of speech. K2

CO4: Evaluate the prosody employed. K5

CO4: Arbitrate on the use of classical and modern form of poetic language. K5

BRITISH PROSE

COURSE OUTCOME

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

CO1: Identify and describe various types of essays (personal, impersonal, didactic, etc.) K2

CO2: Write creative essays of their own. K6

CO3: Examine the structure of an essay. K5

CO4: Analyze the tone and content of the essays. K4

CO5: Appraise the social relevance of the themes. K5

SOCIAL HISTORY OF ENGLAND AND HISTORY OF ENGLISH LITERATURE –I

COURSE OUTCOME:

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

CO1: List the social, political and historical landmarks of England. K1

CO2: Acquaint with the representative works of different ages. K2

CO3: Recognise the authors in connection with their schools and movements. K2

CO4: Assess the impact of socio-political events on literature. K5

INDIAN WRITING IN ENGLISH

COURSE OUTCOME

After the completion of this course students can:

CO1: Identify the representative Indian writings in English language. K2

CO2: Compare IWE with the writings written in Indian regional languages and identify the characteristics of IWE and evaluate it. K2 K3 K4 K5

CO3: Emulate best Indian writings. K6

CO4: Can explain and evaluate the contribution of Indian writing in English to World Literature. K5

SOCIAL HISTORY OF ENGLAND & HISTORY OF ENGLISH LITERATURE- II

COURSE OUTCOME

CO1: Students can explore the full breath of English life and society. K2

CO2: Can analyse and critique the impact of political history on social history. K4

CO3: Can assess the emergence, reasons, development and the impact of social movements which would further enable the students to assess, evaluate the efficacy of those movements. K5

CO4: Can analyse the interconnectedness of religious and political scenarios and the social conditions. K4

CO5: The overall emergence of English society as a nation and a powerful colony can be viewed, assessed which would further enable the students to assess international politics. K5

FILM STUDIES: AN INTRODUCTION

Course Outcome:

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

CO1: Appreciate cinema as an art form than a medium of entertainment K4

CO2: Discuss the various aspects of cinematic language namely shot, camera angle, sound, etc. K3

CO3: Identify the pioneers of cinema K2

CO4: Evaluate films from the point of view of a critic than a mere spectator K5

BRITISH FICTION

COURSE OUTCOME

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

CO1: Identify various types of British fiction. K2

CO2: Recognise representative novelists of various ages in British Fiction. K2

CO3: Examine various techniques of narration. K5

CO4: Assess the major themes and messages of the prescribed fiction. K5

INDIAN LITERATURES IN ENGLISH TRANSLATION

COURSE OUTCOME

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

CO1: Recognise Indian regional literatures in English translation. K2

CO2: Distinguish between Indian writing in English and
Indian writing in English Translation. K4

CO3: Analyze the diverse culture, customs and social practices of Indian regions. K4

CO4: Compare the select representations in Indian writing in English and
Indian writings in English Translation. K4

CO5: Interpret the impact of Indian mythology and folklore on Indian regional
writings. K4

CO6: Assess the regional issues with better inputs. K5

LITERARY FORMS

COURSE OUTCOME

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

CO1: Identify different literary genres of various works. K2

CO2: List the salient features of literary genres. K1

CO3: Analyze the genres of the prescribed texts. K4

CO4: Highlight the scope of literary genres in modern times. K5

BRITISH DRAMA

COURSE OUTCOME

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

CO1: Recognize the important dramatists of various ages. K2

CO2: Examine dramatic techniques and themes. K3

CO3: Differentiate the form and content of classical and modern British drama. K4

CO4: Value the twin status of drama being text and performance. K5

AMERICAN LITERATURE

COURSE OUTCOME

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

CO1 – Discuss the philosophical outlook of American thinkers. K2

CO2 – Analyse literary devices and themes of American poetry. K4

CO3 – Apply the techniques of psychological realism in understanding the human mind and situation. K3

CO4 – Critically examine the American Theatre. K5

LITERARY TERMS: A PRACTICAL INTRODUCTION TO LITERATURE

COURSE OUTCOME

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

CO1: Identify literary device used in a given passage. K2

CO2: Write paraphrase of any unseen poem. K3

CO3: Scan any poem and identify the metre. K2

CO4: Critically evaluate and write an appreciation of any given passage. K5

SHAKESPEARE STUDIES

COURSE OUTCOME

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

CO1: Distinguish between Shakespearean/ English sonnet and Italian sonnet form. K3

CO2: Classify the plays of Shakespeare in accordance with their themes. K2

CO3: Relate prescribed plays to their historical, political and social context. K4

CO4: Ascertain the twin status of Shakespeare's plays as being both text and performance. K5

AN INTRODUCTION TO LANGUAGE AND LINGUISTICS

COURSE OUTCOME

CO1: Knowing the 'why' of certain language rules by tracing out the history of a language enables the students demonstrate a better mastery over the language with a proper awareness of what is what and how to use the tool. K3

CO2: With etymological knowledge students can interpret and explain certain word meanings, associations and constructs effectively. K2 and K3

CO3: Applying the thorough understanding of the language related sound mechanism (Phonological awareness) students can speak clearly and effectively. K2 and K3

CO4: Knowledge of semantics essentially trains the students to code and decode with utmost accuracy. K1 and K3

CHILDREN'S LITERATURES

COURSE OUTCOME

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

CO1: Analyze the texts written for children. K4

CO2: Examine the various genres of children's literature. K5

CO3: Identify the features of children's literature. K2

CO4: Study the social and commercial value of children's literature K3

GENDER STUDIES – AN INTRODUCTION

COURSE OUTCOME

By doing a course on Gender Studies students:

CO1: Can reconsider their perceptions of man, woman, the third gender and gender constructions. K2

CO2: Can rethink and analyse the concepts of sexuality, and gender fluidity. K4

CO3: Can critique the hierarchical organization of people based on heteronormativity. K5

CO4: Can evaluate the constructs of Absolutism and Relativism can enable the students to enter higher realms of thinking. K5

CO5: Can interpret and assess issues of biological determinism and social constructionism leading to further evolution of human mind and life. K4 and K5

COPY EDITING

COURSE OUTCOME:

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

CO1: Identify the errors in spelling, grammar and punctuation in a text and correct them. K2

CO2: Verify factual correctness of information such as dates and statistics. K4

CO3: Assess texts for style, readability and adherence to editorial policies. K4

CO4: Arrange page layouts of photos, articles and advertisements. K3

ENGLISH LANGUAGE TEACHING

COURSE OUTCOME:

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

CO1: Apply the teaching methods rationally and appropriately. K3

CO2: Prioritise 'use' over 'usage' in teaching communication. K4

CO3: Demonstrate good communication skills. K3

CO4: Design efficacious and locally useful English syllabus. K6

CO5: Appraise the techniques of testing and evaluation. K5

LEXICOGRAPHY

COURSE OUTCOME

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

CO1: Identify the structures of various dictionaries. K2

CO2: Use pronunciation keys effectively. K3

CO3: Sketch the craft of compiling, writing and editing dictionaries. K3

CO4: Use dictionaries in language learning and language improvement. K4

ENGLISH FOR COMPETITIVE EXAMINATIONS

COURSE OUTCOME

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

CO1: Express their comprehension. K2

CO2: Summarise long essays. K1 K2

CO3: Identify the errors in a given sentence and correct the errors. K3

CO4: Use appropriate forms of words. K3

CO5: Solve questions related to vocabulary. K6 CO6: Develop better writing skills. K6

WORLD LITERATURES IN ENGLISH TRANSLATION

COURSE OUTCOME:

Reading world literature can enable the students to:

CO1: Analyse histories and historiographies comparing them with the literature that they read. K4

CO2: Assess International politics better with the more authentic representations that are presented to them in the form of literature. K5

CO3: Evaluate social, historical and political events and their impacts. K5

CO4: The global issues affecting the regional and vice versa can be better perceived, analysed, critiqued and addressed. K5

LITERATURES FOR SOCIAL CHANGE

COURSE OUTCOME:

After the completion of this course students will be able to

CO1: Evaluate works in the light of marginality K5

CO2: Analyse literary texts and their relevance to social justice K4

CO3: Apply their understanding of literary texts to social occurrences K3

CO4: Argue against social injustice K5

LITERARY CRITICISM: AN INTRODUCTION

COURSE OUTCOMES:

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

CO1. Demonstrate an understanding of the key concepts in criticism. K3

CO2. Identify the critics and the historical ages they belong to. K2

CO3. Compare and contrast the various concepts in literary theory from classical period to the present. K4

CO4: Interpret the differences in classical, romantic, modern and postmodern theories. K4

NEW LITERATURES IN ENGLISH

COURSE OUTCOME:

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

CO1: Recognise the themes of colonial and postcolonial writings which emerged in former British Colonies out of their colonial experience. K2

CO2: Examine the cross cultural interactions of the colonized and the colonizer in the prescribed works. K5

CO4: Assess the significance of regional novel in postcolonial context. K5

CO4: Summarise the effects of British Imperialism and its Colonial Expansionism. K2

COMPARATIVE LITERATURE AND TRANSLATION STUDIES

COURSE OUTCOMES

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

CO1: Apply the tenets of comparative literature and translation studies. K3

CO2: Analyse the cultural and linguistic significance of comparative literature. K4 CO3: Point out the challenges involved in translating literary works. K5

CO4: Choose comparative literature and translation for their academic purposes. K3

JOURNALISM, MEDIA & FILM

COURSE OUTCOME:

After the completion of this course,

students will be able to CO1 Choose a career in journalism. K5

CO2 Apply the principles and ethics of journalism to their writing. K3 CO3 Analyse films as an art form. K4

CO4 Write reviews and articles about films. K6

PHONETICS

COURSE OUTCOME

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

CO1: Extract precise information on pronunciation from dictionaries. KI CO2: Listen and comprehend the utterances of foreign accents. K2

CO3: Demonstrate effective communication skills using (Received Pronunciation). K3

CO4: Use professionalised communication skills to get placement opportunities in call centres, media and voice synthesis software making companies. K3

ENGLISH - PG

BRITISH LITERATURE

Course Outcomes:

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

CO1: identify authors and texts pertaining to the Medieval Age to the present age.

CO2: discuss the historical and social contexts of the texts.

CO3: critique the literary texts from the Medieval Age to the present age

CO4: identify experimentation in narrative, poetic, and dramatic forms through close reading of representative literary texts.

CO5: examine the modern texts' response to British literary tradition.

AMERICAN LITERATURE

Course Outcomes:

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

CO1: relate writers with movements and trends.

CO2: analyze the salient features of American poetry.

CO3: examine the dramatic techniques and devices pertaining to movements such as Expressionism, Realism and Absurd drama.

CO4: make out the American vision through fiction.

CO5: view the American perspective of aesthetics, intellectual and sociological issues

SHAKESPEARE STUDIES

Course Outcomes:

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

CO1: fix the prescribed play texts of Shakespeare in their specific contexts.

CO2: classify the place of Shakespeare in accordance with their themes and sources.

CO3: realize the scope of Shakespeare's plays for adaptations.

CO4: evaluate the relevance of Shakespeare in the Indian context.

LITERARY CRITICISM AND THEORY

Course Outcomes:

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

- CO1:** use classical approach to literary texts.
- CO2:** apply close reading method to poetry.
- CO3:** find out objective correlatives in literary texts.
- CO4:** recognize archetypes in literature.
- CO5:** identify the sign, signifier and the signified.

One Author: T.S. Eliot

Course Outcomes:

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

- CO1:** discuss Eliot's works as illustrations of his own critical concepts.
- CO2:** highlight the significance of his myth based works.
- CO3:** respond to contemporary critical theories.
- CO4:** analyse his critical works as precursors to both postmodern and poststructuralist trends.
- CO5:** consider T.S. Eliot as an advocate of anti-romantic stand.

TRAVEL WRITING

Course Outcomes:

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

- CO1:** identify various types of travel writing ensconced in other genres.
- CO2:** analyse travel writing from gender perspective.
- CO3:** infer the history of a particular region from prescribed texts.
- CO4:** distinguish the style of travel writing from that of other prose writing.
- CO5:** highlight the relevance of travel writing to contemporary times.

SOFT SKILLS I

Course outcomes:

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

- CO1:** Effectively communicate through oral and written communication.
- CO2:** Exercise their interpersonal skills.

LIFE WRITING

Course Outcomes:

After the completion of this course, students will

CO1: become familiar with various subgenres of life writing.

CO2: sensitize themselves to the predicament of various marginalized sections.

CO3: comprehend the significance of life writing as a literary genre.

CO4: understand the role of personal narrative in writing history.

LITERARY THEORY SINCE STRUCTURALISM

Course Outcomes:

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

CO1: read cultural texts, critically.

CO2: apply poststructural theories to literary texts.

CO3: correctly relate theories to literary and other cultural texts.

CO4: differentiate between Freudian and post-Freudian psychoanalytic critical approach.

CO5: use emerging trends in critical theories for their research.

LITERATURES OF CANADA, AUSTRALIA, NEW ZEALAND AND AFRICA (CANA)

Course Outcomes:

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

CO1: Give an outline of various literary movements in Canada, Australia, New Zealand and Africa.

CO2: read and analyse texts from these four regions in the light of postcolonial studies.

CO3: elaborate on the socio-political implications of the representative texts from these regions.

CO4: identify the points of adherence to and deviation from both British and American canonical texts.

LANGUAGE AND LINGUISTICS

Course Outcomes:

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

CO1: Acquire knowledge of various branches of linguistics.

CO2: Define organs of speech and classify all the speech sounds in English.

CO3: Analyze sentences and rephrase them for better understanding.

CO4: Interpret any unseen poem using the technique of foregrounding.

SOUTH AND EAST ASIAN LITERATURE

Course Outcomes:

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

CO1: make a brief survey of literary trends in South and East Asian writings.

CO2: enumerate the features of Noh and other stylized theatres of Asia.

CO3: contrast forms and themes of South and East Asian fiction with those of the West.

CO4: infer the larger socio-political context from the prescribed representative texts.

WEST ASIAN LITERATURE

Course Outcomes:

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

CO1: make a brief survey of the literary trends in West Asian writings.

CO2: sensitize themselves to the predicament of refugees from war-affected zones.

CO3: identify the commonalities in techniques and themes of West Asian literature.

CO4: politically comment on and interpret the representation of West Asia in Western writings.

MASS COMMUNICATION

Course Outcomes:

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

CO1: define communication in concrete terms.

CO2: analyze any news item critically.

CO3: write reports for newspaper.

CO4: use social media positively.

SOFT SKILLS II

Course outcomes:

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

CO1: make use of the Life skills for their betterment

CO2: make use of the language skills efficiently

Unit: I - Self Development (BTCL- K2, K3, K6)

Unit: II - Process of Communication (BTCL- K2, K3, K6)

Unit: III - Listening Skills (BTCL- K2, K3, K6)

Unit: IV - Reading Skills (BTCL- K2, K3, K6)

Unit: V - Speaking Skills. (BTCL- K2, K3, K6)

COMPARATIVE LITERATURE

Course Outcomes:

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

CO1: compare literary texts.

CO2: analyze the texts using comparative methodology.

CO3: write articles on comparative literature.

CO4: associate Western and Indian literary aesthetics.

CO5: relate social and literary movements across cultures.

MODERN SPANISH AND LATIN AMERICAN LITERATURE

Course Outcomes:

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

CO1: explore Latin American literature.

CO2: differentiate Latin American literature's literary merits.

CO3: analyze critically Spanish and Latin American literature.

CO4: pursue research in Spanish and Latin American Literature.

CO5: write scholarly articles on Spanish and Latin American Literature.

WRITINGS OF THE MARGINALIZED

Course Outcomes:

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

CO1: empathize with the marginalised sections of the society.

CO2: analyse the problems of the marginalised sections.

CO3: apply the idea of justice to the marginalised sections.

CO4: represent and critically respond to multiple points of view on the issues of the marginalised sections in different historical, social, and/or cultural contexts.

CO5: demonstrate an understanding of the complex relationship between the marginalised sections and the structures of power.

MASTERPIECES OF WORLD LITERATURE

Course Outcomes:

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

CO1: identify, discuss, evaluate, adopt and emulate much refined forms of values and apply them in their life.

CO2: dialectically analyse socio-political issues like misuse of power and its consequences leading to a counteractive, liberating and revolutionary thinking and action.

CO3: identify and study human struggle and its causes at personal, socio-political and racial levels to formulate sensible and humane approaches to problem-solving decisions, plans and projects.

CO4: identify and evaluate with insight the complex nature of human relationships, ethical questions and find better solutions by adopting and developing positive emotions of optimism, hope, love and the like.

CO5: communicate deeper insights and bring about a desirable transformation in human society.

GENDER STUDIES

Course Outcomes:

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

CO1: demonstrate an understanding of the non-binary nature of gender.

CO2: analyze the problems of gender from sociological and historical perspectives.

CO3: identify the problems of men and examine the social constructions of masculinity.

CO4: describe the problems of transgenders and intersexed people.

CO5: relate the texts to gender practices in real life.

ACADEMIC WRITING

Course Outcomes:

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

- CO1:** narrow down ideas and topics for academic writing.
- CO2:** organise ideas in the form of paragraphs and develop them into an essay.
- CO3:** use grammar and vocabulary correctly and appropriately.
- CO4:** format essays digitally.
- CO5:** comprehend and analyse unseen literary passages.

MODERN INDIAN AND DIASPORIC WRITING IN ENGLISH

Course Outcomes:

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

- CO1:** pinpoint the demarcating line between the pre- and the post-Independence phases of Indian writing in English.
- CO2:** distinguish between regional and English writings in India.
- CO3:** highlight with relevant examples the impact of Western literary texts on Indian English authors.
- CO4:** show the influence of proscenium stagecraft on contemporary Indian playwrights.

ENGLISH FOR WORKPLACE COMMUNICATION

Course Outcomes:

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

- CO1:** communicate at the workplace without inhibition.
- CO2:** use grammar and vocabulary effectively.
- CO3:** prepare reports and make a presentation confidently.
- CO4:** express themselves on social media with utmost care and confidence.

SOFT SKILLS III

Course Outcomes:

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

- CO1:** make presentations without fear
- CO2:** face interviews with utmost confidence

Unit: I	-	Writing Skills (BTCL- K3)
Unit: II	-	Presentation skills (BTCL- K3)
Unit: III	-	Professional Writing Strategies (BTCL- K3)
Unit: IV	-	Telephone Skills (BTCL- K3)
Unit: V	-	Interview Skills (BTCL- K3)

INDIAN REGIONAL LITERATURES IN ENGLISH TRANSLATION

Course Outcomes:

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

CO1: make a succinct survey of various trends in Indian Literatures.

CO2: distinguish the diversity of Indian Literatures from other monolingual literary contexts.

CO3: enumerate the features of post-Independence Indian theatre from representative play texts.

CO4: make out the response of regional writers across India to various social and political issues.

MYTH AND LITERATURE

Course Outcomes:

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

CO1: highlight the points of both commonalities and difference among the myths across the world.

CO2: use myth as a critical tool in the analysis of literary works.

CO3: analyze myth as a source/means of subversion.

CO4: infer the politics underlying myth-making.

CO5: foreground the contemporary significance of myth-based literary works.

ENGLISH LANGUAGE TEACHING

Course Outcomes:

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

CO1: identify the various components of TELL.

CO2: prepare a curriculum for English language teaching in accordance with specific levels.

CO3: individualize instructions using learner centric method.

CO4: teach grammar for usage.

CO5: use literature as an effective language-learning inventory.

PROJECT AND RESEARCH METHODOLOGY

Course Outcomes:

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

CO1: select a topic viable for research.

CO2: use appropriate methodology to research on the chosen topic.

CO3: avoid plagiarism.

CO4: highlight the social relevance of the chosen topic.

CO5: present the research findings in an organized and coherent manner.

FILM STUDIES

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

CO1: Understand/comprehend the language of cinema

CO2: analyze cinema as a medium of art and the connection between literature and cinema

CO3: apply theoretical concepts to cinema

CO4: synthesize literature, life and cinema for academic purposes

CO5: write reviews and research articles on cinema

TRANSLATION STUDIES

Course Outcomes:

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

CO1: Define the concept of translation in concrete terms.

CO2: To translate any given passage from Tamil to English and vice versa.

CO3: Cite and spot expressions of both cultural and linguistic untranslatability.

CO4: Equip themselves for a career as translators.

SOFT SKILLS IV

Course Outcomes:

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

CO1: participate actively in group discussions and meetings

CO2: develop themselves into good corporate leaders

Unit I	:	Group Discussion (BTCL- K2, K3)
Unit II	:	Leadership Qualities (BTCL- K2, K3)
Unit III	:	Negotiation Skills (BTCL- K2, K3)
Unit IV	:	Time Management (BTCL- K2, K3)
Unit V	:	Stress Management (BTCL- K2, K3)

ECONOMICS - UG

MICRO ECONOMICS – I

Course outcome:

1. Students can cite the basic principles of micro economic theory.
2. Students can illustrate the concepts demand and supply and the forces determining equilibrium in a market economy.
3. Students can infer the simple relationships and ideas in the theory of consumption.
4. Students can understand the factors that determine production decisions.
5. Students can differentiate the relationship between cost-output in the short run and in the long run.

AGRICULTURAL ECONOMICS

Course outcomes:

1. Students can identify the relative significance of agriculture in the economy.
2. Students can evaluate the role of landholding in crop output.
3. Students can evaluate the importance of institutional credit for agriculture.
4. Students can assess the impact of New Agricultural Policy in India.
5. Students can analyse the role of international trade in agriculture.

MICRO ECONOMICS – II

Course outcomes:

1. Students can compare the functioning of different types of market.
2. Students can differentiate the different pricing methods.
3. Students can examine the pricing of factors.
4. Students can evaluate of theories of distribution.
5. Students can describe the basic concepts in welfare economics.

ECONOMICS FOR MANAGERS

Course Outcomes:

1. Students can cite understand important concepts of micro and macro economics;
2. Students can analyse the different types and the operations of markets;
3. Students can ascertain the determinants and forms of money supply in India;
4. Students can assess the solutions of economic problems.

MACRO ECONOMICS – I

Course Outcomes:

1. Students can use macroeconomic models to describe the operation of the problems of economy of a country
2. Students can apply the circular flow of income.
3. Students can compute national income using different methods
4. Students can demonstrate classical macro economics.
5. Students can explain the role of aggregate demand function in determining the level of employment in the economy
6. Students can examine the various theories of the consumption function.

INDIAN ECONOMY - I

Course Outcomes:

1. Students can describe the features of the Indian economy.
2. Students can analyse the relative relevance of agriculture in the economy.
3. Students can determine Industrial policy framework and the sector's role.
4. Students can evaluate the methods of calculating National income.
5. Students can apprise the role of Planning commission and NITI Aayog.

ECONOMIC STATISTICS – I

Course Outcomes:

1. Students can identify the basic ideas and concepts of statistics.
2. Students can analyze the different sources of data and sampling methods.
3. Students can evaluate the various measures of central tendency.
4. Students can compute the measures of dispersion.
5. Students can assess the analytical tools of skewness and kurtosis.

MACRO ECONOMICS – II

Course Outcomes:

1. Students can illustrate the meaning of Marginal Efficiency of Capital and Marginal Efficiency of Investment.
2. Students can demonstrate the working of multiplier.
3. Students can apply multiplier -Accelerator interaction to business cycle.
4. Students can use IS-LM model to explain economic fluctuations.
5. Students can integrate the role of fiscal and monetary policies in regulating economy.
6. Students can apply the macro-economic theories in analyzing real world macroissues.

INDIAN ECONOMY - II

Course outcomes:

1. Students can examine Demographic Transition in the present context.
2. Students can evaluate the poverty alleviation Programmes and their role in poverty reduction.
3. Students can apprise India's health indicators and their implications of human welfare in India.
4. Students can infer estimation of health expenditures in India.
5. Students can examine the competitive skills on India's Foreign trade affairs.

ECONOMIC STATISTICS-II

Course Outcomes:

1. Students can analyze correlation and its uses.
 2. Students can apply regression in a practical way.
 3. Students can compute index numbers and assess its practical importance.
 4. Students can evaluate time series analysis and its uses.
- Students can discuss probability and chi-square test

MONETARY ECONOMICS

Course Outcome

1. Students can explain the people hold money and used for economic activities.
2. Students can describe the channels of the monetary transmission.
3. Students can grasp foundational theory of demand for money.
4. Students can exploration of the role of banking sector in the economy
5. Students can assess the role and efficiency of monetary policy.

INTERNATIONAL ECONOMICS

Course Outcomes:

1. Students can identify the concepts and theories of international trade.
2. Students can predict the basis of international trade.
3. Students can apply their knowledge to determine the terms of trade of a country.
4. Students can outline the relevant trade policy of a country.
5. Students can evaluate the balance of payment and its adjustment mechanism of the country.

FISCAL ECONOMICS – I

Course Outcome:

1. Students can explain the scope of the Government in an economy;
2. Students can classify sources of Government's revenue;
3. Students can distinguish between methods of taxation;
4. Students can evaluate the theories of tax shifting; and
5. Students can examine public expenditure and its impact.

ENVIRONMENTAL ECONOMICS

Course Outcomes:

1. Students can describe the fundamentals of Environmental Economics
2. Students can examine market failure and theory of public goods.
3. Students can assess the environmental policies and their implementation.
4. Students can ascertain the environmental problems at the global level.
5. Students can evaluate the environmental promotional methods and measures.

RURAL ECONOMICS

Course Outcomes:

1. Students can describe the key basic functioning of the rural economy.
2. Students can explain the employment and poverty conditions in the rural society.
3. Students can determine the marketing and financing situation in the agricultural sector.
4. Students can ascertain the role of rural employment programmes.
5. Students can evaluate the role of rural industries.

HEALTH ECONOMICS

Course outcomes:

1. To describe the basic concepts of health economics.
2. To examine the demand and supply of health care.
3. To evaluate the financing policies in the health sector.
4. To apprise the situation of health infrastructure in India.
5. To analyse the nature of health tourism in India.

TAMIL NADU ECONOMY

Course Outcomes:

1. Students can state the geographical characteristics of Tamil Nadu.
2. Students can describe the features regarding population of Tamil Nadu.
3. Students can ascertain the role of the agricultural sector in Tamil Nadu.
4. Students can analyse the functioning of industrial sector in Tamil Nadu.
5. Students can infer the role of the tertiary sector in Tamil Nadu.

INDIAN ECONOMY FOR COMPETITIVE EXAMINATIONS

Course Outcomes:

1. Students can describe economic development concepts.
2. Students can interpret the basic structure of population.
3. Students can infer various indices of poverty measurement.
4. Students can ascertain the pricing policy issues in India.

MANAGERIAL ECONOMICS

Course Outcomes:

1. Students can able to define meaning and definition of Managerial Economics.
2. Students can classify types of demand and demand forecasting.
3. Students can able to distinguish between cost control and cost reduction.
4. Student can evaluate the Theory of Production and Production Function.
5. Students can examine the need for Capital Budgeting and Project Profitability.

FISCAL ECONOMICS-II

Course Outcomes:

1. Students can identify the policies of the Government concerning borrowing and its management;
2. Students can examining the functioning of fiscal policy in the economy;
3. Students can ascertain the steps involved in budget preparation and its components;
4. Students can assess the challenges involved in centre-state financial relation;
5. Students can determine the problems faced by the local bodies in resource mobilization.

MODERN BANKING AND INSURANCE

Course Outcomes:

1. Students can state the historical and modern trends of Banking,
2. Students can describe the nature and the functioning of Insurance sector.
3. Students can explain various types of insurances.
4. Students can evaluate the latest trends in the Banking sector.
5. Students can enhance their chances of employability and higher studies.

INDUSTRIAL ECONOMICS

Course Outcomes:

1. Students can explain the determinants and issues of industrialization.
2. Students can analyse the industrial location and industrial productivity.
3. Students can apprise the cost of operation and industrial efficiency.
4. Students can evaluate concentration of market, its merger and innovation.
5. Students can ascertain the recent trends in the industrialization process of the country.

DEVELOPMENT OF ECONOMIC IDEAS

Course Outcomes:

1. Students can describe the views made by early economic thinkers.
2. Students can assess the views of the classical economists and Karl Marx.
3. Students can examine contributions of the neo-classical and Welfare economists.
4. Students can evaluate the Keynesian and Post-Keynesian macroeconomic ideas.
5. Students can assess the views of the Nobel laureates and Indian thinkers.

LABOUR ECONOMICS

Course Outcomes:

1. Students can define the labour market and policies.
2. Students can explain the wage related concepts.
3. Students can examine the nuances of trade union and labour legislation.
4. Students can analyse labour problems and policies.
5. Students can assess the role of the Government in the labour market.

TOURISM FOR DEVELOPMENT

Course Outcomes:

1. Students can state the basic features of tourism.
2. Students can ascertain the effect of tourism on various aspects.
3. Students can classify the impact of tourism on employment and income generation.
4. Students can determine the role of tourism development organisations.
5. Students can analyse development of tourism in India.

INDIAN ECONOMIC DEVELOPMENT – I

Course Outcomes:

1. Students can identify the basic features of economic development.
2. Students can assess the methods of calculating National Income.
3. Students can discuss the role of human resource and capital formation.
4. Students can evaluate the works of Planning Commission.
5. Students can analyse the role agriculture and food policy.

INDIAN ECONOMIC DEVELOPMENT – II

Course Outcomes:

1. Students can demonstrate the role of industrial sector.
2. Students can discuss trade unions and labour problems.
3. Students can assess situation of the transport sector in India.
4. Students can analyse the role of financial sector and that of foreign trade in India.
5. Students can ascertain the overall functioning of the economy.

MANAGERIAL ECONOMICS

Course outcomes:

1. Students can understand the application of economics in decision-making.
2. Students can state the fundamentals concepts in managerial economics.
3. Students can analyse the operation of market forces.
4. Students can examine the factors influencing the production decisions.
5. Students can ascertain the working of various types of markets.

ECONOMICS - PG

ADVANCED MICRO ECONOMICS – I

Course Outcomes:

1. Students can examine the modern utility theories.
2. Students can determine modern utility analysis
3. Students can analyse the various production functions.
4. Students can apprise the modern duopoly models.
5. Students can evaluate the pricing principles.

MACRO ECONOMICS

Course Outcomes:

1. To describe the basic concepts of Macro economics.
2. To analyse theories of income and employment.
3. To assess the consumption and investment functions.
4. To examine role of government and macroeconomic policies.
5. To evaluate the macroeconomic policies and instruments.

INDIAN ECONOMIC DEVELOPMENT

Course Outcomes:

1. Students can identify the fundamentals of development and demography.
2. Students can analyze Planning Model and Performance of Five Year Plans.
3. Students can evaluate the role of Agriculture Sector.
4. Students can assess the Industrial Growth in India.
5. Student can examine the role of Foreign Capital in India.

PUBLIC ECONOMICS – I

Course Outcome:

1. Students can explain the role of Government and public sector in the economy;
2. Students can apply the theoretical basis for Government intervention in the economy;
3. Students can examine the effective way of resource allocation in the economy;
4. Students can ascertain the revenue generation methods of the Government; and
5. Students can assess the principles and the theories of expenditure.

ECONOMIC STATISTICS

Course Outcomes:

1. Students can identify important concepts of statistics.
2. Students can apply the methods of index numbers and time series analysis.
3. Students can discuss the probability theorems.

4. Students can evaluate the theories of sampling.
5. Students can analyse testing of hypothesis.

PORTFOLIO THEORY AND INVESTMENT ANALYSIS

Course Outcomes:

1. Students can explain the instruments of financial market.
2. Students can describe the derivative markets and instruments.
3. Students can analyse alternative investment strategies.
4. Students can analyse of portfolio and factor models.
5. Students can apprise the functioning of algorithmic trading.

ADVANCED MICRO ECONOMICS – II

Course Outcomes:

1. Students can analyse the theories of distribution.
2. Students can infer factor pricing theories.
3. Students can evaluate the General Equilibrium models.
4. Students can apprise choice and uncertainty and the problem of public goods.
Students can examine the role of information in the market system

MONETARY ECONOMICS

Course Outcomes:

1. Students can analyse the underlying concepts of money.
2. Students can discuss the theories of demand for money.
3. Students can evaluate the modern views on monetary policy.
4. Students can assess the functions of central bank and money supply.

PUBLIC ECONOMICS – II

Course Outcomes:

1. Students can analyse the procedure involved in budget preparation;
2. Students can determine the Government's borrowing policies and its burden;
3. Students can examine the deficit financing methods and their impact;
4. Students can evaluate the problem in centre-state financial relation; and
5. Students can ascertain the functioning of the local Governments.

MATHEMATICAL METHODS FOR ECONOMISTS

Course Outcomes:

1. Students can analyze matrix and its properties.
2. Students can identify differential calculus and its applications.
3. Students can evaluate partial differentiation and its applications.

4. Students can compute integration and its application.
5. Students can apply real life problems in mathematical model.

HEALTH ECONOMICS

Course outcomes:

1. Students can state the basic Health Indicators.
2. Student can identify the importance of Resource Allocation in the health sector
3. Student can evaluate the benefits and cost of Health Services.
4. Students can examine the role of Health in Economic Development.
5. Student can analyze the financing of Health Services.

INDUSTRIAL ECONOMICS

Course Outcomes:

1. Students can explain the industrialisation pattern in India.
2. Students can ascertain the theories of size and locational theories of industries.
3. Students can infer the industrial policy in India.
4. Students can examine the role of industrial finance and development institutions.
5. Students can evaluate the recent developments in Indian industries.

HUMAN RESOURCE MANAGEMENT

Course Outcomes:

1. Students can explain the importance of human resources and their effective management in organizations.
2. Students can describe the importance of human resource planning and forecasting human resource requirement for employee selection and recruitment.
3. Students can summarize the contributions of McGregor, Maslow and Herzberg to the concept of Motivation.
4. Students can identify the steps in the recruitment and selection process.
5. Students can compare and contrast the different training methods.

INTERNATIONAL ECONOMICS – I

Course outcomes:

1. Students can compile the theories on which the international trade takes place.
2. Students can outline the benefits of international trade among participating countries.
3. Students can demonstrate the impact of international trade on economic growth and welfare of a country.
4. Students can compare the static and dynamic gains of international trade.
5. Students can explain the consequences of technological changes in economic development.

ECONOMETRIC METHODS

Course Outcomes:

1. Students can specify assumptions, formulate and estimate appropriate models, interpret the results and test their statistical significance.
2. Students can describe the standard methods used in empirical analysis, like properties of least square estimators and statistical testing of hypothesis
3. Students can estimate the parameters in regression equations when the random disturbances are allowed to be heterocedasticity or autocorrelation.
4. Students can apply the remedial measures for autocorrelation, heteroscedasticity and multicollonearity.
5. Students can interpret the dummy variables.

ECONOMICS OF GROWTH AND DEVELOPMENT

Course outcomes:

1. Students can apply the growth models to Indian context.
2. Students can examine the demography of the country as potential capital for its development.
3. Students can prepare a development model based on the theoretical knowledge and available resources.
4. Students can critically evaluate the contribution of different sectors to the national income of the country.
5. Students can appraise the pros and cons of growth models adopted in India and can formulate a pertinent growth model.

ECONOMICS OF INFRASTRUCTURE

Course Outcomes:

1. Students can acquire knowledge on the concepts and importance of the infrastructure in the economy.
2. Students can identify the basic infrastructure required for the economic development.
3. Students can analyse the demand and supply of the energy sector.
4. Students can acquire perception on social infrastructure especially health and education.
5. Students can update knowledge on the recent infrastructural programmes in rural and urban India.

AGRICULTURAL ECONOMICS

Course Outcomes:

1. Students can explain the characteristics of agricultural economics.
2. Students can describe the agricultural policy.
3. Students can determine resource use efficiency in agriculture.

4. Students can assess current issues in Indian agriculture.
5. Students can examine the trend in agricultural exports in India.

RESEARCH METHODOLOGY AND COMPUTER APPLICATIONS IN ECONOMICS

Course Outcomes:

1. To describe the fundamentals of Social Science research.
2. To illustrate formulation of research problem.
3. To classify the methods of data sources and collection.
4. To determine the necessary software in data processing.
5. To analyse the collected data and writing the report.

URBAN ECONOMICS

Course Outcomes:

1. Students can state the basic concepts of Urban Economics.
2. Students can describe the characteristics of urban planning.
3. Students can determine the functioning of urban infrastructure.
4. Students can ascertain the urban finance and governance issues.
5. Students can evaluate the issues pertaining to urban poverty.

RURAL RESOURCE MANAGEMENT AND MARKETING

Course Outcome:

1. Students can identify the condition of a rural family and rural economy.
2. Students can infer the role of land holding in the present condition of rural economy.
3. Students can determine the role of migration of rural labour.
4. Students can analyse the relevance of rural institutional credit.
5. Students can assess the part played by marketing in the rural economy.

INTERNATIONAL ECONOMICS – II

Course outcomes:

1. Students can compile the advantages and disadvantages of fixed and flexible exchange rate system.
2. Students can demonstrate the relationship between devaluation and increase in exports.
3. Students can assess the role of economic integration for smoothening the foreign trade.
4. Students can outline the contributions of IMF and World Bank.
5. Students can evaluate the functions of WTO in facilitating the world trade.

FINANCIAL ECONOMICS

Course Outcomes:

1. The students will be able to explain the financial system and components.

2. The students will be expected to predict the working of money market and instruments.
3. The students will be made aware of the evaluation of working of capital market.
4. The students will be gained practical knowledge to judge the security market operations.
5. The students are expected to assess the working of SEBI.

ENVIRONMENTAL ECONOMICS

Course Outcomes:

1. Students can analyse the environment economic theory.
2. Students can evaluate market failure and public goods.
3. Students can infer the renewable and non-renewable sources of energy.
4. Students can assess the issues related to pollution and economics.
5. Students can evaluate the role of environment in economic policy.

ECONOMICS OF SOCIAL ISSUES

Course Outcomes:

1. Students can acquire knowledge on conceptualization about the socialistic doctrines.
2. Students can identify the cause, effect and remedial measures of social issues of the economy.
3. Students can access the knowledge on factors influencing on human capital.
4. Students can analyse social unrest due to various immoral activities.
5. Students can refine the policy measures to establish the empowerment.

DEMOGRAPHY

Course Outcomes:

1. Students can discuss the components of population and their interdependence.
2. Students can identify the demographic variables influencing population growth, composition and structure.
3. Students can estimate the rate of change in population and project population in future.
4. Students can analyse the prevailing demographic trends and development process in India
5. Students can illustrate demographic measurements like fertility and mortality rates.
6. Students can discuss the population and human development issues
7. Students can examine population policy in India and demonstrate the tasks before the National Population Commission.

GENDER ECONOMICS

Course Outcomes:

1. Students can describe the key concepts of Gender Economics.
2. Students can explain the theories of women exploitation.
3. Students can interpret the role of international bodies in women development.
4. Students can ascertain the contributions of women in economic development.
5. Students can apprise the function of women in entrepreneurship.

PUBLIC ADMINISTRATION M.A

ADMINISTRATIVE THEORY AND NEW PUBLIC ADMINISTRATION COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the nature and scope of Public Administration
CO2	To comprehend the changing paradigms of Public Administration
CO3	To acquaint with the theories, approaches and administrative control mechanisms administration.
CO4	To understand the synthesizing nature of knowledge of public administration from public perspectives.

ORGANISATION BEHAVIOUR COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the nature and scope of Organisations in Administration
CO2	To comprehend the changing paradigms of Organisation Behaviour
CO3	To acquaint with the theories, approaches in Organisation Behaviour
CO4	To understand the application of knowledge about human behaviour in organization

PRINCIPLES OF MANAGEMENT

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Explain the nature and scope of Principles of Management
- CO2 Comprehend the changing paradigms of Principles of Management
- CO3 Compare and Contrast the various theories, and approaches in Management
- CO4 Create HR Analysis and Analytics to predict and forecast the HR challenges towards retention and talent management
- CO5 Appraise Participative and Self Management

ADMINISTRATIVE THINKERS

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 This course aims to equip the students by introducing various administrative thinkers with an idea of providing strong foundation in Public Administration
- CO2 To impart knowledge about various theories of Public Administration
- CO3 Understand thinkers and their concepts from multiple perspectives and their universal applicability of principles
- CO4 Evaluate the contributions of thinkers with respect to Administrative development
- CO5 Analyse the key ideas of Administrative thinkers belonging to various schools of thought

STATE ADMINISTRATION IN INDIA

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 This subject introduces the study of distinctive area of enquiry that is integral to the study of Public Administration in India
- CO2 It highlights the development of state politics in India and its relationships. It emphasises the state autonomy and regional disparities
- CO3 This subject aims to equip students to evaluate the party system and Electoral politics
- CO4 To help students Analyze the nuances of administration at State level in India
- CO5 This course acquaint students to evaluate the role of State Executives and secretariats

DISINVESTMENT POLICY

COURSE LEARNING OUTCOMES

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

Course outcomes

- CO1 Analyze the objectives of Disinvestment Policy; Recall the historical perspective of Disinvestments in India. Students will Evaluate the difference between Disinvestment and Privatization under various Government policy towards public sector
- CO2 Understand the approaches towards major and minor types of Disinvestment in India
- CO3 Identify the various procedures and strategies related to Disinvestment
- CO4 Formulate the utility of PSU funds
- CO5 Acquiring knowledge about prevailing issues related to Disinvestment

PUBLIC FINANCIAL ADMINISTRATION

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the nature and scope of Public Finance in India
CO2	To comprehend the changing paradigms of Public Revenue and Public Expenditure
CO3	To acquaint with the basic principles in Public Finance at various levels of government
CO4	To understand the application of budget and budgetary processes in India

ADMINISTRATION OF HUMAN CAPITAL

COURSE LEARNING OUTCOMES

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

Course outcomes

- CO1 Develop an understanding to appreciate the importance of Human Capital in a Country like India
- CO2 Discuss the pivotal position of Human Capital in both Private and Public Administration
- CO3 To evaluate the changing Environment of HR and its contemporary challenges
- CO4 Evaluate the key objectives of this subject is to examine the reasons behind labour mobility
- CO5 Appraise Employee training and development and focuses on who is to be trained in what and how they are to be trained

INDIAN ADMINISTRATION

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the historical evolution and socio-economic, political, cultural and global context of Indian Administration.
CO2	To understand the form and substance of Indian Administration
CO3	To identify the transformative role of Indian Administration
CO4	To grasp the emerging issues in Indian Administration in the context of changing role of state, market and civil society

COMPARATIVE PUBLIC ADMINISTRATION
COURSE LEARNING OUTCOMES

On the Completion of the Course the student will be able to:

CO1	Review the history and development of comparative public administration as a study and movement in public administration.
CO2	Recognize the importance of comparative public administration.
CO3	Identify the similarities and differences of various administrative systems and ideas for current national administrative system.
CO4	Evaluate various culture, political, economy, and administrative systems and problems in particular national systems.
CO5	Analyze and evaluate the civil service structure and local governance in developed nations.

POLICE ADMINISTRATION
COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Examine the role of Police in Indian Administration
- CO2 Discuss Central and State Police System in India
- CO3 Evaluate the Police Personnel Management and Justify the necessity of code of conduct and Legal Knowledge of Police
- CO4 Able to explain the relationship between Police and Judiciary
- CO5 Outline the importance of community Policing and Utilize information technology to update Police department

SOCIAL WELFARE ADMINISTRATION

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 The scope of social welfare administration is quite diverse with the emergence of new social problems, a new strategy needs to be evolved for solution. It is necessary for the Students to apply the welfare policies of state, national and international in the perspectives of optimum solution.
- CO2 Evaluate the working of the Ministry of Social Justice and Empowerment, Human Resource Development, Women and Child Development, Central and Social welfare Boards at state and central levels
- CO3 Outline the provisions for the differently abled , Welfare Measures for drug addicts, Prisoners welfare and juvenile delinquents
- CO4 Comprehend the Role, Scope, Registration procedures, Structure, Bye-laws and operational procedures of Non Governmental Organizations. The rules for receiving foreign aid and FCRA
- CO5 Compare the Role and significance of Voluntary organizations in India and International agencies of social welfare .

ENVIRONMENTAL ADMINISTRATION

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 To create an Awareness of the environment and acquisition of specialized knowledge in the field
- CO2 Understand constitutional aspects of environment Administration in India
- CO3 Assess environment friendly policy instruments
- CO4 Analyze environment projects in India
- CO5 Create Comprehensive view on environmental issues and Administrative measures with a social aspect

PUBLIC POLICY

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Understand the significance of Public Policy and the role of different agencies in Policy Making
- CO2 Evaluate the various Models of Public Policy and its Implementation process
- CO3 Analyse the contribution of external influencing forces like pressure groups , media and citizens in Policy Making Process
- CO4 Outline few case studies in order to bring out the strategies and constraints involved in Policy Process
- CO5 Equip students to assess the Process of making Public Policies

RESEARCH METHODOLOGY

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Acquaint the student with the knowledge of philosophy, rationale, and methodology of conducting good quality research
- CO2 Enabling learners to look at contemporary relevant problems critically in social science research, including Public Administration, and finding empirical solutions for the same.
- CO3 Equip students in structuring research design, formulating research questions/hypotheses besides endowing them with the knowledge of how to collect data and analyze it with the help of suitable statistical techniques.
- CO4 Understanding the importance of research writing in Social Sciences with special reference to Public Administration

ADMINISTRATIVE LAW

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Explain administrative law as the body of rules, regulations, orders, and decisions created by the administrative agencies of government.
- CO2 The student is expected to develop an understanding of the various components of administrative law along with the principles of natural justice, Rule of Law, administrative legislation, adjudication and much more
- CO3 Create an insight into the federal structure as envisaged in the Constitution of India and focuses upon educating them about the Legislative, Administrative and Financial relations.
- CO4 Able to evaluate the Law relating to the control of Governmental and related administrative Powers

HUMAN RIGHTS ADMINISTRATION

COURSE LEARNING OUTCOMES

On the Completion of the Course the student will be able to:

- CO1 To study and understand the basic concept of human rights and human rights administration in India
- CO2 To understand and evaluate the international concept of human rights administration
- CO3 Students may scrutinize Indian Constitution and human rights laws
- CO4 Students able to evaluate the human rights administration, rule of law and good governance
- CO5 Finally human rights administration subject helps the students to get deep understanding of laws and able to think critically and work out any sort of difficulty.

DISASTER MANAGEMENT IN INDIA

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Understand the difficulties in managing the sudden pandemic outbreaks.
- CO2 Analyze the natural disasters from Indian perspective.
- CO3 Evaluate the structure and functions of present disaster Management authorities in the country.
- CO4 Comprehend the role of government Agencies in Managing the disaster Situation during Various phases.
- CO5 Outline the importance of Co-operation during disaster.

LOCAL GOVERNMENT ADMINISTRATION IN INDIA

COURSE LEARNING OUTCOMES

On the Completion of the Course the student will be able to:

COURSE OUTCOME

- CO1 Understand the basic concept regarding local government and perspectives of different leaders on local government.
- CO2 Recognize the contributions of various committees on local government
- CO3 Explain the features and provisions of Constitutional Amendment Acts and the concept of Decentralization.
- CO4 Analyze the significance of Grama Sabha in Local Government System and analyze the importance of women participation.
- CO5 Helps the students to get in depth analysis of urban local government and rural local government and evaluate the importance of local administration.

RURAL DEVELOPMENT PROGRAMMES IN INDIA

COURSE LEARNING OUTCOMES

On the Completion of the Course the student will be able to:

Course Outcome

- CO1 Gain knowledge regarding major concepts of Rural Development besides various strategies practiced in India
- CO2 Learn about policies and programmes of Government of India concerning rural development.
- CO3 Understand the relevance for achieving sustainable development goals through rural development policies and programmes
- CO4 Analyse and evaluate and the rural development schemes and programmes.
- CO5 Act as an administrator or management professional in different rural development Projects, Programmes, Schemes, Agencies etc.

INDIAN CONSTITUTION and POLITY

COURSE LEARNING OUTCOMES

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

Course outcomes

- CO1 Introduce the Constitution of India and the basic objectives and functioning of the government.
- CO2 Analyse the major discourses and provisions for bringing about social change
- CO3 Understand the relationship between individual citizen and the state.
- CO4 Examine the various basic areas of constitution in this inter disciplinary course.

DEVELOPMENT ADMINISTRATION

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 To make the students understand the indispensable role of Administration in the process of development
- CO2 To create interest on the dimensions of development and acquaint them
- CO3 To evaluate the challenges and prospects of Development Administration
- CO4 To get comprehensive view on the sustainable development models

HEALTH ADMINISTRATION IN INDIA

COURSE LEARNING OUTCOMES

On the Completion of the Course the student will be able to:

COURSE OUTCOME

- CO1 Get the general understanding on health administration in India
- CO2 Make the students aware about various committees of health administration and analyze the importance of health administration as a separate discipline
- CO3 Evaluate the importance of health administration at the international, central and state level
- CO4 Analyze the significance of Health Care Delivery System at top to bottom level
- CO5 Evaluate the problems and prospectus of health care administration and reforms needed in health administration.

STRATEGY AND PRACTICE OF INDIA'S FOREIGN POLICY

COURSE LEARNING OUTCOMES

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

COURSE OUTCOMES

- CO1 Understand the Judiciaries of Indian Foreign Policy
- CO2 To enable students understand the Foreign Policy Approach of India
- CO3 To impart students with Knowledge pertaining International system
- CO4 To encourage the students to critically think and analyse various issues confronting India's external relations
- CO5 Develop a Capacity to reflect on new issues emerging in International relations and India's response

E-GOVERNANCE IN INDIA

COURSE LEARNING OUTCOMES

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

Course outcomes

- CO1 Introduce the concept of E-governance and its usage in India's administrative machinery
- CO2 Analyse the major discourses on e-governance with case studies for better understanding its implementation in India.
- CO3 Understand the various theories and concepts in e-Governance models
- CO4 Examine the efficiency and effectiveness of e-governance for better public service delivery to citizens

DIGITAL INDIA – INITIATIVES, ISSUES & TRENDS

COURSE LEARNING OUTCOMES

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

Course outcomes

- CO1 Understand the Internet is the main source of information today, with usage climbing across urban and rural areas
- CO2 Evaluate the ascent of fake news in the digital world across political, ideological, economic, and social spectra is a huge matter of concern.
- CO3 Create awareness among consumers regarding 'information' needs to be of utmost importance.
- CO4 Recognizing and understanding the reasoning behind the creation of a piece of information on the basis of digital literacy.
- CO5 Apply and identify reliable sources of information or differentiate between information and misinformation.

Commerce B.Com

PRINCIPLES OF ACCOUNTANCY – I

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basic accounting concepts and prepare final accounts of sole proprietor and make use of Tally software to prepare the same.	Understanding /Application
CO-2	Prepare final accounts of Not for profit organisation and make use of Tally software to prepare the same.	Application
CO-3	Calculate depreciation using various methods and use MS Excel to calculate depreciation.	Evaluation
CO-4	Calculate value of stock and prepare consignment accounts	Application
CO-5	Prepare joint venture accounts under various methods	Application

BUSINESS COMMUNICATION

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Identify and Illustrate the nature and scope of Communication, Describe the types of communication and Analyse to make effective communication	Recall, Understanding and Analysing
CO-2	Recall, Understand and Explain the concepts different basic business letters	Recall, Understanding and Analysing
CO-3	Identify and Evaluate the second stage of business letters regarding making, developing and usage	Recall, Understanding and Evaluation
CO-4	Analyse the significance of business correspondence towards agency, insurance and companies' level	Analysing and Evaluation
CO-5	Classify and analyse the effective report writing in business communication	Analysing and Evaluation

BUSINESS ECONOMICS

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	State the subject matter of Economics and the Business Economics.	K1 - State
CO-2	Describe the demand analysis to relevant economic issues.	K2- Describe
CO-3	Apply Marginal Utility analysis in business decisions.	K4 - Apply
CO-4	Examine the concepts of Cost, nature of Production and its relationship to business operations.	K4 - Examine
CO-5	Infer the concept of Price and Output decisions of firms under various market structure.	K4 - Infer

PRINCIPLES OF ACCOUNTANCY – II

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basic concepts relating to partnership. Calculate ratios and prepare accounts relating to admission, retirement and death of a partner.	Understanding/ Application
CO-2	Prepare accounts relating to insolvency of partners and apply Garner Vs. Murray rule.	Application
CO-3	Prepare branch and departmental accounts using different methods.	Application
CO-4	Prepare hire purchase accounts and accounts for goods sold on sale or return basis	Application
CO-5	Compute average due date. Prepare account current and apply statutory provision in accounting for bills of exchange transactions.	Application

INDIAN ECONOMY

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Identify the indicators of economic development and formulate the methods to estimate National Income in India	K1-Recall
CO-2	Understand the major problems of Indian Economy and measures in their contextual perspective.	K2-Understand
CO-3	Explain the role of agriculture and industries in India	K2-Understand
CO-4	Analyse the importance of Land reforms, Food policy and Public distribution system in India	K4-Analyse
CO-5	Able to assess the five year plans and government policies.	K5-Evaluate

FUNDAMENTALS OF ACCOUNTING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Classify accounts and prepare journal entries	Understanding / Application
CO-2	Prepare ledgers and trial balance	Application
CO-3	Prepare subsidiary books	Application
CO-4	Prepare final accounts of sole proprietors	Application
CO-5	Prepare final accounts of sole proprietor – Use Tally Software to prepare final accounts of sole proprietors	Application

CORPORATE ACCOUNTING – I**COURSE OUTCOMES:** On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Solve the problems relating to issue of shares, debentures and underwriting of shares and debentures.	Application
CO-2	Solve the problems relating to redemption of preference shares and debentures.	Application
CO-3	Prepares the company's final accounts (as per Companies Act, 2013)	Application
CO-4	Calculate the value of goodwill & shares and profit prior to incorporation of a company.	Application
CO-5	Appraise the efforts made by the company to improve its financial position through Amalgamation, Absorption and both internal and external Reconstruction.	Evaluation / Application

BUSINESS LAWS**COURSE OUTCOMES:** On the completion of the course, the students will be able to

CO No.	Course outcome	Cognitive Level
CO - 1	Identify and Evaluate the legal rules in offer, acceptance, consideration and capacity to contract under Indian Contract Act.	Recall and Evaluation
CO - 2	Identify and Describe the law relating to free consent, legality of object and list the agreements opposed to public policy under Indian Contract Act.	Recall, Understanding,
CO – 3	Evaluate the performance of contract, describe the modes of discharge of contract and ascertain the remedies for breach of contract under Indian Contract Act.	Understanding, Analysing and Evaluation
CO – 4	Analyse and evaluate the law relating to Contract of Agency.	Analysing and Evaluation
CO - 5	Analyse and evaluate the law relating to Sale of Goods Act.	Analysing and Evaluation

MODERN BANKING

COURSE OUTCOMES: On the completion of the course, the students will be able to

Co. No.	Course Outcomes	Cognitive Level
CO - 1	Identify the different types of banks in India and its role in the economy and examine the important features of the Banking Regulations Act.	Recall - K ₁ / Analysis-K ₄
CO - 2	Ascertain and Compare various functions of RBI and commercial banks.	Analysis - K ₄ / Evaluation - K ₅
CO - 3	Examine the various steps in opening a new account in a bank and assess the various documents needed to open a bank account.	Analysis - K ₄ / Evaluation - K ₅
CO - 4	Identify the different e-Banking activities and evaluate and compare the effectiveness of modern banking operations.	Recall - K ₁ / Evaluation - K ₅
CO - 5	Classify the Negotiable instruments and endorsements and ascertain the need for good Customer relationship.	Understanding - K ₂ / Analysis - K ₄

BUSINESS ENVIRONMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

Co. No.	Course Outcomes	Cognitive Level
CO - 1	Recall the concept of business environment and its impact on strategic business decision	Understanding
CO - 2	Identify the relationship between government and business	Comprehension
CO - 3	Relate the different environmental factors that shape the environment of the business	Application
CO - 4	Demonstrate the social factors which influence the businesses	Application
CO - 5	Relate components of financial system to the development of business	Application

BUSINESS MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcome	Cognitive Level
CO – 1	Identify and Illustrate the nature and scope of Management, Describe the levels of Management and Analyse the role and of contributions of Henry Fayol and F.W. Taylor to management.	Recall, Understanding and Analysing
CO – 2	Recall, Understand and Explain the concepts of Planning and Decision making and Examine the process of MBO.	Recall, Understanding and Analysing
CO – 3	Identify and Evaluate the organisation and its concepts and understanding of Authority and responsibility in organizations.	Recall, Understanding and Evaluation
CO – 4	Analysis the significance of staffing, directing and Leadership and to Evaluate them through few theories	Analysing and Evaluation
CO – 5	Analyses and evaluate the controlling and coordination activities followed by organizations.	Analysing and Evaluation

BUSINESS STATISTICS I

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcome	Cognitive Level
CO – 1	Describe the concepts of business statistical analysis	Knowledge
CO – 2	Create table, graphs to organize and interpret data	Synthesis
CO – 3	Calculate various measures of Central tendency and dispersion to data	Application
CO – 4	Solve bivariate data using correlation coefficient	Application
CO – 5	Understand to fit and predict bivariate data using Regression analysis	Evaluation

CORPORATE ACCOUNTING – II

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Prepare liquidators final statements of the company.	Application
CO – 2	Prepare Consolidated final statement of Holding companies and subsidiary companies.	Application
CO – 3	Prepares final accounts of banking company accounts.	Application
CO – 4	Prepares life, fire and marine insurance companies accounts.	Application
CO – 5	Recalls the Accounting standards objectives, significance, HRA and SRA need and objectives.	Understanding

COMPANY LAW

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Identify and Understand the provisions of Companies Act.	Recall and Understanding
CO – 2	Describe the contents of Memorandum of Association, Explain the contents of Articles of Association and Classify the Contents of Prospectus.	Understanding and Application
CO – 3	Identify the role of members and describe the powers and duties of management in a company.	Understanding and Application
CO – 4	Classify the kinds of company meetings and illustrate the kinds of resolutions.	Understanding and Application
CO – 5	Describe and Evaluate the modes of winding up of a company.	Understanding and Evaluation

ELEMENTS OF GOODS AND SERVICES TAX

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Identify the Basic concept of Goods and Services Tax Act and give examples related to Levy and Collection of Tax.	Recall - K ₁ / Understanding – K ₂
CO – 2	Apply and ascertain the Registration Procedure under Goods and Services Tax Act.	Understanding -K ₂ / Application – K ₃
CO – 3	Apply the knowledge for Valuation of Goods and Services, Levy of Tax, Evaluation of Amount of Tax to be Indicated in Tax Invoice.	Application - K ₃ / Analysing – K ₄
CO – 4	Appraise Payment of tax, Interest on Delayed Payment of Tax and Ascertain the claim of input tax.	Analysing – K ₄ / Evaluation – K ₅
CO – 5	Determine the GST Returns and analyse the Default in Furnishing GST Returns.	Analysing – K ₄ / Evaluation – K ₅

MARKETING MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Develop an idea about marketing and its functions and marketing approaches	Recall and understanding
CO – 2	Discuss and make the students understand the nuances and complexities involved in various product and pricing decisions	Understanding and application
CO – 3	Equip the students to take effective distribution decisions for products and services	Understanding and application
CO – 4	Develop the skills among students to enable them to design the Promotion-Mix strategies advertising campaigns.	Understanding and application
CO – 5	Make the students awareness about the current trends in marketing to enable them to take proactive measures while taking marketing decisions.	Recall and understanding

INTERNATIONAL TRADE

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Identify and Illustrate the nature and scope of International trade, Describe the environmental issues and Analyse the theories or approaches towards recent trend	Recall, Understanding and Analysing
CO – 2	Recall, Understand the activities of international trade and Explain the role of MNCs in Indian markets	Recall, Understanding and Analysing
CO – 3	Identify and Evaluate the various modes of entry in to the international trade and evaluate its entry strategies	Recall, Understanding and Evaluation
CO – 4	Analyse the significance and role of world trade organization and other international organizations related to international trade and evaluate its performance in trade	Analysing and Evaluation
CO – 5	Classify and analyses the effective use of financial assistance in international trade and make students to evaluate exchange values	Analysing and Evaluation

BUSINESS STATISTICS – II

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Analyse and forecast the time series data	Application
CO – 2	Compare different types of index along its uses and methods	Evaluation
CO – 3	Outline the concept of probability and sampling techniques	Knowledge
CO – 4	Learn and perform testing of hypothesis for one and two sample cases	Application
CO – 5	Evaluate the interpolation of data using numerical methods	Evaluation

COST ACCOUNTING – I

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Recalls the basic cost accounting concepts and cost accounting standards.	Understanding
CO – 2	Preparation of cost sheet, Appraise tenders and quotations.	Evaluating
CO – 3	Compare different methods of material issues and different levels of inventory	Understanding
CO – 4	Computation of wage rates and labour cost.	Application
CO – 5	Computation of overhead absorption rates.	Application

INCOME TAX - I

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Understand the different concepts as per Income Tax Act 1961 to practical assessments.	Evaluation / Application
CO – 2	Compute income under the head salary	Application
CO – 3	Compute income under the head house property	Application
CO – 4	Compute income under the head profits and gains from business or profession.	Application
CO – 5	Understand the e-filing & submission of returns procedure, meaning of PAN and concept of Transfer Pricing.	Evaluation / Application

FINANCIAL MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Describe the fundamental concepts of finance and its functions	Understanding
CO – 2	Examine various factors affecting capital structure decision and design optimum capital structure	Understanding and Analysing
CO – 3	Compute cost of capital and evaluate risk involved in investment decision making	Analysing and Evaluation
CO – 4	Apply dividend models for dividend decisions	Application
CO – 5	Estimate working capital requirement	Evaluation

PERSONAL FINANCIAL PLANNING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Recall basic concepts on personal financial planning process	Understanding
CO – 2	Identifying phases in individuals life cycle and find out risk profiling	Analysing
CO – 3	Choose best banking and insurance products to save and invest	Application
CO – 4	Assess and track the performance of the investments in securities and returns from the investments	Evaluation
CO – 5	Justify low, medium and high risk asset class and allocation of assets to plan for smooth retirement	Evaluation

ENTREPRENEURIAL DEVELOPMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Recall the entrepreneurial characteristics, functions and types.	Understanding
CO – 2	Recall trend analysis, generating ideas, brainstorming, focus groups, surveys and customer advisory boards.	Understanding / Analyzing
CO – 3	Recall to know the opportunity identification and product/service selection market analysis, technical analysis, project formulation and assessment of project feasibility.	Understanding / Analyzing
CO – 4	Evaluate the business plan, process, and preparing a model project report for starting a new venture.	Evaluation / Application
CO – 5	Evaluate the various sources of finance in venture capital, business angles, commercial banks and government grants and schemes.	Application / Evaluation

PROJECT MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Recall the basic concepts of project and project management tools	Understanding
CO – 2	Examine the project appraisal and its methods	Analysing and Evaluation
CO – 3	Apply the risk assessment techniques for managing risk in project appraisal	Evaluation
CO – 4	Evaluate the project by applying project evaluation methodologies	Evaluation
CO – 5	Design the content of a project and Construct an ideal project report	Synthesis

PRINCIPLES OF COMMERCE

COURSE OUTCOMES: On the completion of the course, the students will be able to

Co. No.	Course Outcomes	Cognitive Level
CO – 1	Recall the concept of Business, Profession, Industry, Commerce and Important terms of Commerce.	Understanding
CO – 2	Analyse and Evaluate the different forms of organisation viz., Sole trade, Partnership, HUF, Company, co-operatives and Public Sector.	Understanding / Analysing
CO – 3	Understand and Analyse the different types of Manufacturing Industries in the present Liberalisation and Privatisation scenario.	Understanding/ Analysing
CO – 4	Understand and Analyse the different Service industries in the present Globalisation scenario	Understanding / Analysing
CO – 5	Understand the basic elements of Marketing and analyse its approaches and functions	Application / Evaluation

COST ACCOUNTING – II

COURSE OUTCOMES: On the completion of the course, the students will be able to

Co. No.	Course Outcomes	Cognitive Level
CO – 1	Prepare Contract account, Contractee's account and Balance Sheet	Evaluating
CO – 2	Calculate Process loss, Process gain and Equivalent production units and Prepare Process Account	Application
CO – 3	Calculate cost for hotels, Transport and Cinema Theatres	Application
CO – 4	Use tools CVP and BEP to assess and make managerial decisions based on calculations	Application
CO – 5	Analyse the causes of variances	Understanding

INCOME TAX – II

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Compute income under the head capital gain	Application
CO-2	Compute income under the head income from other sources	Application
CO-3	Apply the procedure for set off and carry forward of losses	Application
CO-4	Apply the procedure for deductions from GTI to arrive at taxable income and liability	Application
CO-5	Understand the income tax authorities, various types of assessment and due dates	Evaluation / Application

MANAGEMENT ACCOUNTING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall concept, tools and techniques of management accounting	Understanding
CO-2	Analyse the financial statements with the help of various techniques	Analysing
CO-3	Prepare funds flow and cash flow statements	Application
CO-4	Classify and Prepare various kinds of budgets	Comprehension and Application
CO-5	Apply capital budgeting techniques in long-term investment decision	Application

HUMAN RESOURCE MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Identify and Illustrate the nature and scope of HRM, Describe the History and Functions of HRM and Analyse the role of HR manager in an organization.	Recall, Understanding and Analysing
CO – 2	Recall, Understand and Explain the concepts of Human Resource Planning and Examine the process of HRP.	Recall, Understanding and Analysing
CO – 3	Identify and Evaluate the Sources of Recruitment and Explain the stages in selection of employees in organizations.	Recall, Understanding and Evaluation
CO – 4	Examine the significance of Training and Evaluate the Performance appraisal of employees.	Analysing and Evaluation
CO – 5	Classify and Explain the incentives offered, illustrate the significance of promotions and Evaluate the transfer policy followed by organizations.	Understanding Analysing and Evaluation

PRACTICAL AUDITING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Apply the concept of audit ,its merits and demerits of auditing	Recall/ Understanding
CO – 2	Apply the techniques of vouching and verifications	Evaluation/ Understanding
CO – 3	Understand about auditing and accounting standards	Recall/ Understanding
CO – 4	Gain the knowledge on the auditor and audit report	Understanding /Evaluation
CO – 5	Acquire knowledge on the recent trend in auditing	Recall/ Understanding

RESEARCH METHODOLOGY

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO – 1	Recall the concept of social research, describe the characteristics and learn research limitations	Understanding / Application
CO – 2	Analyze essentials, selection and formulation of social research problems, formulation of hypothesis and steps in process of social research.	Understanding / Analysing
CO – 3	Evaluate and analyze the methods of data collection and analyzing them through statistical tools	Evaluation/ Analysing
CO – 4	Construct, analyze and evaluate social research with a deep technique of data	Evaluation / Analysing
CO – 5	Evaluate the writing of the report and apply it in to their future project	Application / Evaluation

Commerce M.Com

ADVANCED FINANCIAL ACCOUNTING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Assess the development of Financial Accounting and Identify the Users of Financial Accounting Information.	Evaluation and Recall
CO-2	Solve problems by illustrating, interpreting, calculating and ascertain the solution by recording Journal Entries, assess the Profit or Loss by Preparing Branch accounts in respect of Dependent and Independent branches.	Understanding, Application, Analysing and Evaluation
CO-3	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Recording Journal Entries, assess the Profit or Loss by Preparing Ledger Accounts under Hire Purchase and Instalment Purchase System.	Understanding, Application, Analysing and Evaluation
CO-4	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Passing Journal Entries, assess the Profit or Loss by Preparing relevant Ledger Accounts and Balance Sheet on Dissolution of a Partnership Firm.	Understanding, Application, Analysing and Evaluation
CO-5	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Recording Journal Entries, assess the Profit or Loss by Preparing Ledger Accounts and Balance Sheet in Amalgamation of Firms and Sale of a Firm to a Company.	Understanding, Application, Analysing and Evaluation

BUSINESS FINANCE

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concepts in business finance. Calculates the cost of capital. Recall the commonly used capital structure theories and calculate the time value of money.	Understanding / Application
CO-2	Compare different types of risk and analyse the risk return relationship.	Understanding / Analysing
CO-3	Evaluate the leasing agreement from the view point of lessor and lessee.	Evaluation
CO-4	Apply models in cash management, inventory management and receivables management.	Evaluation / Application
CO-5	Apply the various methods of capital budgeting and Recommend the multinational projects.	Application / Evaluation

LABOUR LAWS

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Identify the principles of Labour Legislations in India and explain the provisions of Trade Union Act.	Recall -K ₁ / Understand-K ₂
CO-2	Analyse the Industrial Disputes and apply various forum available for the settlement of the dispute today and examine the provisions of Factories Act applicable in the present scenario.	Application –K ₃ / Analysis-K ₄
CO-3	Examine and evaluate the provisions relating to the Workmen's Compensation Act and Employee's State Insurance Act.	Analysis-K ₄ / Evaluation - K ₅
CO-4	Assess and generalize the procedure regarding Payment of Wages and Fixation and Revision of minimum wages under the Act.	Evaluation-K ₅ / Creativity- K ₆
CO-5	Evaluate the provisions with regard to Provident Fund and Gratuity Act in India.	Evaluation – K ₅

ENTREPRENEURIAL DEVELOPMENT AND SMALL SCALE BUSINESS

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the Entrepreneurial competency, Functions and Types.	Understanding
CO-2	Recall the Problems faced by Women Entrepreneurs and Entrepreneurship in Informal Sector.	Understanding / Analyzing
CO-3	Recall the scope and types of small business, Relationship between small and large business.	Understanding / Analyzing
CO-4	Get clarity in Market analysis, Technical analysis and financial analysis, Project formulation, Assessment of project feasibility and Preparation of project report.	Evaluation / Application
CO-5	Recall the knowledge about various incentives and subsidies provided by the central and state government.	Application / Evaluation

MARKETING RESEARCH

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall concept of marketing research, selection and formulation of marketing research problems, hypothesis and steps in process of marketing research.	Understanding / Application
CO-2	Analyse the essentials of product and pricing research as a powerful weapon in the day to day market	Understanding / Analysing
CO-3	Evaluate the importance of advertising, E- advertising and personal selling research for a product survival in the market.	Evaluation/ Analysing
CO-4	Construct, analyse and evaluate the service marketing research	Evaluation / Analysing
CO-5	Evaluate and apply the data analysis and interpretation in marketing research	Application / Evaluation

CONSUMER BEHAVIOUR

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concept of Consumer Behaviour and Marketing Strategy and Contributing disciplines area	Understanding / Application
CO-2	Recall and Analyse influence of Consumer Needs and Theories of Personality	Understanding / Analysing
CO-3	Analyse about learning theories and Strategies of attitude Change	Evaluation/ Analysing
CO-4	Construct, analyse and evaluate the Self Concept, Multiple Selves and Reference Group Influence in Consumption	Evaluation / Analysing
CO-5	Evaluate Family Life Cycle, Social Class, Consumption and Persuasion	Application / Evaluation

ADVANCED CORPORATE ACCOUNTING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Appraise the efforts made by the company to improve its financial position through Amalgamation, Absorption and both internal and external reconstruction and prepare liquidators final statements of the company.	Evaluation / Application
CO-2	Prepare life, fire, marine and miscellaneous insurance companies accounts	Application
CO-3	Prepares final accounts of banking company	Application
CO-4	Prepares Consolidated final statement of Holding companies and subsidiary companies	Application
CO-5	Recalls the Accounting standards need, significance and IFRS and US GAAP	Understanding

SECURITIES ANALYSIS AND PORTFOLIO MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recalls the concepts of investment and its environment along with risk return framework in Indian financial markets.	Understanding / Application
CO-2	Make use of equity as one model of investment with its analysis and evaluate various approaches to securities valuation	Understanding / Analyzing
CO-3	Analyse and understand bond fundamentals and construct bonds portfolio management	Evaluation
CO-4	Construct, analyze, select and evaluate portfolios along with a deep understanding of portfolio models and theories	Evaluation / Application
CO-5	Recall the concepts of portfolio management and financial derivatives such as - futures, options, swaps and hedges available in derivatives market to yield maximum return	Application / Evaluation

SERVICES MARKETING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Identify and evaluate the growth of service marketing	Recall/ Understanding
CO-2	Understand the concept and classification of service marketing	Analyzing/ Understanding
CO-3	Identify and evaluate the service marketing mix	Analyzing/ Understanding
CO-4	Apply the service marketing strategies in managing demand and supply	Evaluation/ Application
CO-5	Listout and identify the marketing of various types of services	Application/ Evaluation

APPLIED COSTING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Identify and Evaluate the Application of Costing Methods in different industries.	Recall and Evaluation
CO-2	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Preparing Contract Account, ascertain the Profit or Loss on Contracts and Prepare the Balance Sheet.	Understanding, Application, Analysing and Evaluation
CO-3	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Preparing Operating Cost Sheet for Transport, Power House, Cinema Theatres and Lodging Houses and ascertain the Cost and profit.	Understanding, Application, Analysing and Evaluation
CO-4	Solve problems by illustrating, interpreting, calculating and ascertain the solution by Preparing Process Accounts, assessing Inter-Process Profits, Compute Equivalent Production and Apportion the Joint Cost with Main Product	Understanding, Application, Analysing and Evaluation

	and By-Product and ascertain Cost and Profit in the Process Costing.	
CO-5	Evaluate the Advantages and Disadvantages of Standard Costing and Compute Material, Labour, Overhead and Sales Variances.	Evaluation And Analysing

COMPUTER APPLICATIONS IN BUSINESS (100% PRACTICAL)

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Apply functions of MS Excel.	Application
CO-2	Apply MS Excel in business decision making	Application
CO-3	Apply SPSS to compute statistics for business.	Application
CO-4	Prepare final accounts of sole proprietor using Tally Software.	Application
CO-5	Make use of Tally software to administer Payroll	Application

TOTAL QUALITY MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Explain the TQM Framework, Vision and Mission Policy Statements and customer perception of quality.	Understanding-K ₂ / Creativity-K ₆
CO-2	Illustrate the various contributions to TQM and appraise the Statistical Process Control.	Evaluation-K ₅ / Understanding-K ₂
CO-3	Analyse the reliability concepts and total productive maintenance.	Analysing-K ₄
CO-4	Evaluate the quality, functions, developments and Failure mode effective analysis and apply the statistical tools.	Evaluation-K ₅ / Applications-K ₃
CO-5	Examine the Quality Management System and evaluate TQM culture and leadership.	Analysing-K ₄ / Evaluation-K ₅

BASICS OF COMMERCE

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concept of Business, Profession, Industry, Commerce, Internal and International Trade.	Understanding
CO-2	Recall and Analyse Manufacturing Industries viz., Large Scale, Medium, Small and Micro , Handloom and Cottage Agro Industry	Understanding / Analysing
CO-3	Analyse and understand the Services Industries and various services available .in the Market	Understanding/ Analysing
CO-4	Analyse and evaluate various forms of Business Organisations	Understanding /Analysing
CO-5	Remember and recall Consumer Awareness and Consumer Protection	Application / Evaluation

INTERNATIONAL MARKETING

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Identify and Evaluate the Pros and Cons of International Marketing and List the Components of International Marketing Environment.	Recall, Understanding and Evaluation
CO-2	Evaluate the Marketing Mix decisions, Describe the stages in International Product Life Cycle and Examine the methods of Pricing.	Understanding, Analysing and Evaluation
CO-3	Identify and Understand the concept of brand and Evaluate the promotional aspects and distribution channels and Explain the steps in International Market Segmentation.	Recall, Understanding and Evaluation
CO-4	List out and explain the Documents required for Exporting of Goods.	Recall and Understanding
CO-5	List out and describe the documents submitted by the Importers for customs clearance.	Recall and Understanding

BUSINESS RESEARCH METHODS

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Reproduce concept of Research and Business Research and Ascertain Different Business Area for research .	Recall – K ₁ / Analyzing - K ₄
CO-2	Determine the Concepts of Research Problems, Assess the Different Sources of Literature for Research and Framing Research objectives.	Analyzing – K ₄ / Evaluation – K ₅
CO-3	Assess different methods of data Collection. Examine and compare the differences among Sampling Methods and determination of Sampling size.	Analyzing – K ₄ / Evaluation – K ₅
CO-4	Extend Different new Sources of Data Collection and Criticise about Application of the Sources for Data Collection.	Evaluation – K ₅ Creativity - K ₆
CO-5	Plan about Suitable Tools for Data Analysis and Judge about Proper Research Report style.	Evaluation – K ₅ Creativity - K ₆

ADVANCE STATISTICAL TECHNIQUES

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Study the distributions and estimate the probability value.	Evaluation
CO-2	Learn the relationship of the variables by correlation coefficients and to predict using regression analysis.	Evaluation
CO-3	Study the nature of hypothesis.	Knowledge
CO-4	Apply the parametric test and to interpret the results of Z test, t test, F test and ANOVA.	Application
CO-5	Apply the non-parametric test and to interpret the results of Chi-square, The Mann-Whitney U Test -The Kruskal-Wallis test.	Application

INCOME TAX THEORY, LAW AND PRACTICE – I

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concept of income tax act 1961 for practical assessments and residential status	Recall/Evaluation / Application
CO-2	Compute the income under the head salary	Application
CO-3	Compute the income under the head house property	Application
CO-4	Compute the income under the head capital gains	Application
CO-5	Compute the income under the head income from other sources	Application

CUSTOMER RELATIONSHIP MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Identify and evaluate the pros and cons of customer relationship management	Recall / Understanding
CO-2	Evaluate the customer relationship marketing implementations	Understanding/ Analyzing
CO-3	Identify and understand the relationship marketing	Recall/ Understanding
CO-4	Understand the service quality and its measurement scales	Understanding/ Evaluation
CO-5	Understand about technological revolution and evaluating	Recall/

	technological solutions for CRM	Understanding/ Evaluation
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GOODS AND SERVICES TAX

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Reproduce history of GST and GST Act 2017, Ascertain GST Levy and Collection of Tax	Remembering – K ₁ / Analysing – K ₄
CO-2	Discriminate Persons liable and not liable for Registration and apply the Procedure for Registration and Cancellation	Application – K ₃ / Analysing – K ₄
CO-3	Compute the Valuation of Goods and Services and Evaluation of Amount of Tax to be Indicated in Tax Invoice.	Understanding – K ₂ / Application – K ₃ / Evaluation – K ₅
CO-4	Compute Payment of GST and Interest on Delayed Payment of Tax and Analyse the Claims for Input Tax	Understanding – K ₂ / Application – K ₃ / Analysing – K ₄
CO-5	Apply the rules for Returns and Default in Furnishing Returns, Evaluation of Appeals, Settlement of Cases, Recovery and Liability to Pay Tax	Application K ₄ / Evaluation – K ₅

BUSINESS ENVIRONMENT AND POLICY

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Identify and Illustrate the nature and scope of business environment, Describe the micro and macro levels of environmental factors and Analyse the role and contributions of NEP	Recall, Understanding and Analysing
CO-2	Recall, Understand and Explain the concepts of political environment and its policies	Recall, Understanding and Analysing
CO-3	Identify and Evaluate the business environment and its social responsibility.	Recall, Understanding and Evaluation
CO-4	Analysis the significance of economic environment and Evaluate them through few economic yardsticks.	Analysing and Evaluation
CO-5	Analyses and evaluate the financial environment like Foreign	Analysing

	capital and National capital and its institutions associated with business	and Evaluation
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PRINCIPLES OF INSURANCE

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Describe the fundamental concepts of insurance and its importance	Remembering
CO-2	Describe the laws and regulations governing insurance	Remembering
CO-3	Demonstrate and analyse different life insurance products	Application and Evaluation
CO-4	Compare and analyse different general insurance products	Evaluation
CO-5	Assess the ideas on marketing of insurance services	Evaluation

FINANCIAL MARKETS AND SERVICES

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Identify and Illustrate the nature and scope of Indian financial system, Describe the types of financial markets and Analyse the powers of SEBI	Recall, Understanding and Analysing
CO-2	Recall, Understand the activities of capital markets and Explain the instruments used in the capital markets	Recall, Understanding and Analysing
CO-3	Identify and Evaluate the concepts of money markets and its instruments and also evaluate other financial markets	Recall, Understanding and Evaluation
CO-4	Analyse the significance of financial services like mutual funds. NBFC, CCIL and credit rating	Analysing and Evaluation

CO-5	Classify and analyses the effective financial services through merchant banking and venture capital and evaluate them.	Analysing and Evaluation
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ACCOUNTING FOR MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Reproduce and explain management accounting concepts and techniques	Understanding
CO-2	Identify practical application of financial analysis tools and construct financial statement with the help of ratios	Understanding and synthesising
CO-3	Prepare funds flow and cash flow statements	Application
CO-4	Classify and prepare various kinds of budgets	Understanding and Application
CO-5	Use marginal costing techniques in profit planning and decision-making	Application

ORGANISATIONAL BEHAVIOUR

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Reproduce the basic concepts of organizational behavior and explain OB models and the peculiar problems involved.	Recall - K ₁ / Understanding -K ₂
CO-2	Predict and analyse the various factors influencing individual behavior.	Understanding – K ₂ / Application-K ₃ / Analysis-K ₄
CO-3	Compare and classify the various theories of motivation and leadership styles.	Application - K ₃ / Evaluation-K ₅ / Understanding- K ₂
CO-4	Justify and differentiate among different groups in the organization and transactional analysis.	Analysis – K ₄ / Evaluation - K ₅
CO-5	Evaluate and generalize the organizational changes,	Evaluation - K ₅ /

	development, culture and climate.	Understanding-K ₂
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LEGAL ASPECTS OF BUSINESS

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Examine the important provisions of the Indian Contract Act and apply the Sale of Goods Act in the present situation.	Applications - K ₃ / Analysis-K ₄
CO-2	Evaluate the important provisions of the Companies Act.	Evaluation-K ₅
CO-3	Reproduce and Examine the today's essentials and importance of Information Technology Act.	Recall – K ₁ / Analysis-K ₄
CO-4	Identify the Rights of the Consumers and evaluate the salient features of the Consumer Protection Act.	Recall – K ₁ / Evaluation-K ₅
CO-5	Examine and compile the needs and applications of Intellectual Property Rights in India today.	Analysis-K ₄

INCOME TAX THEORY, LAW AND PRACTICE - II

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Compute the income under the head business or profession	Application
CO-2	Apply the procedure for clubbing of income, carry forward and set off losses	Application
CO-3	Assess the tax liability for individuals and firms	Application
CO-4	Evaluate and understand the corporate tax planning	Application / Evaluation
CO-5	Understand e-filing of tax returns and transfer pricing	Application

STRATEGIC MANAGEMENT

COURSE OUTCOMES: On the completion of the course, the students will be able to

CO No	Course Outcomes	Cognitive Level
CO-1	Recall the basic concepts of strategy and strategic management	Understanding
CO-2	Identify the internal and external factors affecting the strategic management process model	Analysing
CO-3	Analyze the business strategy and choices	Analysing
CO-4	Evaluate the strategy implementation and its importance	Evaluation
CO-5	Recall and understand the managing strategic change and strategic evaluation and control	Understanding

HISTORICAL STUDIES B.A**HISTORY OF INDIA UPTO A.D 300**

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Delineate changing perceptions on ‘Ancient/early’ India.	K1
	OC2. Explain the importance of archaeological sources for study of proto-history.	K2
	OC3. Distinguish between civilization and culture, particularly in the context of first-ever civilization.	K3
	OC4. Locate the shift of historical focus from Gangetic belt to newer Areas.	K4
	OC5. Highlight the significance of foreign invasions.	K5

PRINCIPLES OF SOCIOLOGY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the importance of sociological process in the beginning of formation of society.	K1
	OC2. Outline the changes and continuities in the field of culture and the process of socialization.	K2
	OC3. Trace the inter-dependence of social institutions and applying the thought in real life situations.	K3
	OC4. Analysing the social change due to modern outlook and thought.	K4
	OC5. Understanding the progress of the society.	K5

HISTORY OF INDIA FROM AD 1858 TO AD 1919

(Allied Subject for Economics Students)

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Assess the changing perceptions on Modern India	K1
	OC2. Explore the importance of Contemporary Politics	K2
	OC3. Highlight the importance of Gandhian era and freedom Struggle	K3
	OC4. Locate the shift of historical focus from pre- Independent India.	K4
	OC5. Describe the contributions of political leaders.	K5

HISTORY OF INDIA FROM AD 300 TO AD 1206

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the historical importance of the accelerated practice of land grants issued by ruling houses.	K1
	OC2. Delineate changes in the realm of polity and culture	K2
	OC3. Contextualize the evolution and growth of regional styles of temple architecture and socio-economic and political activities.	K3
	OC4. Discuss the invasion of the Arabs and their influence.	K4
	OC5. Evaluating and Reasoning the foundation of Islamic reign in India.	K5

HISTORY OF INDIA FROM AD 1919 TO AD 1991

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Delineate changing perceptions on Modern India	K1
	OC2. Explain the importance of Contemporary Politics	K2
	OC3. Assess the importance of Gandhian Era and freedom Struggle	K2, K3
	OC4. Locate the shift of historical focus from pre- Independent India.	K3, K4
	OC5. Highlight the contributions of political leaders.	K5

INTRODUCTION TO HISTORY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcate and initiate the basic idea of the importance of study of History.	K1
	OC2. Exploring and Critically assessing the available sources using scientific tools and techniques.	K2
	OC3. Explain the importance of antiques and artefacts and fix the date of antiques and artefacts	K3
	OC4. Evaluate the significance and contributions of Archaeological Department and Museums	K4
	OC5. Assessing the Multidimensional view about other nations and continents which provides basic understanding about society, culture, religion diplomacy and tourism.	K5

ENVIRONMENTAL STUDIES

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Critically evaluate the available potential resources.	K1
	OC2. How to maintain the various ecological zones.	K2
	OC3. Analyse the Eco-sensitive issues, the preservation and conservation of environment.	K3
	OC4. Critically assessing the relation between man and eco-system, and man and resources.	K4, K5
	OC5. Field work gives a practical knowledge and data of the nature, resources and eco-system and helps sustain the existing nature and also expanding the natural environment through positive and affirmative human actions.	K5

HISTORY OF DELHI SULTANATE FROM AD 1206 TO AD 1526

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify Qutub-ud-din as not only the founder of the Slave dynasty but of establishing Muslim rule in India.	K1
	OC2. Critique the Tuqlugs were a section of the Turks who had come over to India in the form of nomadic tribes	K2
	OC3. Discuss the growth of agriculture, Industry, Textile, Trade and Commerce during Sultanate periods	K3
	OC4. Delineate the development of the Science, Art and Architecture in Medieval Deccan	K4
	OC5. Evaluate the Social, Economic and Literary condition of Vijayanagar Empire	K5

GLIMPSES OF TAMIL NADU UPTO AD 1565

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Extract the Sources of history of Tamil Nadu	K1
	OC2. Assess the Contribution of Jainism, Buddhism and Ajivikas to Tamil Society	K2
	OC3. Analyse the Literature, art, architecture and Sculpture of Pallavas	K3
	OC4. Distinguish the administration, Art, Architecture and Educational growth of Imperial Cholas and pandyas.	K4
	OC5. Describe the Tamil Music, Painting, Tamil Medicine and Foreign Travellers in Tamil Nadu during 15 th and 16 th Century	K5

TOURISM-PRINCIPLES AND PRACTICES

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Communicate the importance of Domestic and International Tourism	K1
	OC2. Discuss the Economic, Socio-Cultural and Environmental aspect of Tourism	K2
	OC3. Plan the significance of Fairs and Festivals of India and explain the functions of Travel agencies.	K2, K3
	OC4. Select the Pilgrimage of Hindu, Muslim, Christian, Jain, Buddhist and Sikhs in India	K4
	OC5. Apply the Future Prospects of Tourism in India	K6

HISTORY OF THE MUGHALS FROM AD 1526 TO AD 1757

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Analyse the situation in India on the eve of Babur invasion and after math.	K1
	OC2. Evaluate the importance of Land Revenue System, Military Administration And Religious policy of Mughals	K2
	OC3. Evaluate the penetration of colonial rulers into India after the decline of Mughals.	K3
	OC4. Analyze the significance of Deccan and North West Frontier Policy of the Mughals	K4
	OC5. The rise of the British Power in Bengal	K5

HISTORY OF TAMILAGAM FROM AD 1565 TO AD 1806

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Compare the Social and Political conditions of Tamil Nadu after the Battle of Talaikotta.	K1
	OC2. Appreciate the growth of Art, Architecture, Literature and Fine Arts under the Marathas.	K2
	OC3. Discuss the conditions for the European Settlements in Tamil Nadu.	K3
	OC4. Evaluate the significance of Poligars System and South India Rebellion in Tamil Nadu.	K4
	OC5. Critique the contribution of Missionaries activities in Tamil Nadu.	K5

INDIAN ECONOMY FROM AD 1858 TO AD 2001

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Outline the growth of Indian Economy in Pre-Independence Era	K1
	OC2. Analyze the different Level of Land Revenue System in British India	K2
	OC3. Evaluate the development of Communication Network and Postal Services Since 1858	K3
	OC4. Discuss the impact of Green and White Revolutions after Independence.	K4
	OC5. Critique the New Rural Employment Guarantee Scheme its impact in Rural Economy.	K5

INDIA UNDER BRITISH IMPERIALISM FROM AD 1757 TO AD 1885

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Able to formulate administrative principles of British.	K1
	OC2. Evaluate the uprisings of subdued people	K2
	OC3. Assess the impact of English education & socio-religious reforms	K3
	OC4. Analyze the cause and effect of the uprising & its failure	K4
	OC5. Learn the evolution of the first colonial Local Self government	K5

HISTORY OF ANCIENT CIVILIZATION (EXCLUDING INDIA)

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Outline differences between culture and civilization	K1
	OC2. Compare the distinct facets of Egyptian & Sumerian civilizations	K2
	OC3. Compile the features of Persian, Babylonian & Assyrian Civilizations	K3
	OC4. Fathom the sophistication of Greek and Roman civilizations	K4
	OC5. Cognize the exclusiveness of the Chinese civilization	K5

HISTORY OF TAMILAGAM FROM AD 1806 TO AD 1947

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Comprehend Thomas Munroe's Ryotwari system	K1
	OC2. Acknowledge the importance of social justice	K2
	OC3. Appreciate Tamizh peoples' struggle for freedom and self-respect	K3
	OC4. Admire and salute the patriotic heroes for their sacrifices	K4
	OC5. Assess the significance of provincial elections and fallout	K5

ELEMENTS OF INDIAN GEOGRAPHY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the geographical entities of rainfall, climate & vegetation	K1
	OC2. Analyze agriculture, forest resources flora fauna, green & white revolution	K2
	OC3. Evaluate the multi-pronged industrial growth & Economic zones	K3
	OC4. Discuss the skyrocketing development in transport, trade, communication & space research	K4
	OC5. Review ecological issues, environmental hazards, sustainable growth and development	K5

INDIA AND HER NEIGHBOURS

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Understand the features of India's foreign policy.	K2
	OC2. Identify the problems and challenges of India with neighbouring countries.	K5
	OC3. Get the knowledge of the role of Indira Gandhi in the liberation of Bangladesh.	K1
	OC4. Evaluate the ethnic issues of Sri Lanka.	K5
	OC5. Analyze the role of various organizations in maintaining good relations with neighbouring countries.	K4

STUDIES ON HUMAN RIGHTS

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Explain the origin & evolution of various theories and concepts of the basic rights of man	K1
	OC2. Aware and apply the political & civil, social & economic, cultural & environmental rights of citizens	K2
	OC3. Trace the Human Rights Movements between two World Wars	K3
	OC4. Legally competent to critique the fundamental rights, social legislations Commissions and human rights violations.	K4
	OC5. Discuss the functions of Law Commissions on children, women, and subaltern sects, role of media, consumer court and free legal aid to the needy.	K5

INTRODUCTION TO ARCHAEOLOGY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Discover the treasures of age old civilizations	K2
	OC2. Apply the methods of Exploration and Excavation in their Research.	K3
	OC3. Analyze the Archaeological Artefacts.	K4
	OC4. Remember and Integrate the knowledge of archaeology in studying history.	K1
	OC5. Create more Interest on Archaeological sites of Tamilnadu.	K6

CONTEMPORARY WORLD FROM AD 1945 To AD 1991

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. To critically analyse the Emergence of two Power Blocs	K1
	OC2. The study helps to know about De-colonization of Asia, Africa and Middle East	K2
	OC3. Analyse the Emergence of Third world and Non –Alignment	K3
	OC4. The study helps to know about the Disintegration of Soviet Union and rise of unipolar world	K4
	OC5. Assess the reasons for the competitive space race.	K5

VALUE EDUCATION

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the importance of social values more specifically personal and moral values	K1
	OC2. Assessing the positive and negative traits of the individual.	K2
	OC3. Emphasizing social values, conventions and the education of Human Rights.	K3
	OC4. Analysing the global changes due to modern tools and communication and accordingly the changes in customs, traditions and food habits.	K4
	OC5. Critically discussing the values and ethics as the panacea of all evils in the society.	K5

HISTORY OF INDIAN FREEDOM STRUGGLE FROM AD 1885 TO AD 1947

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Evaluate the role of moderates and extremists in the freedom movement.	K1
	OC2. To examine the rise of Nationalism	K2
	OC3. To know about the Non Co-Operation Movement	K3
	OC4. To understand the Civil Disobedience movement and Dandi March	K4
	OC5. Realize the spirit of freedom and secular nature of India	K5

CONTEMPORARY INDIA FROM AD 1947 To AD 2000

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Create knowledge about foreign policy of Panch Sheel and Non Aligned Movement	K1
	OC2. Assess Land Reforms - Nationalization of Banks - Green Revolution	K2
	OC3. Critique the legal issues and impact of Declaration of Emergency	K3
	OC4. Assess the political structure and policies of non congress government.	K4
	OC5. Analyse the Liberal Restructuring of Economy and experiment on coalition politics.	K5

HISTORY OF EAST ASIA FROM AD 1900 To AD 1949

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Create an in depth political knowledge of South East Asia.	K1
	OC2. Understand reasons for civil war and communist revolution in China.	K2
	OC3. The study helps to know about Mao Tse Tung and his Cultural Revolution	K3
	OC4. Students know about the basic structure of pre-modern Japan and its main social divisions and Meiji Reforms.	K4
	OC5. Assess Industrial and Economic Growth and Development of Science and Technology.	K5

HISTORY OF MODERN EUROPE FROM AD 1789 TO AD 1945

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Realize the cause and results of French Revolution and the Role of Philosophers.	K1
	OC2. To know the achievements of Napoleon Bonaparte.	K2
	OC3. To understand unification of Italy and Germany	K3
	OC4. To know Crimean war, The Russo - Turkish war, The Balkan wars and effects	K4
	OC5. Understand the causes and results for the First and Second World war.	K5

HISTORY OF USA FROM AD 1865 TO AD 1945

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Compile the efforts for reconstruction and the role of secret agencies	K1
	OC2. Assess the growth of industrialization and its ramification	K2
	OC3. Estimate the customized and vested foreign policy of USA	K3
	OC4. Outline the role of Woodrow Wilson in forming League of Nations	K4
	OC5. Examine the Economic depression & the emergence of USA as a World leader after Second World War.	K5

GENERAL KNOWLEDGE

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Prepare the students for the competitive examinations.	K6
	OC2. Broaden the focus on social, economic and political diversity of India	K2
	OC3. The study also focussed on the ideas of economy in India and other countries and the ideas on laws and constitutional amendments	K3
	OC4. Analyse the growth of science and technology and enviro-awareness in India	K4
	OC5. Explain the background and values of ethics, psychology and education.	K5

INDIAN CULTURAL HERITAGE

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Remember the present Indian society and culture.	K1
	OC2. Understand the uniqueness of Ancient Indian Values, the Teachings of Social Reformers, the need and development of ethics.	K2
	OC3. Appreciate to know the salient features of the Indian culture.	K3
	OC4. Analyze the impact of west on Indian culture.	K4
	OC5. Evaluate the role of social reformers in reforming the society.	K5

HISTORICAL STUDIES M.A
SOCIAL AND CULTURAL HISTORY OF ANCIENT INDIA

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the pre-historic evidence and solid archaeological evidence in the evolution of civilization.	K1
	OC2. Critique the origin and growth of Vedic Jainism and Buddhism	K2
	OC3. Discuss the Magadhan Empire and relations with Hellenism.	K3
	OC4. Evaluate the Social and Cultural conditions of the Gupta period.	K4
	OC5. Aware of the Harsha period and also cultural contacts with Eastern Islands.	K5

SOCIAL AND CULTURAL HISTORY OF TAMILAGAM
UPTO AD 1565

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the Geographical landscape and the Land divisions of Tamilagam	K1
	OC2. Critique the beginning of Sangam period and the causes leading to Kalabhra period.	K2
	OC3. Discuss the growth of social and cultural evolution through dynasties in Tamilagam	K3
	OC4. Trace the lineage of Pallavas, Cholas and Pandyas	K4
	OC5. Understanding the travelogues of Foreign travellers and the significance of Art, Architecture, Music. Painting and Medicine	K5

HISTORY OF WORLD CIVILIZATIONS – ANCIENT PERIOD
(EXCLUDING INDIA)

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the tools and its early usage by human beings.	K1
	OC2. Critique the formation of civilization along the River valleys.	K2
	OC3. Discuss the growth of early society, culture and economy	K3
	OC4. Analyse the contribution of early science, Literature and Philosophy	K4
	OC5. Evaluate the contributions of Mesopotamian, Greek, Roman and Chinese civilization.	K5

WOMEN STUDIES

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the role of women movements in U.K., U.S.A.	K1
	OC2. Critique the role of Feminism and the assertion of women	K2
	OC3. Discuss the growth and influence of women's movement and organization	K3
	OC4. Brought to limelight the contribution of women in medicine.	K4
	OC5. Evaluate the commissions, legal provisions and the protective mechanism for women	K5

INDIAN CONSTITUTION

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the social and political reasons for the evolution of basic inalienable rights of every human being.	K1
	OC2. Describe the evolution of executive, legislature and judiciary.	K2
	OC3. Discuss the issues and concerns for the various legislations in India.	K3
	OC4. Examine the procedure of budget and the powers of the High Court and Supreme court.	K4
	OC5. Evaluate the background of the constitutional Acts and Amendments	K5

HISTORY OF LABOUR MOVEMENT IN INDIA FROM AD 1870 TO AD 1970

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Identify the reasons for Labour Movement, rise of early Socialists and the formation of First International Organisations.	K1
	OC2. Comprehend the Classical and Modern theories of Democracy with special reference to Labour Issues,	K2
	OC3. To Know the response of the new Labour Leaders with special leanings to socialist and communist ideology.	K3
	OC4. Understand the impact of Labour laws pertaining to Factories and Industries.	K4
	OC5. Familiarize with Industrial Disputes, anti-labour responses Labour Commissions and the ILO conventions.	K5

SOCIAL AND CULTURAL HISTORY OF MEDIEVAL INDIA

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Comprehend the synthesis of Islamic Culture into Indian culture	K1
	OC2. Identify the tribulations and accomplishments of great women	K2
	OC3. Value the religious harmony and cognize the pure devotion	K3
	OC4. Recognize the richness of multilingual literature	K4
	OC5. Appreciate the magnificence of Islamic art and architecture	K5

SOCIAL AND CULTURAL HISTORY OF TAMILAGAM FROM AD 1565 TO AD 1947

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Analyze the Nayak and Maratha rule in the Tamil country	K1
	OC2. Assess the impact of European settlements	K2
	OC3. Appreciate the growth of Modern Tamizh Literature	K3
	OC4. Realize the true spirit of Nationalism	K4
	OC5. Comprehend the concept of social fairness and equivalence	K5

WORLD CIVILIZATION- MEDIEVAL PERIOD (EXCLUDING INDIA)

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Cognize the doctrines of Christianity and the significance of Roman Empire	K1
	OC2. Comprehend the Development of Islam and its civilization	K2
	OC3. Analyze the causes & impact of slavery, religious conflicts and geographical voyages	K3
	OC4. Marvel the richness of Renaissance art, literature, science, music and philosophy	K4
	OC5. Explore the implication Reformation, Counter Reformation and sects of Christianity	K5

INTERNATIONAL POLITICS FROM AD 1919 TO AD 2000

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Explore International Relations, Imperialism, Racism and Nationalism	K1
	OC2. Discover the evil aspects of Dictatorship and Second World with its ghastly impact	K2
	OC3. Assess the role of UNO and the regional collective security of Third World Countries	K3
	OC4. Evaluate Bi-polar politics and the effects of cold war	K4
	OC5. Comprehend the current geo-political situation of the world	K5

HISTORY OF THE SUBALTERN PEOPLE

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Critically situates the political and social contexts that led to communal dichotomy and discrimination	K1
	OC2. An attempt being made to decolonize and deconstruct the dominant narrative thinking.	K2
	OC3. Brought into limelight the pathetic and disadvantaged nature of women and how they were brought into the focused social narratives.	K3
	OC4. Intellectuals from Subalterns demystified the discrimination theory	K4
	OC5. Identify the Dalits, Women and other Subaltern groups into the dominant colonial historiography.	K5

ARCHIVAL MANAGEMENT

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Appreciate the seminal contribution of National and State Archives	K1
	OC2. Familiarise with the functions of Archival Office and the Record Management.	K2
	OC3. Comprehend the complexities of documents, preservation and sustainable conservation of Records	K3
	OC4. Analyse the various Soft tools and techniques in the preservation of records.	K4
	OC5. Understand the importance of Digital Archives and the importance of Field Work and Projects.	K5

**INTELLECTUAL THINKERS OF MODERN INDIA
FROM AD 1800 TO AD 1947**

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Recognize the social reforms and women's equality	K1
	OC2. Enunciate spiritual philosophies based on different religious thoughts.	K2
	OC3. Analyze the economic drain theory of the British and its impact	K3
	OC4. Formulate the political concepts of nationalism and independence	K4
	OC5. Explicate the revolutionary thoughts of the South Indian reformers	K5

**SOCIAL, ECONOMIC AND CULTURAL HISTORY OF MODERN INDIA FROM
A.D 1700 TO A.D 1947**

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. To know about Society and Culture in the 18th century	K1
	OC2. Assess the Emergence of Urban Labour Force and New Industrial class	K2
	OC3. To evaluate the Social and Religious Reform Movements	K3
	OC4. Distinguish the Growth of Education and the policies of colonial rule.	K4
	OC5. Critique the Social and Economic Legislations before independence.	K5

HISTORY OF WEST ASIA FROM AD 1914 TO AD 1990

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Critique and understand Arab Nationalism	K1
	OC2. Learners will understand Peace Efforts for Palestine and Israel issues	K2
	OC3. This study will equip the learners to understand Civil war in Lebanon and its effect	K3
	OC4. Students will evaluate the Oil Crisis and Gulf War	K4
	OC5. Students will realize the Contemporary Politics in West Asia.	K5

HISTORY OF CHINA AND JAPAN FROM AD 1900 TO AD 1990

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. The study helps students to know about Political, Social and Economic conditions of China and Revolution of 1911	K1
	OC2. Analyze the Growth of Communism, Civil war and the Birth of Republic.	K2
	OC3. Evaluate the Cultural Revolution, Modernization. Liberalization and Economic progress of People's Republic of China	K3
	OC4. Assess the role of Japan in World War I and World War II	K4
	OC5. Debate on the Foreign Policies and Economic growth of China and Japan	K5

INDIA'S FOREIGN POLICY AND STRATEGIC AFFAIRS

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. The study helps students to know about Colonial India's role in The World War I and The Common Wealth.	K1
	OC2. Learners able to analyze the processes of de-colonization in Asia, Africa and Latin American countries	K2
	OC3. Students will evaluate Independent India's Foreign Policy	K3
	OC4. Students able to analyze Ethnic issues in Srilanka and the Kashmir Problem	K4
	OC5. The study helps students To know about India's Nuclear Policy and Diplomatic, Strategic Relations with other countries.	K5

INTRODUCTION TO JOURNALISM AND MASS COMMUNICATION

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Remember the historical significance of journalism in Indian freedom struggle.	K1
	OC2. Understand the importance, functions & Scope of communication and media.	K2
	OC3. Apply their knowledge in News writing: News editing and choose careers in Journalism and Mass media.	K3
	OC4. Analyze more about newspapers, editing pages.	K4
	OC5. Create more interest on various national and international news agencies.	K6

TOURISM MANAGEMENT

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Students can Display an understanding the production, implementation and impacts of tourism development locally, nationally and internationally	K1
	OC2. Students can Demonstrate cultural and environmental sensitivity through an appreciation for various forms of diversity in our worlds	K2
	OC3. Students can Exhibit effective knowledge on Human Resource Management	K3
	OC4. Students can Conduct research ethically, as evidenced through effective research design and implementation	K4
	OC5. Students can Possess skills and experience relating to the management and production of tourism in a professional setting	K5

HISTORY OF USA UPTO AD 1865

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Evaluate the effects of the colonization of USA.	K1
	OC2. Analyze the causes and significance of American War of Independence.	K2
	OC3. Comprehend the circumstances and procedure in the drafting of American Constitution.	K3
	OC4. Assess and justify various democratic practices.	K4
	OC5. Critically review the system of slavery and racism.	K5

HISTORY OF CHENNAI

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Course will enable students to contextualise contemporary questions with regard to the city in the light of its colonial past.	K1
	OC2. Focus of this course will seek to plot the political importance in shaping the physiography and geography of Chennai.	K2
	OC3. Students will chart local, social, ecological and cultural processes that nurtures and moulds the Chennai city.	K3
	OC4. It will make the students appreciate the historical roots of the problems of urbanization.	K4
	OC5. At the end of the course the student will be able to get the glimpses of the ancient, medieval and the colonial construction of Chennai.	K5

THEORY AND METHODOLOGY OF HISTORY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcate and initiate the basic idea of the importance of study of History.	K1
	OC2. Exploring and Critically assessing the available sources using scientific tools and techniques.	K2
	OC3. Explain the importance of views and ideologies of oriental and western historians.	K3
	OC4. Evaluate the significance and contributions of Archaeological Department and Museums.	K4
	OC5. Assessing the Multidimensional view about other nations and continents which provides basic understanding about society, culture, religion and diplomacy.	K5

CONTEMPORARY INDIA FROM AD 1947 TO AD 2000

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcated and initiated the basic idea of politics in India.	K1
	OC2. Critically viewed the emergence of Political leaders.	K2
	OC3. Explain the evolution of contemporary politics in India.	K3
	OC4. Evaluate the significance and contributions of contemporary society.	K4
	OC5. Assessing the ideologies and its impact in political administration in India.	K5

CONTEMPORARY TAMILNADU FROM AD 1947 TO AD 2000

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcated and initiated the basic idea of contemporary history of TamilNadu	K1
	OC2. Analysed the various thinking processes of Intellectuals of TamilNadu	K2
	OC3. Explain the causes for the emergence of ideologies in TamilNadu	K3
	OC4. Evaluate the significance and contributions of political leaders of TamilNadu	K4
	OC5. Assessing the policies, views and administration of post-independent TamilNadu.	K5

STUDIES ON HUMAN RIGHTS

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcated and initiated the basic idea of rights.	K1
	OC2. Exploring the evolution of basic rights in the Universe.	K2
	OC3. Explained the contribution of humane-centred social thinkers.	K3
	OC4. Evaluate the contribution of NGO's in disseminating and giving awareness of the Rights.	K4
	OC5. Assessing the role of NGO's human rights organizations, legal remedies and commission for women and depressed classes.	K5

HISTORY OF SCIENCE AND TECHNOLOGY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Inculcated and initiated the basic idea of scientific thinking during Renaissance period.	K1
	OC2. Exploring and Critically assessing the contribution of Western scientists.	K2
	OC3. Explain the importance of tools and treasures under the earth.	K3
	OC4. Evaluate the significance and contributions of discoveries and Inventions	K4
	OC5. Assessing the fusion of western science exploring Indian scientists and the impact of science on the society.	K5

INTRODCUTION TO MUSEOLOGY

Course Outcomes	On Completion of the Course, Students should be able to	
	OC1. Classify the Objectives of having Museums	K1
	OC2. Get to know the various National, Regional and Private Museums	K2
	OC3. Understand the storage, conservation and preservation techniques.	K3
	OC4. List out the functions and Administration of Museum Libraries and the preservation of Museum Objects.	K4
	OC5. Updating and reviewing the functions of Government and Private Museums.	K5

CORPORATE SECRETARYSHIP B.Com

FINANCIAL ACCOUNTING – I

Course outcomes: Students will be able to

1. Discuss and apply fundamental accounting concepts, principles and conventions
2. Record basic accounting transactions and prepare annual financial statements for a sole proprietorship business.
3. Calculate depreciation to be charged to assets under different methods.
4. Calculate the amount of fire insurance claim to lodged to an insurance company.
5. Students will be able to prepare trading, profit and loss account and balance sheet from incomplete records derived from single entry system.

BUSINESS MANAGEMENT

Course outcomes: Students will be able to

1. Illustrate the theory and practice of management and its development phases till date.
2. Discover, nourish and nurture managerial traits and talents among the students.
3. Know about business management and its development through the functions of planning, organizing, staffing, leadership and control.

ELEMENTS OF MERCANTILE LAW

Course outcomes: Students will be able to

1. Apply basic elements required to enter into a valid contract under the Indian Contract Act 1872
2. Outline the remedies available to individuals in case of breach of contract.
3. Analyze the relationship between agent and principal and its legalities.
4. Understand legal provisions relating to Indemnity, Guarantee, Bailment and Pledge.
5. Gain knowledge on the main principles which govern trade and business under the Sale of Goods Act 1930.

FINANCIAL ACCOUNTING – II

Course outcomes: Students will be able to

1. 1 Prepare ledger accounts for inland branch transactions and calculate profit or loss.
2. Allocate and apportion the expenses among the departments and calculate profit or loss for each department.
3. Pass journal entries and prepare ledger accounts for the transactions relating to a partnership firm.

MARKETING MANAGEMENT

Course outcomes: Students will be able to

1. To develop an idea about marketing and its functions
2. To enhance the students on consumer behavior.
3. To familiarize students about product and its classifications.
4. To make them understand pricing policies.
5. To introduce the concept of sales forecast motives

BUSINESS COMMUNICATION

Course outcome: Students will be able to

- Understand the Grammatical background and presentation competencies which aid effective communication in business.
- Prepare, proof read and Edit business reports, enquiries, orders, complaints and claims.
- Compose effective and accurate business documents through e-mails and social networks.

CORPORATE ACCOUNTING

Course Outcome: Students will be able to

1. Analyze the accounting treatment of issue of shares and redemption of preference shares.
2. Prepare accounts relating to issue and redemption of debentures.
3. Prepare Statement of Profit & Loss and Balance Sheet of Joint Stock Companies as per Schedule III, Companies Amendment Act 2017.
4. Appreciate the accounting practices followed in alteration or reduction of share capital.
5. Apply accounting methods to value goodwill and shares..

COMPANY LAW AND SECRETARIAL PRACTICE – I

Course Outcomes: Students will be able to

1. Plan for formation of company right from promotion to commencement of business stage.
2. Illustrate the procedure involved in raising capital by way of issue of shares and debentures.
3. Illustrates the main charter of a company and the raising of capital in a company

CORPORATE ACCOUNTING -II

Course Outcome: Students will be able to

1. Develop the skill of preparation of statement showing liability of underwriters
2. Develop a conceptual logic behind preparing financial statements relating to profit prior to and after incorporation
3. Acquire the skill of preparation of accounts for companies which are going for acquisition, merger and reconstruction as per legal requirements.

COMPANY LAW AND SECRETARIAL PRACTICE –II

Course outcomes: Students will be able to

1. Illustrate the role of Company secretary as per secretarial standard 1 and 2 under the Companies Act of 2013.
2. Illustrate the duties and responsibilities of director as per compliances under companies Act of 2013.
3. Learn different ways of obtaining membership in a company and its termination and the procedure for transfer and transmission of shares.
4. Understand the provisions regarding conduct of meetings of the board of directors and Share holders, voting rights and resolutions and procedure for winding up of companies

MANAGEMENT ACCOUNTING

COURSE OUTCOMES: After completion of the course the students will be able to

1. Illustrate the role of a Management Accountant in the present scenario.
2. Evaluate the financial statement analysis for strategic decision making of firm.
3. Examine the solvency, turnover/performance and Liquidity of a business by using live data.
4. Evaluate the magnitude and pattern of sources and application of fund under different head of account.
5. To understand the break- even level in volume and units to make managerial decisions competently on cost volume and profit.

INCOME TAX LAW AND PRACTICE – I

Course outcomes: Students will be able to

1. Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.
2. Assess the residential status of an assessee & the incidence of tax.
3. Compute income of an individual under the head salaries.
4. Ability to compute income from house property.
5. Evaluate income from a business carried on or from the practice of a Profession.

BANKING THEORY AND PRACTICE

Course Outcomes Students will be able to

1. Illustrate knowledge on banking and financial system in India
2. Provide knowledge about commercial banks and its products
3. Familiarize banking system in India
4. Understand better customer relationship
5. Know about modern banking services like e-banking, m-banking and internet banking

FINANCIAL SERVICES

Course Outcome

1. To give an idea about fundamentals of financial services and players in financial sectors.
2. To create an awareness about merchant banking, issue management, capital markets and role of SEBI.
3. To provide knowledge about leasing and hire purchase concepts.
4. To make them understand about different types of insurance and IRDA Act.

HUMAN RESOURCE MANAGEMENT

Learning outcomes: Students will be able to

1. Analyze about the various processes of HR planning and compensation structure.
2. Aware about the various employee training and development methods.
3. Select the various methods of recruitment and safety measures to be employed by the employees.
4. Assess about employee welfare and grievance handling.

BASIC LAWS OF BUSINESS

Course outcomes: Students will be able to

1. Elements of a valid contract: agreement, consideration, capacity, legality, and satisfaction of the statute of frauds.
2. Recognize a valid, enforceable contract, and identify reasons why an agreement may not be enforceable.
3. By the end of this module, you will have a basic understanding of some of the fundamental rules that govern the employer-employee relationship.

PRACTICAL AUDITING

Course outcomes: Students will be able to

1. Apply the concept of Audit, its principles and objectives.
2. Gain knowledge on the Importance of Internal Audit, Internal Check and Internal Control .
3. Apply the techniques of Vouching and Valuation of Assets and Liabilities in Auditing.
4. Acquire knowledge on the duties, rights and responsibilities of Auditor.
5. Prepare Audit report.

INCOME TAX LAW AND PRACTICE – II

Course outcomes: Students will be able to

1. Compute short term & long term capital gains.
2. Evaluate income under the residuary head and apply the provisions of clubbing of income.
3. Demonstrate an understanding of set off & carry forward of losses and also identify the incomes exempt from tax.
4. Identify the different deductions available to an individual from total income and the process of e-filing.
5. Assess taxable income & tax liability of an individual

COST ACCOUNTING

Course outcome: Students will be able to

1. Outline the basic principles and concepts of cost accounting.
2. Prepare the statement of Cost and Provide insight into control of cost.
3. Prepare the statements relating to material purchase, issue and losses.
4. Compute the Labour cost under various remuneration schemes.
5. Analysis the different methods to compute overhead cost

CORPORATE LAWS

Course outcomes: Students will be able to

1. Develop an understanding of the Nature of SEBI, Amendments, corporate governance.
2. Understand the various kinds of acts passed.

GOODS AND SERVICES TAX

Course outcomes: Students will be able to

1. Outline the basic concepts of taxation.
- 2 . Assess the framework of time, place of supply, reverse charge mechanism & related provisions.
3. Acquire the knowledge on the basis of assessment & returns to be filed.
4. Acquire knowledge on the basis of levy & provision relating to the supply of IGST & SGST.
4. Gain knowledge on Customs Act & related provisions.

ZOOLOGY - UG
INVERTEBRATA

COURSE OUTCOME

CO-1 The student learns the structural organization of animals and learns the importance of taxonomy.

CO-2 Appreciates the diversity of non-chordates living in varied habitats.

CO-3 Analyses the organization, complexity and characteristic features of non-chordates.

CO-4 Learns the morphology, life history and economic importance of representatives of various invertebrate animal phyla.

CO-5 Comprehends the interaction of non-chordates with the environment and their role in the ecosystem and critically analyses the inter-relationships with different non-chordate groups through structural and functional affinities.

ELEMENTS OF ENTOMOLOGY AND APPLIED ZOOLOGY

COURSE OUTCOME:

CO-1 The students learn to appreciate the diversity of insects.

CO-2 Students learn the different species of silkworm. Understand the basics in rearing of silkworm.

CO-3 Appreciate the social organization of honey bees and learn the basics of honeybee rearing and learn the biology of lac insect and appreciate the uses of lac.

CO-4 Comprehend the loss of agricultural produce caused by pests and understand I.P.M and recognize the diseases spread by various Arthropod vectors.

CO-5 Comprehend the importance of earthworms in maintaining soil health and learn the basics of vermicomposting.

CO-6 Recognize the various breeds of poultry and understand the basics of poultry farming.

CO-7 Appreciate the economic importance of the by products of Piggery. Learn the basics of cattle farming and appreciate its economic importance.

CHORDATA

COURSE OUTCOME:

CO-1 The student learns the different classes of chordates and the level of organization and understands the evolutionary relationship between different subphyla and classes.

CO-2 Appreciates the diversity of chordates.

CO-3 Acquires knowledge about the habitats of chordates in different ecosystems and comprehends the increasing complexity in the circulatory, nervous and skeletal systems.

CO-4 Explores parental care in different classes of vertebrates.

CO-5 The paper will give a strong observation skill and prompt him to think about its conservation, sustainable economic utilisation of animal resources.

ALLIED ZOOLOGY – I

COURSE OUTCOME:

CO-1 Upon completion of this course the students will comprehend the basis of animal classification.

CO-2 Will understand the characteristics of different animal phyla and appreciate the increasing complexity seen in animal from Protozoa to Mammalia.

CO-3 Compare the different modes of nutrition in Protozoans and understand the concept of polymorphism.

CO-4 Will relate the feeding habit to the type of mouth parts seen in different insects.

CO-5 Compare the different systems in the different Classes of Chordates.

ALLIED ZOOLOGY – II

COURSE OUTCOME:

CO-1 Upon completion of this course the students will understand the different cell organelles and enumerate the applications of Biotechnology in Medicine and Agriculture.

CO-2 They will understand the creation of life and origin of life.

CO-3 Will comprehend the basic physiology of Man.

CO-4 Will suggest remedial measures for global warming and pollution. They will also appreciate and contribute towards the wildlife conservation strategies.

CO-5 They will understand the different biomolecules and explore the sources of different vitamins.

FOOD, NUTRITION AND HEALTH

COURSE OUTCOME:

CO-1 They appreciate the importance of a balanced diet.

CO-2 They learn to relate dietary fibre, probiotics and prebiotics with healthy living.

CO-3 Appreciate the causes of malnutrition and obesity and learn to choose healthy food over junk food.

CO-4 Understand the relation between diet and lifestyle related diseases.

CO-5 Learn the effects of smoking, alcoholism and drug abuse.

CO-6 They learn to relate food hygiene and food borne illnesses.

CELL AND MOLECULAR BIOLOGY

COURSE OUTCOME:

CO-1 Upon completion of the course students will be able to, understand the basic principles of cell biology.

CO-2 Describe the structure and functions of the different cellular organelles.

CO-3 Comprehend the cell cycle and appreciate cell division, cell aging and apoptosis.

CO-4 Gain insight about the basics of cancer biology.

CO-5 Gain knowledge about DNA replication and repair and learn the process of protein synthesis.

PRINCIPLES OF GENETICS

COURSE OUTCOME

CO-1 Upon completion of the course, students shall gain knowledge about the basic principles of inheritance.

CO-2 Discuss different types of gene interaction.

CO-3 Compare and learn the difference between multiple alleles and polygenes.

CO-4 Learn the significance of recombination in inheritance.

CO-5 Compare sex-linked inheritance, sex limited traits and sex influenced traits in Man.

CO-6 Recognize the different types of mutations and causes of mutations and to explain the different in-born errors of metabolism.

DEVELOPMENTAL BIOLOGY- THE CREATION OF LIFE

COURSE OUTCOME:

- CO-1 Upon completion of the course students will be able to, explain and contrast the processes of spermatogenesis, oogenesis and fertilization.
- CO-2 Understand various cleavage patterns in animals.
- CO-3 Gain basic knowledge about the sequential changes from cellular grade of organization to organ grade of organization.
- CO-4 Acquire knowledge about experiments on reproductive biology.
- CO-5 Gain information about human reproduction, sexual health and birth control measures and appreciates the importance of assisted reproduction.

EVOLUTIONARY BIOLOGY AND BIOSTATISTICS

COURSE OUTCOME:

- CO-1 Upon completion of this course the students shall, gain knowledge about the theories of evolution.
- CO-2 Compare the different evidences for evolution and explain the modern evolutionary forces responsible for evolutionary process.
- CO-3 Learn the implications of Hardy-Weinberg Equilibrium and compile the applications of phylogenetic trees.
- CO-4 Gain knowledge about data collection and sampling methods and develop skills to present data in different ways.
- CO-5 Learn to compute measures of central tendency and dispersion and learn different methods of hypothesis testing.

ANIMAL PHYSIOLOGY

COURSE OUTCOME:

- CO-1 Upon completion of this course the students will be able to clearly understand the basic concepts of nutritional physiology.
- CO-2 Recognize how all the physiological systems work together to maintain homeostasis in the body.
- CO-3 Correlate the effects of smoking with lung disease.
- CO-4 Recognize different respiratory disorders and eye defects.
- CO-5 Learn the effects of Hypo and Hypersecretions of the different endocrine glands.

FUNDAMENTALS OF BIOTECHNOLOGY AND BIOINFORMATICS

COURSE OUTCOME:

CO-1 Upon completion of this course the students will be able to acquire basic knowledge about Recombinant DNA technology.

CO-2 Gain knowledge about gene isolation and gene amplification.

CO-3 Compare different gene transfer methods.

CO-4 Learn the applications of transgenic animals and transgenic plant

CO-5 Learn different Nucleic acid, protein and specialized genome databases and understand sequence alignments and protein structure prediction.

BIOCHEMISTRY AND BIOPHYSICS

COURSE OUTCOME:

CO-1 Upon completion of this course the students will have comprehensive knowledge of biochemical pathways-synthesis and catabolism of major biomolecules.

CO-2 Gain knowledge of the structure and activity of major biomolecules.

CO-3 Understands enzyme kinetics and appreciate the structure and activity of important drugs.

CO-4 Understand the mechanism of echolocation and bioluminescence.

CO-5 Compare the principles behind different types of microscopy and learn the uses of radioisotopes, ultrasound and spectroscopy in biology.

PRINCIPLES OF BIOPHYSICS AND BIOCHEMISTRY

COURSE OUTCOME:

CO-1 Upon completion of this course the students shall acquire comprehensive knowledge of biochemical pathways-synthesis and catabolism of major biomolecules.

CO-2 Gain knowledge of the structure and activity of major biomolecules.

CO-3 Comprehend the mechanism of enzyme action.

CO-4 Appreciate the relevance of pH in biological systems.

CO-5 List the applications of colloids and radioisotopes.

PHARMA MARKETING

COURSE OUTCOME:

CO-1 Upon completion the students shall gain basic knowledge about the pharmaceutical industry.

CO-2 Understand the basics of drug nomenclature and appreciate the role of CDSCO.

CO-3 Differentiate the different types of drugs and vaccines in the drug industry.

CO-4 Acquire knowledge about the different medical devices and their uses.

CO-5 Become equipped with skills necessary to become a Medical Representative.

APPLICATIONS OF BIOTECHNOLOGY

COURSE OUTCOME:

CO-1 Upon completion of this course the students will be able to understand different molecular diagnostic techniques.

CO-2 List the uses of gene therapy and appreciate the uses of recombinant therapeutic proteins.

CO-3 Comprehend the applications of biotechnology in agriculture and food industry and understand the significance of bioremediation.

CO-4 Learn the basic technique of animal cell culture and cloning and gain insight on bioethics and biosafety of GMO.

CO-5 Enhance their understanding in IPR and Patenting.

ENVIRONMENTAL BIOLOGY AND WILDLIFE CONSERVATION

COURSE OUTCOME:

CO-1 Upon completion of the course, the students will be able to demonstrate an understanding of the important concepts in Environmental Biology such as role of different factors in ecosystem and the concept of limiting factors.

CO-2 Comprehend the different biogeochemical cycles and understand population characteristics, dynamics and growth models.

CO-3 Analyze the impact of Man on the ecosystem and suggest ways for preventing pollution and proper waste disposal.

CO-4 Learn the importance of wildlife conservation and management and appreciate the importance of forests and Mangroves

CO-5 Learn alternative technology such as ecofriendly products, organic farming, green chemistry and appreciate the usage of clean fuels.

IMMUNOLOGY AND MICROBIOLOGY

COURSE OUTCOME:

CO-1 Upon completion of this course the students will be able to acquire knowledge about types of immunity and lymphoid organs.

CO-2 Understand the complement system and MHC organization.

CO-3 Learn the molecular basis of humoral and cellular processes involved in inflammation, and immunity.

CO-4 Comprehend the mechanism of graft rejection and the need for immunosuppressive therapy.

CO-5 Gain knowledge about the different types of microorganisms and learn about microbes causing food spoilage and diseases.

BASICS OF IMMUNOLOGY AND MICROBIOLOGY

COURSE OUTCOME:

CO-1 Upon completion of this course the students will be able to describe about types of immunity and lymphoid organs.

CO-2 Understand the complement system and MHC organization.

CO-3 Learn the molecular basis of humoral and cellular processes involved in hypersensitivity and comprehend the basics of transplantation immunology.

CO-4 Gain knowledge about the different microorganisms.

CO-5. Learn basics of medical microbiology.

FISHERY SCIENCE AND AQUACULTURE

COURSE OUTCOME:

CO-1 Upon completion of this course the students will gain knowledge of Inland and marine fishery resources of India and how it contributes to Indian economy.

CO-2 Identify different edible marine fishes using its characters.

CO-3 Acquire basic knowledge about fish biology and explain different kinds of fishing methods.

CO-4 Compare different fish preservation methods and select the ones most suitable for export and storage.

CO-5 Acquire knowledge about culture of different shell fishes and compare different fish culture methods.

CO-6 Learn to discuss different integrated farming practices and explain the usage of zebra fishes in research.

FISHERY BIOLOGY AND AQUACULTURE

COURSE OUTCOME:

CO-1 Upon completion of this course the students will, understand the classification of fishes.

CO-2 Identify different marine fishes using its characters and acquire basic knowledge about fish biology.

CO-3 Acquire knowledge about culture of different shell fishes.

CO-4 Compare different fish culture methods and learn to discuss different integrated farming practices.

CO-5 Discuss the significance of using zebra fishes in research.

ZOOLOGY – PG

STRUCTURE, FUNCTIONS AND PHYLOGENY OF INVERTEBRATES

Course Outcomes

- Classify animal kingdom and recollect different types of locomotion in invertebrate.
- Analyze evolution advantage of metamerism in specified invertebrate phyla
- Relate the structure and function of different invertebrate phyla.
- Summarize the affinities of larval significance of invertebrates.

STRUCTURE, FUNCTIONS AND PHYLOGENY OF CHORDATES

Course Outcomes

1. Have knowledge on the outline classification of pro chordates, chordates and their evolution.
2. Will be able to critically asses the origin and evolution of various structures in vertebrates and their significance.
3. Assess the evolutionary traits like origin of flight, adaptative radiation in vertebrates, and their adaptation to different habitat.
4. Design evolutionary tree based on the study of various vertebrate classes and their traits.

BIOSYSTEMATICS, EVOLUTION AND ANIMAL BEHAVIOUR

Course Outcomes

- 1) Analyze the trends in bio-synthetics and identify the species using taxonomic keys.
- 2) Criticize theories of evolution and explain then forces of the evolution.
- 3) Analyze the behavior of animals in relation to environment.
- 4) Appreciate the social, ecological and biological behavior of animals.

ELEMENTS OF ENTOMOLOGY

Course outcomes

1. Classify insects up to order
2. List the pest that infects the crops
3. Highlight the methods used to control pest
4. Aware of the insects vectors
5. Design methods to culture economically important insects.

ENTOMOLOGY (Morphology, Physiology and Systematics)

Course outcomes:

1. Discuss the morphology and physiology of insects
2. Classify arthropods up to order
3. Explain caste determination of social insects.
4. Elaborate wing venation of arthropods

MOLECULAR BIOLOGY OF THE CELL

Course Outcomes

1. Explain the structure and functions of cell organelles.
2. Exemplify the importance of cell signaling molecules and adhesion molecules.
3. Appreciate the movements of chromosomes during different phases of cell cycles.
4. Justify central dogma of protein synthesis.

GENETICS

Course Outcomes

1. Recall mendalian principles and extensions.
2. Describe gene mapping methods and mechanism of transposition.
3. Relate mutation in mitochondrial and chloroplast gene with genetic disorders & diseases.
4. Analyze forces that alter gene frequencies in a population and significance of variation.

PRINCIPLES OF BIOCHEMISTRY

Course Outcomes

1. Summarize the structure and classification metabolism of carbohydrates, protein and lipids.
2. Explain the importance of metabolic pathways of biomolecules with disorders in humans.
3. Discuss the importance of enzymes in chemical reactions and their regulation.

ELEMENTS OF BIOCHEMISTRY

Course Outcomes

1. Summarize the laws of physics and chemistry in biological systems
2. Classify carbohydrates, proteins, lipids and nucleic acids.
3. Explain the metabolic pathways of biomolecules
4. Integrate the importance of metabolic pathways with the metabolic disorders
5. Evaluate the clinical aspects of enzymology.

PUBLIC HEALTH AND HYGIENE

Course Outcomes

1. Articulate health with hygiene.
2. Classify food and prevent mal nutrition in children in general & society in particular.
3. Distinguish between communicable & non- communicable disease, mode of transmission and control measures.
4. Handle waste in a better way and improve the environment.

COMPARATIVE ANIMAL PHYSIOLOGY

Course outcomes

1. Compare and contrast the physiology of organs in different groups of animals
2. Integrate anatomy with physiology of various organs in different vertebrate systems.
3. Classify hormones and recognize haemostatic mechanism for normal function of the body.

BIOPHYSICS, BIOSTATISTICS AND BIOINFORMATICS

Course outcomes

1. Integrate the laws of physics in biological system and explain the physical principles behind the instrument used in disease diagnosis.
2. Choose methods to collect, classify and present data
3. Select appropriate statistical tool to infer results.
4. Define and classify biological data bases and predict methods for DNA and protein sequencing.
5. Construct evolutionary tree using bioinformatics tool .

PRINCIPLES OF BIOPHYSICS, BIOSTATISTICS AND BIOINFORMATICS

Course outcomes

1. Integrate the laws of physics in biological system and explain the physical principles behind the instrument used in disease diagnosis.
2. Choose methods to collect, classify and present data
3. Select appropriate statistical tool to infer results.

4. Define and classify biological data bases and predict methods for DNA and protein sequencing.
5. Construct evolutionary tree using bioinformatics tool construct.

IMMUNOLOGY AND MICROBIOLOGY

Course outcomes

1. List the immune cells, molecules, types of immunity and structure of antigens.
2. Describe immunoglobulin and the importance of lymphatic basis of antibody diversity.
3. Identify hypersensitivity reactions, classify vaccines and explain importance of MHC molecules in transplantation.
4. Differentiate gram negative, gram-positive bacteria explain the structure of virus aspect, culture media for growth of microbes.
5. Knowledge on the beneficial and disease-causing microbes

BASICS OF MICROBIOLOGY AND IMMUNOLOGY

Course outcomes

1. Differentiate bacteria and virus and explain the structure of bacteria and virus
2. Acquires knowledge on the disease causing microbes and useful microbes
3. List the immune cells, molecules, types of immunity and structure of antigens.
4. Describe immunoglobulin and the importance of lymphatic basis of antibody diversity.
5. Identify hypersensitivity reactions, classify vaccines and explain importance of MHC molecules in transplantation.

ENVIRONMENTAL BIOLOGY, CONSERVATION AND MANAGEMENT

Course outcomes

1. List biotic and abiotic factors and characteristics of ecosystem.
2. Explain structure of ecosystem and sketch the energy models in an ecosystem.
3. Describe the attributes of population and employ method to measure population size
4. Define biodiversity, list wild life conservation act and discuss various environmental issues.
5. Critically examine the interlink between pollution and health suggest remedies to manage them.

FISHERY BIOLOGY AND AQUACULTURE

Course outcomes

1. Classify fishes and procure the right type of feed and produce hybrid fishes.

2. Apply remote sensing and GIS to identify fishery resources of India.
3. Design a farm and practice aquaculture using various methods.
4. Formulate feed and develop fish vaccines.
5. Manage fish farms and problems that arise in post-harvest technology.

BIOTECHNOLOGY

Course outcomes

1. Compare Biotechnology regulatory agencies of India with developed countries.
2. Select a suitable vector and construct genomic library.
3. Develop bioproducts such as hormones, immune molecules, vaccines and microbiological and metabolites biotechnology.
4. Interpret the results of the technique to identify disease and suggest gene therapy methods to treat genetic disorders.

GEOLOGY – UG**PHYSICAL GEOLOGY AND CRYSTALLOGRAPHY****COURSE OUTCOMES**

CO No.	Course Outcomes: On completion of the course, students will be able to	Level
CO-1	Understand the origin of Galaxy, Our Solar System and Crystal Science	K1
CO-2	Knowledge on Dating of Earth Age	K2
CO-3	Correlate various Hypothesis on Origin of Earth	K3
CO-4	Analyze the importance of Crystallography Studies	K4
CO-5	Various Type minerals and their respective crystal system	K5
CO-6	To improve their ability to self-study and acquire knowledge Earth's Physiography and Crystal systems.	K6

GEO STATISTICS-I**LEARNING OUTCOMES:**

- To describe the definition, scope, classification, tabulation, drawing diagrams and plotting graphs of Statistics through Geological information.
- To measure and interpret the various measures of averages using Geological data.
- To measure and interpret the various measures of dispersions using Geological data.
- To measure and interpret the relationship among the geological variables and to estimate and predict the unknown and future value through the regression lines using geological data.

To fit the curve using geological data.

GEO STATISTICS-II**LEARNING OUTCOMES:**

- To study and interpret the time series data through Geological information.
- To describe the simple random sample using Geological data.
- To understand the stratified random sample using Geological data.
- To test and interpret the large sample using Geological data.
- To learn the analysis of Geological data through Statistical software's.

GEOMORPHOLOGY AND GEOTECTONICS**COURSE OUTCOMES**

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Know the basics of Geotectonics and landforms	K1
CO-2	Understand the importance of various geomorphological agencies	K2,
CO-3	Process of Geomorphological features and creation of landforms	K3, K4, K5
CO-4	Understand and predict Earth's Internal and external processes	K1, K2, K3,
CO-5	Predict the future from the past formed features	K4, K5

PALAEONTOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basics of Fossils	K1
CO-2	Understand the importance of fossils in Geological studies	K2,
CO-3	Know different phylum and their species with morphological changes	K3, K4, K5
CO-4	Understand and correlate fossil with various rock formations	K1, K2, K3,
CO-5	Understand the importance of Palaeontology in dating and evolution studies	K4, K5

MINERALOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basics of Minerals	K1
CO-2	Understand the importance of Minerals in Geological studies	K2,
CO-3	Know different group of minerals systems	K3, K4, K5

CO-4	Understand the descriptive mineralogy of different groups	K1, K2, K3,
CO-5	Understand the importance of Minerals and mineralogical studies	K4, K5

STRUCTURAL GEOLOGY AND REMOTE SENSING

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basics components of Structural Geology	K1
CO-2	Know the formations of geological formations	K2,
CO-3	Basics of Aerial Photographs	K3, K4, K5
CO-4	Understand the Application of Satellite science	K1, K2, K3,
CO-5	Analyse various physiographical features through GIS	K4, K5

IGNEOUS PETROLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basic Petrology	K1
CO-2	Know the textures and micro-structures	K2,
CO-3	Know composition of magma and various system of rock formation	K3, K4, K5
CO-4	Understand the Petrographical characters of rocks	K1, K2, K3,
CO-5	Analyse Origin of various rock types	K4, K5

METAMORPHIC AND SEDIMENTARY PETROLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basic Petrology	K1
CO-2	Know the macro and micro-structures	K2,
CO-3	Know various agents of sedimentary and metamorphic petrology	K3, K4, K5
CO-4	Understand the Petrographical characters of rocks	K1, K2, K3,
CO-5	Analyse Origin of various rock types	K4, K5

STRATIGRAPHY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand the basic of Historical Geology	K1
CO-2	Know the Important group of Stratigraphic systems	K2,
CO-3	Know various economic importance of various periods	K3, K4, K5
CO-4	Understand the various rocks of different periods from the formation of Earth	K1, K2, K3,
CO-5	Present is the Key to the Past – Critical Analyse	K4, K5

RAIN WATER HARVESTING

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand various hydrometeorological components	K1
CO-2	Know the Important of Rain Water Harvesting	K2,
CO-3	Know various temporary and Permanent RWH structures	K3, K4, K5
CO-4	Know the planning and designing of RWH	K1, K2, K3,
CO-5	Have an idea of creation of RWH structures in a needy places	K4, K5

REGIONAL GEOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand various Geological formations at Regional Scale	K1
CO-2	Know the Important Stratigraphic landforms	K2,
CO-3	Know various economic importance of regional geology	K3, K4, K5
CO-4	Know the mode of occurrence and uses of minerals	K1, K2, K3,
CO-5	To predict mineral formations in an unknown region.	K4, K5

APPLIED GEOLOGY AND ENGINEERING GEOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand basics Engineering Structures	K1
CO-2	Know the Importance of geological survey before constructing any civil structure.	K2,

CO-3	Know the basics of Geochemistry	K3, K4, K5
CO-4	Know the application of Geophysics in understanding Earth's formation	K1, K2, K3,
CO-5	To predict mineral formations in an unknown region through geophysical and Geochemical investigations.	K4, K5

HYDROGEOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand basics of Hydrological Cycle	K1
CO-2	Know the various hydrological parameters	K2,
CO-3	Know the various water bearing formations	K3, K4, K5
CO-4	Know the application of Geological methods in groundwater investigations	K1, K2, K3,
CO-5	To explore groundwater regime through various geophysical methods	K4, K5

ECONOMIC GEOLOGY AND MINERAL ECONOMICS

COURSE OUTCOMES

CO No.	Course Outcomes: On completion of this course, students will be able to	Level
CO-1	Understand basics of Economic minerals	K1
CO-2	Know the various process of mineral formation	K2,
CO-3	Know the various mode of mineral deposits	K3, K4, K5
CO-4	Know the physical and chemical characters of minerals	K1, K2, K3,
CO-5	To understand various uses of minerals	K4, K5

MATHEMATICS – UG
Allied Mathematics - Paper II

Course Outcomes:

After completing this course, the student will be able to

- CO1. Identify the different types of series and sum the given series
- CO2. Compute the roots of higher degree equations
- CO3. Evaluate the eigen values and eigen vectors of matrices
- CO4. Assess the expansion of trigonometric functions
- CO5. Formulate the relation between trigonometric and hyperbolic functions

ANALYTICAL GEOMETRY OF TWO AND THREE DIMENSIONS

Course Outcomes:

After completing this course, the student will be able to

- CO1. Determine the distance between the points, find the area of triangle given
- CO2. Acquire knowledge about tangent, normal, pole, polar, conjugate diameter of parabola, ellipse and hyperbola
- CO3. Acquire knowledge about sphere and solve relevant problems
- CO4. Analyze the concept of Cone and Cylinder

MATHEMATICAL STATISTICS – I

Course Outcomes:

After completing this course, the student will be able to

- CO1. Formulate mathematical expectations
- CO2. Analyze the probability distributions for discrete and continuous random variables
- CO3. Apply properties of distributions in solving real-world problems
- CO4. Determine the existence of correlation coefficients between two variables
- CO5. Interpret the strength of the correlation
- CO6. Use regression equations in order to predict the value of one variable given the value of another

CALCULUS

Course Outcomes:

After completing this course, the student will be able to

- CO1. Apply Leibnitz formula to find differential of product of functions
- CO2. Discuss about subtangent, subnormal and asymptotes
- CO3. Evaluate the radius of curvature in cartesian and polar co-ordinates
- CO4. Use Multiple Integral ideas to evaluate area, volume, center of gravity
- CO5. Evaluate integrals using Beta and Gamma function

MATHEMATICAL STATISTICS – II

Course Outcomes:

After completing this course, the student will be able to

- CO1. Discuss when particular procedures can be applied, and how to choose the most appropriate test
- CO2. Apply procedures and methods to a variety of real-world applications
- CO3. Use a variety of statistical inference methods to analyze data and draw meaningful conclusions.
- CO4. Infer conclusions from statistical data

QUANTITATIVE APTITUDE

Course Outcomes:

After completing this course, the student will be able to

- CO1. Compute problems based on ages and percentage
- CO2. Explain probability, permutation and combination
- CO3. Acquire knowledge about ratio and proportion – time and distance
- CO4. Apply Problems on trains in real life circumstances
- CO5. Discuss problems based on Bar Graph and Pie Chart

VECTOR CALCULUS, FOURIER SERIES, FOURIER TRANSFORMS AND Z-TRANSFORMS

Course Outcomes:

After completing this course, the student will be able to

CO1: identify Solenoidal and Irrotational vector.

CO2: evaluate multiple integrals using Gauss Divergence Theorem, Stokes' Theorem and Green's Theorem.

CO3: discuss Fourier Series on full-range, half-range and change of interval.

CO4: evaluate improper integrals using Fourier Transforms.

CO5: apply z-Transform to solve difference

DIFFERENTIAL EQUATIONS AND LAPLACE TRANSFORMS

Course Outcomes:

After completing this course, the student will be able to

CO1: identify and solve first order differential equations of higher degree.

CO2: predict the solution for linear differential equations with constant coefficients.

CO3: apply knowledge to evaluate partial differential equations.

CO4: evaluate problems using Laplace transform

CO5: discuss the concepts of inverse Laplace transform to solve differential equations.

ABSTRACT ALGEBRA

Course Outcomes:

After completing this course, the student will be able to

CO1. predict the geometric symmetry of groups.

CO2. compute Lagrange's theorem and analyze its consequences.

CO3. demonstrate the importance of First Isomorphism Theorem.

CO4. assess the properties and characteristics of Rings and Ideals.

CO5. compute the Division Algorithm for polynomial rings.

CO6. outline the importance of irreducibility test using the Eisenstein's Criterion.

REAL ANALYSIS – I

Course outcomes:

After completing the course, the students will be able to

- CO1. assess real valued functions, countability and equivalence
- CO2. identify sequences and the limits
- CO3. analyze convergence and divergence
- CO4. compute limit superior and limit inferior
- CO5. discuss the series and absolute convergence and apply tests for it and sum the series
- CO6. evaluate limit of functions on metric spaces

LINEAR ALGEBRA

Course Outcomes:

After completing this course, the student will be able to

- CO1. compute the Bases and Dimensions of a Vector Space.
- CO2. analyze the Linear transformation of matrices and its Linear functionals.
- CO3. demonstrate the importance of Cayley-Hamilton theorem.
- CO4. evaluate the orthonormal vectors using Gram-Schmidt orthogonalization process.
- CO5. outline the importance of Orthogonal projections and the Spectral Theorem.

REAL ANALYSIS – II

Course Outcomes:

After completing this course, the student will be able to

- CO1. identify open, connected and bounded sets and analyze them
- CO2. discuss compact metric spaces, continuous functions and uniform continuity
- CO3. discuss Riemann integral and its applications.
- CO4. evaluate improper integrals and apply Taylor's formula and L'Hospital rule
- CO5. demonstrate pointwise convergence and uniform convergence of sequence and series of functions.

STATICS

Course Outcomes:

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

- CO1: apply the concepts of Lami's Theorem.
- CO2: discuss parallel forces and find moment of forces.
- CO3: demonstrate Couples, Concurrent forces and friction.

CO4: evaluate the Centre of gravity of plane areas and solids.

CO5: explain the equilibrium of strings and chains.

PROGRAMMING WITH C: THEORY

Course Outcomes:

After completing this course, the student will be able to

CO1. identify the different types of tokens, expressions and the importance of control structures.

CO2. demonstrate the significance of managing input and output operations.

CO3. outline the effectiveness of Functions and Nesting of Functions.

CO4. explain the prominent programming features of structure and unions in computing real- life problems.

CO5. formulate Matrix operations using arrays.

PROGRAMMING WITH C++: THEORY

Course Outcomes:

After completing this course, the student will be able to

CO1. identify the different types of tokens, expressions and the importance of control structures.

CO2. demonstrate the significance of a scope resolution operator and manipulators.

CO3. outline the effectiveness of Functions and Function overloading.

CO4. explain the prominent programming features of classes and objects in computing real- life problems.

CO5. formulate Matrix objects using constructors.

CO6. evaluate different operator functions using operator overloading.

QUANTITATIVE METHODS

Course Outcomes:

After completing the course, the student will be able to

CO1: Compute HCF and LCM

CO2: Evaluate square roots and cube roots

CO3: Discuss Calendar problems and evaluate Logarithms

CO4: Apply Profit and Loss knowledge in real-life

CO5: Identify Odd Man Out and predict missing terms in Series

DYNAMICS

Course Outcomes:

After completing this course, the student will be able to

C01: identify and solve kinematics and rectilinear motion.

C02: evaluate work done and Simple Harmonic Motion.

C03: analyze the motion of Projectiles and their results.

C04: discuss the concepts of central orbit and impacts of two Spheres.

C05: determine Moment of Inertia for various geometrical shapes.

COMPLEX ANALYSIS

Course Outcome:

After completing this course, the student will be able to

CO1. demonstrate the basic concepts in complex analysis

CO2. explain the importance of analytic functions

CO3. discuss residues, singular points, and zeros of the function

CO4. evaluate definite and indefinite improper integrals.

DISCRETE MATHEMATICS

Course Outcomes:

After completing this course, the student will be able to

CO1. acquire knowledge logics and proposition and develop decision making skill.

CO2. associate relation and digraphs.

CO3. identify Boolean algebra and the relation.

CO4. analyze about partially ordered sets, lattices and their types.

CO5. discuss trees, Euler and Hamiltonian paths and circuits

THEORY OF NUMBERS

Course Outcomes:

After completing this course, the student will be able to

CO1. explain the concept of division algorithm

CO2. demonstrate the features of congruences

CO3. outline the importance of Fermat's and Wilson's theorem

CO4. analyze the Gauss reciprocity law

CO5. compute the greatest integer function

CO6. evaluate the Diophantine equations

OPERATIONS RESEARCH

Course outcomes:

The course will enable the students to;

CO1. formulate the LPP and apply methods to solve LPP.

CO2. discuss various methods to obtain the IBFS and optimal solutions of transportation, assignment problems.

CO3. discuss the methods of sequencing and game theory problems.

CO4. describe the inventory problems, various types of inventory models and network analysis for project planning using Project Evaluation and Review Technique (PERT) and Critical Path Method (CPM).

NUMERICAL METHODS

Course Outcome: This course will enable the students to:

CO1. analyze finite differences

CO2. interpolate for equal and unequal intervals

CO3. Compute numerical differentiation and numerical integration.

CO4. compute numerical solution of system of linear equations and check the accuracy of the solution

CO5. use various numerical methods to solve first order differential equations.

CO6. analyze the boundary value problems in Partial Differential Equations

GRAPH THEORY

Course Outcomes:

After completing the course, the students will be able to

CO1. identify the different models of a graph

CO2. formulate and solve real-life problems

CO3. compute the Eulerian trail and Hamiltonian path of a graph

CO4. evaluate the chromatic number

CO5. discuss the properties of directed graphs

ALLIED MATHEMATICS - PAPER I

Course Outcomes:

After completing this course, the student will be able to

- CO1. Use exponential, logarithmic and binomial series
- CO2. Compute approximations of roots for algebraic and transcendental equations
- CO3. Discuss Cayley-Hamilton theorem
- CO4. Demonstrate the techniques to solve polynomial equations of higher degree
- CO5. Discuss relation between trigonometric and hyperbolic functions
- CO6. Computing the problems for extreme values using derivatives
- CO7. Discuss Fourier series on full-range and half-range

ALLIED MATHEMATICS - PAPER II

Course Outcomes:

After completing this course, the student will be able to

- CO1. Compute solutions of differential equations with constant coefficients and variable coefficients
- CO2. Identify Clairaut's equation, Lagrange's equation
- CO3. Use Laplace transforms in solving differential equations
- CO4. Analyse the concept of solenoidal, irrotational vectors
- CO5. Use Green's, Stokes and Gauss theorems to solve multiple

MATHEMATICS – PG

REAL ANALYSIS – I

Course Outcomes:

After completing this course, the student will be able to

- CO1. Understand the elements of point set topology - Euclidean space, metric space, open, closed, bounded and compact sets and accumulation points
- CO2. Demonstrate covering theorems and its applications
- CO3. Identify bounded and total variation of functions and apply in curves and paths
- CO4. Discuss the Riemann-Stieltjes integrals, existence conditions, step functions and Riemann's condition and use these concepts to learn Fundamental theorem and mean value theorems
- CO5. Discuss infinite series and infinite products.
- CO6. Apply various tests to test the convergence of infinite series.
- CO7. Analyze Cesàro summability, Riemann's theorem and Riemann zeta functions

ORDINARY DIFFERENTIAL EQUATIONS

Course Outcomes:

After completing this course, the student will be able to

- CO1. Formulate mathematical models in the form of ordinary differential equations of real time situations arising in physical, chemical and biological disciplines
- CO2. Use various techniques to get solutions of higher order linear differential equations and system of linear differential equations
- CO3. Identify and compute the solution Legendre's equation
- CO4. Acquire knowledge about Bessel's function, Sturm - Liouville problem and Picard's theorem
- CO5. Analyze the concept of critical points and stability of nonlinear systems

CLASSICAL MECHANICS

Course Outcomes:

After completing this course, the student will be able to

CO1. Understand the basic concept of the mechanical system, generalized coordinates, work, energy and momentum

CO2. Explain the ideas of virtual work and d'Alembert's principle

CO3. Use d'Alembert's principle to derive Lagrange's equation of motion

CO4. Discuss the use of Routhian function

CO5. Distinguish the concept of the Hamilton equations of motion and the principle of Least Action

CO6. Discuss Hamilton's principle function and Hamilton Jacobi equation

CO7. Discuss about differential forms and generating functions in canonical transformation and to obtain some rather concrete procedures for solving problem

OPERATIONS RESEARCH

Course Outcomes:

After completing this course, the student will be able to

CO1. Demonstrate the limitations of simplex method and apply Gomory's cutting plane method to obtain an optimal integer solution

CO2. Identify the situations that generate a queuing problem

CO3. Analyze the variety of performance measures of a queuing system

CO4. Outline the distinction between analytical and simulation models

CO5. Apply Monte Carlo simulation to understand the advantages and disadvantages of simulation

CO6. Formulate recursive function based on Bellman's principle of optimality to get an optimal solution of any multi-stage decision problem

CO7. Explain the importance of Kuhn-Tucker conditions and use graphical method to solve a nonlinear programming model

FORMAL LANGUAGES AND AUTOMATA THEORY

Course Outcomes:

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

CO1. Formulate grammar which produces a language

CO2. Identify an automaton which accepts a given language

CO3. Formulate automaton from grammar

CO4. Critically analyze the relationship between grammar, language and automaton

ALGEBRA –II

Course Outcomes:

After completing this course, the student will be able to

CO1. Access knowledge about the modules.

CO2. Discuss extension fields and roots of polynomials.

CO3. Explain Galois theorem.

CO4. Analyze Wedderburn's theorem on finite division rings

REAL ANALYSIS –II

Course Outcomes:

After completing this course, the student will be able to

CO1. Understand the sequence of functions, pointwise and uniform Convergence

CO2. Discuss power series, Taylor's series generated by a function and sufficient condition of convergence

CO3. Understand orthogonal systems and use Fourier series with convergence and discuss approximation theorems

CO4. Demonstrate multivariable differential calculus, directional derivatives, total derivatives, Mean-Value theorem, and Taylor's formula

CO5. Use implicit functions and evaluate extrema of real valued functions of one and several Variables

PARTIAL DIFFERENTIAL EQUATIONS

Course Outcomes:

After completing this course, the student will be able to

CO1. Formulate first order Partial differential equations (PDE) from real life situations

CO2. Predict the compatibility first order equations

CO3. Apply Charpit's method and its canonical forms.

CO4. Evaluate problems involving elliptic, parabolic and hyperbolic PDE's in Cartesian and cylindrical coordinates.

CO5. Analyse boundary value problems using the methods of images and Green's functions.

TOPOLOGY

Course Outcomes:

After completing this course, the student will be able to

CO1. Analyze basis and different types of topological space

CO2. Compute limit points of a subset of a topological space

CO3. Apply the countability and separation axioms

CO4. Discuss the Tietze extension theorem and Tychonoff theorem

CO5. Explain Metrization of spaces

CO6. Provide information on compactifying of topological spaces.

NUMBER THEORY AND CRYPTOGRAPHY

Course Outcomes:

After completing this course, the student will be able to

CO1. Analyze the time requirement for performing fundamental operations between numbers on various number systems

CO2. Demonstrate the role of finite fields in Cryptography

CO3. Create cipher text securely from a plain text, and the deciphering process using simple and public key cryptographic techniques such as RSA

CO4. Analyze and use the discrete log technique such as Diffie-Hellman

GRAPH THEORY

Course Outcomes:

After completing this course, the student will be able to

CO1. Investigate problems, generate and analyze information graphically.

CO2. Apply knowledge about matching, coloring, domination number in real life situations.

CO3. Use graph theoretical techniques in applied areas like computer science, sociology, data-mining.

CO4. Demonstrate and develop graphical models for Social and Physical sciences

QUANTITATIVE TECHNIQUES

Course Outcomes:

CO1. Solve problems on ages and percentage

CO2. Compute profit and loss, simple interest and compound interest

CO3. Gain knowledge about Pipes and Cisterns – Time and Work

CO4. Solve problems arising in real life situations

CO5. Interpret data based on Bar Graph and Pie Chart

FUNCTIONAL ANALYSIS

Course Outcomes:

After completing this course, the student will be able to

CO5. analyze the continuity of linear maps on normed spaces

CO6. explain Geometric nature and analytic character of Hahn-Banach theorem

CO7. demonstrate the salient features of Closed Graph and Open Mapping Theorems

CO8. analyze the concept of weak convergence and geometry of normed space

CO9. compute orthonormal vectors using Gram-Schmidt Orthogonalization process.

CO10. discuss the implications of Fourier-Plancherel Transform

MEASURE THEORY AND INTEGRATION

Course Outcomes:

After completing this course, the student will be able to

CO1. explain the measure on the real line

CO2. demonstrate the Lebesgue Measurability

CO3. compute the Riemann and Lebesgue Integrals

CO4. analyze the completeness of $L_p(m)$

CO5. evaluate the product measure.

CO6. evaluate the integral with respect to product measure using Fubini's theorem.

CALCULUS OF VARIATIONS AND INTEGRAL EQUATIONS

Course Outcome:

After completing this course, the student will be able to

CO1. discuss functional of variational problems with fixed boundaries in real time situations

CO2. demonstrate various types for the extremum of the functional in fixed and moving boundaries.

CO3. analyze the sufficient conditions for an extremum of the functional

CO4. explain the types of Integral equations and its kernels

CO5. apply Green's function to solve integral equations.

PROBABILITY THEORY

Course Outcomes:

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

CO1: compute probability on finite sample spaces and apply Bayes theorem

CO2: compute functions of random variables

CO3: evaluate moments and analyse joint behavior of multiple random variables

CO4: identify discrete and continuous distributions

CO5: analyze convergence properties of sequence of random variables.

DIFFERENCE EQUATIONS

Course Outcomes:

After completing this course, the student will be able to

- CO1. discuss the difference operator
- CO2. apply generating functions in solving the difference equations
- CO3. identify the order of a difference equation
- CO4. demonstrate the z-transform
- CO5. identify the initial value problem and solve them
- CO6. assess the stability of linear and nonlinear difference equations
- CO7. test the oscillatory behavior of difference equations using Riccati transformation

FUNCTIONAL MATHEMATICS

Course Outcomes:

After completing the course, the students will be able to

- CO1: Evaluate problems on Surds and Indices.
- CO2: Discuss True Discount and Banker's Discount.
- CO3: Select Odd Man Out and predict missing term in a series
- CO4: Use Problems on Mixture, Heights and Distances in real life situations
- CO5: Compute Permutation and Combination
- CO6: Apply probability in real life situations

COMPLEX ANALYSIS

Course Outcomes:

After completing the course, the student will be able to

- CO1. compare fundamental theorems on complex integration.
- CO2. evaluate the index of a point and discuss Cauchy integral formula
- CO3. discuss the generalized versions of Cauchy's theorem.
- CO4. evaluate definite integrals using calculus of residues.
- CO5. discuss the properties of harmonic functions and Gamma functions
- CO6. demonstrate the relationship between Zeta function and Gamma function

DIFFERENTIAL GEOMETRY

Course Outcomes:

After completing this course, the student will be able to

CO1: explain curvature and surfaces.

CO2: discuss the surface of revolution and family of curves.

CO3: demonstrate Existence theorem.

CO4: discuss Geodesics, Gauss-Bonnet Theorem and Principal curvatures.

CO5: analyze the fundamental equations of surface theory

STOCHASTIC PROCESSES

Course Outcomes:

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

CO1: assess stochastic processes and describe Markov chain and its transition matrix

CO2: identify states of Markov chain and compute higher transition and equilibrium probabilities

CO3: discuss Poisson process and Markov Process

CO4: analyze conditional limit laws in branching process

CO5: apply the concepts of Stochastic processes in queueing theory

FLUID DYNAMICS

Course Outcomes:

After completing this course, the student will be able to:

CO1. discuss various fluids, equations of continuity and vorticity vector.

CO2. explain the notions of fluid pressure and derive Euler's equations of motion.

CO3. apply the concepts of sources, sinks and doublets

CO4. use the theorem of Blasius to compute the components of force and couple

CO5. apply Navier-Stokes equations to determine the pressure of a viscous fluid in physical problems.

PROGRAMMING WITH PYTHON: THEORY

Course Outcomes:

After completing this course, the student will be able to

- CO1. define identifiers, keywords, operators and expressions
- CO2. recognize different forms of function arguments
- CO3. access individual characters in a string and apply basic string operations
- CO4. create and manipulate items in lists
- CO5. demonstrate the use of built-in functions to navigate the file system
- CO6. understand and create objects
- CO7. understand the relation between dictionaries and tuples

PROGRAMMING WITH JAVA: THEORY

Course Outcomes:

After completing this course, the student will be able to

- CO1. define identifiers, keywords, operators and expressions
- CO2. recognize different forms of function arguments
- CO3. demonstrate the significance of operators and branching technique
- CO4. outline the salient features of inheritance
- CO5. create graphics, web designing and applet programming.

ALGEBRA –I

Course Outcomes:

After completing this course, the student will be able to

- CO1. Apply Sylow's theorems identify finite simple groups.
- CO2. Evaluate number Sylow subgroups
- CO3. Discuss Jordan form of a linear transformation.
- CO4. Find the trace and transpose of linear transformations of vector spaces over a field F .

REAL ANALYSIS – I

Course Outcomes:

After completing this course, the student will be able to

CO1. Understand the elements of point set topology - Euclidean space, metric space, open, closed, bounded and compact sets and accumulation points

CO2. Demonstrate covering theorems and its applications

CO3. Identify bounded and total variation of functions and apply in curves and paths

CO4. Discuss the Riemann-Stieltjes integrals, existence conditions, step functions and Riemann's condition and use these concepts to learn Fundamental theorem and mean value theorems

CO5. Discuss infinite series and infinite products.

CO6. Apply various tests to test the convergence of infinite series.

CO7. Analyze Cesàro summability, Riemann's theorem and Riemann zeta functions

ORDINARY DIFFERENTIAL EQUATIONS

Course Outcomes:

After completing this course, the student will be able to

CO1. Formulate mathematical models in the form of ordinary differential equations of real time situations arising in physical, chemical and biological disciplines

CO2. Use various techniques to get solutions of higher order linear differential equations and system of linear differential equations

CO3. Identify and compute the solution Legendre's equation

CO4. Acquire knowledge about Bessel's function, Sturm - Liouville problem and Picard's theorem

CO5. Analyze the concept of critical points and stability of nonlinear systems

CLASSICAL MECHANICS

Course Outcomes:

After completing this course, the student will be able to

CO1. Understand the basic concept of the mechanical system, generalized coordinates, work, energy and momentum

CO2. Explain the ideas of virtual work and d'Alembert's principle

CO3. Use d'Alembert's principle to derive Lagrange's equation of motion

CO4. Discuss the use of Routhian function

CO5. Distinguish the concept of the Hamilton equations of motion and the principle of Least Action

CO6. Discuss Hamilton's principle function and Hamilton Jacobi equation

CO7. Discuss about differential forms and generating functions in canonical transformation and to obtain some rather concrete procedures for solving problem

OPERATIONS RESEARCH

Course Outcomes:

After completing this course, the student will be able to

CO1. Demonstrate the limitations of simplex method and apply Gomory's cutting plane method to obtain an optimal integer solution

CO2. Identify the situations that generate a queuing problem

CO3. Analyze the variety of performance measures of a queuing system

CO4. Outline the distinction between analytical and simulation models

CO5. Apply Monte Carlo simulation to understand the advantages and disadvantages of simulation

CO6. Formulate recursive function based on Bellman's principle of optimality to get an optimal solution of any multi-stage decision problem

CO7. Explain the importance of Kuhn-Tucker conditions and use graphical method to solve a nonlinear programming model

FORMAL LANGUAGES AND AUTOMATA THEORY

Course Outcomes:

- After completion of the course, the students will be able to
- CO1. Formulate grammar which produces a language
 - CO2. Identify an automaton which accepts a given language
 - CO3. Formulate automaton from grammar
 - CO4. Critically analyze the relationship between grammar, language and automaton

ALGEBRA –II

Course Outcomes:

- After completing this course, the student will be able to
- CO1. Access knowledge about the modules.
 - CO2. Discuss extension fields and roots of polynomials.
 - CO3. Explain Galois theorem.
 - CO4. Analyze Wedderburn's theorem on finite division rings

REAL ANALYSIS –II

Course Outcomes:

- After completing this course, the student will be able to
- CO1. Understand the sequence of functions, pointwise and uniform Convergence
 - CO2. Discuss power series, Taylor's series generated by a function and sufficient condition of convergence
 - CO3. Understand orthogonal systems and use Fourier series with convergence and discuss approximation theorems
 - CO4. Demonstrate multivariable differential calculus, directional derivatives, total derivatives, Mean-Value theorem, and Taylor's formula
 - CO5. Use implicit functions and evaluate extrema of real valued functions of one and several Variables

PARTIAL DIFFERENTIAL EQUATIONS

Course Outcomes:

After completing this course, the student will be able to

CO1. Formulate first order Partial differential equations (PDE) from real life situations

CO2. Predict the compatibility first order equations

CO3. Apply Charpit's method and its canonical forms.

CO4. Evaluate problems involving elliptic, parabolic and hyperbolic PDE's in Cartesian and cylindrical coordinates.

CO5. Analyse boundary value problems using the methods of images and Green's functions.

TOPOLOGY

Course Outcomes:

After completing this course, the student will be able to

CO1. Analyze basis and different types of topological space

CO2. Compute limit points of a subset of a topological space

CO3. Apply the countability and separation axioms

CO4. Discuss the Tietze extension theorem and Tychonoff theorem

CO5. Explain Metrization of spaces

CO6. Provide information on compactifying of topological spaces.

NUMBER THEORY AND CRYPTOGRAPHY

Course Outcomes:

After completing this course, the student will be able to

CO1. Analyze the time requirement for performing fundamental operations between numbers on various number systems

CO2. Demonstrate the role of finite fields in Cryptography

CO3. Create cipher text securely from a plain text, and the deciphering process using simple and public key cryptographic techniques such as RSA

CO4. Analyze and use the discrete log technique such as Diffie-Hellman

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CO4. outline the salient features of inheritance

CO5. create graphics, web designing and applet programming.

Computer Science
BCA (Hearing Impaired)
DIGITAL LOGIC FUNDAMENTALS

COURSE OUTCOMES :

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

1. Understand digital logic and solve given problems. (K2,k3,k6)
2. Analyze and design the combinational logic circuits. (K4,K6)
3. Develop sequential circuits using flip flops. (K4)

PROGRAMMING IN C

COURSE OUTCOMES :

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

1. Understand the fundamentals of programming constructs. (K2)
 2. Apply various operations on functions, arrays, pointers and structures in C programs. (K3)
- Construct C programs to solve simple problems. (K4)

OFFICE AUTOMATION & C PROGRAMMING LAB

COURSE OUTCOMES:

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

1. Solve common business problems using MS Office. (K3,K6)
 2. Solve real time problems using C programming. (K3,K6)
- Explain their ideas and views through power point presentation (K5)

STATISTICAL METHODS-I

COURSE OUTCOMES :

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

1. Apply central tendency, dispersion and location to analyze any statistical data. (K3,K4)
2. Evaluate discrete and continuous probability distributions to various business problems. (K5)
3. Understand the data and formulate the statistical analysis of data. (K2,K6)

SPSS TOOL LAB

COURSE OUTCOMES :

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

1. Familiarize with SPSS environment and software. (K2)
2. Perform descriptive and inferential statistics. (K4)
3. Test the hypothesis by accomplish statistical analysis. (K6)

OBJECT ORIENTED PROGRAMMING IN C++

COURSE OUTCOMES :

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

1. Understand the features of C++ supporting object oriented programming. (K2)
2. Apply object oriented programming concepts. (K3)
3. Evaluate how to produce object-oriented software using C++. (K5)

OBJECT ORIENTED PROGRAMMING IN C++ LAB

COURSE OUTCOMES :

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

1. Understand the features of C++ supporting object oriented programming. (K2)
2. Build programs using fundamental concepts of C++. (K3)
3. Apply the object-oriented concepts. (K3)

STATISTICAL METHODS – II

COURSE OUTCOMES :

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

1. Demonstrate knowledge of probability and standard statistical distributions. (K2)
2. Perform complex data management and analysis as well as analyze data using sampling techniques. (K3)
3. Apply linear, nonlinear and generalized linear models. (K3)

SPSS TOOL LAB

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Understand how to integrate information and build models in SPSS. (K1)
2. Evaluate descriptive analysis with SPSS. (K5)
3. Apply statistical analysis that can test hypotheses. (K3)

DATA STRUCTURES

COURSE OUTCOMES :

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

1. Understand various linear and nonlinear data structures. (K2)
2. Analyze various operations like insertion, deletion, searching and traversing. (K4)
3. Evaluate appropriate algorithm for a given problem. (K5)

PROGRAMMING IN JAVA

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Understand the structure and model of the Java programming language. (K2)
2. Analyse different techniques like interface, package, thread and Applet through simple programs. (K4)
3. Develop interactive programs using java standard library API and Applet. (K6)

ADVANCE EXCEL

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to

1. Apply advanced formulas to lay data in readiness for analysis. (K3)
2. Analyze the advanced techniques for report visualizations. (K4)
3. Understand and apply basic principles of laying out Excel models for decision making. (K2)

PROGRAMMING IN JAVA LAB

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Use java programming components to solve simple programs. (K3)
2. Design applications using thread and applet. (K5)
3. Create java code, compile and able to handle errors. (K6)

FINANCIAL ACCOUNTING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Understand the internal control and the effects of the regulatory environment on financial reporting.(K2)
2. Evaluate business processes and practices, such as problem analysis and decision making. (K5)
3. Apply knowledge of federal tax laws and procedures to individuals and businesses. (K3)

PYTHON PROGRAMMING

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to

1. Analyse the basic principles of python programming language. (K3)
2. Integrate object oriented concepts in python. (K6)
3. Demonstrate GUI applications.(K3)

OPERATING SYSTEM

COURSE OUTCOMES:

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

1. Analyze the structure of OS and basic architectural components involved in OS design (K4)
2. Understand the process management policies and scheduling of processes by CPU. (K2)
3. Analyzedifferent problems related to memory management techniques, process schedulingand files.(K3,K5)

DATA COMMUNICATION AND NETWORKING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Remember the functions of Application layer and Presentation layer paradigms and Protocols.(K1)
2. Understand the functions of each layer in OSI and TCP/IP model.(K2)
3. Evaluate the functions of Application layer and Presentation layer paradigms and Protocols.(K5)

PYTHON PROGRAMMING LAB

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to:

1. Implement basic concepts and control structures in python programming. (K3)
2. Develop python programs by utilizing built-in data structures and functions. (K6)
3. Design applications using python. (K6)

COST AND MANAGEMENT ACCOUNTING

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to

1. Evaluate the role of accounting information and its limitations. (K5)
2. Analyze the reasons for the difference between cash book and pass book balances. (K4)
3. Understand the useful life and value of depreciable asset. (K2)

INTERNET AND ITS APPLICATIONS

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Create HTML documents and enhance them with browser extensions. (K1)
2. Analyze a web page and identify its elements and attributes. (K4)
3. Understand how to search effectively for information on the Internet, including search options, strategies. (K2)

MULTIMEDIA SOFTWARE

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to

1. Understand various multimedia systems applicable in real time.(K2)
2. Create the interactive multimedia software.(K6)
3. Evaluate and determine hardware and software required for multimedia use.(K5)

VB.NET PROGRAMMING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Understand .net Framework, loops, exception handling, and develop windows application in VB.Net. (K2,K3)
2. Create user interface in vb.net using forms and controls. (K6)
3. Explain file processing and create data base with ADO.NET to manipulate the database. (K5,K6)

VB.NET PROGRAMMING LAB

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Understand VB.NET environment and create simple programs.(K2,K6)
2. Analyse the problems and its structure to provide suitable solutions using VB.NET. (K4)
3. Create windows applications using forms and controls. (K6)

MOBILE APPLICATION DEVELOPMENT

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Understand Android platform, framework, architecture and features. (K2)
2. Demonstrate Android programming concepts. (K3)
3. Design user interface and develop activity for Android App. (K5)

WEB PROGRAMMING

COURSE OUTCOMES:

Upon Completion of the course, the students will be able to

1. Choose, understand, and analyse any suitable real time web application. (K1,k2,K3)
2. Develop solution to simple to complex problems using client/ server side programming, JSP and Servlet. (K2)
3. Develop web based applications using suitable technologies. (K4,K6)

PROGRAMMING IN PHP & MYSQL

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Understand and analyze the basics, arrays and functions in PHP programming. (K2,K3)
2. Develop PHP scripts to handle HTML forms, create cookies and for session management. (K4,K6)
3. Deploy web pages using PHP and MySQL. (K6)

DATA MINING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to :

1. Understand data mining techniques, methods and tools. (K2)
2. Apply appropriate data mining algorithms to solve real world problems. (K3,K6)
3. Analyze the output and explore the hidden patterns present in the data by applying suitable algorithm. (K3,K6)

PROGRAMMING IN PHP & MYSQL LAB

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Build PHP code using basic syntax, control and looping structures and PHP library functions. (K3,K6)
2. Develop PHP scripts to handle HTML forms. (K6)
3. Implement PHP script to create cookies and for session maintenance. (K6)

RELATIONAL DATABASE MANAGEMENT

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to

1. Create a RDBMS for a real life application, with constraints and keys using SQL.(K6)
2. Analyse design of a database schema and apply normalization to design an optimal database.(K4)
3. Explain transaction processing, concurrency control mechanisms and how data is stored . (K2,K5)

CLOUD COMPUTING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Outline and analyze the cloud architecture, its services and virtualization in cloud computing. (K2,K4)
2. Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing. (K4)
3. Illustrate and analyze various cloud programming models and asses the security issues. (K2,K4,K5)

SOFT COMPUTING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Understand and analyse different soft computing methodologies like Fuzzy systems and Neural Networks. (K2,K4)
2. Adapt specific soft computing technique and apply optimization to solve a problem. (K3,K6)
3. Analyse genetic algorithm and its applications. (K4)

PRINCIPLES OF INFORMATION SECURITY

COURSE OUTCOMES :

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

1. Apply basic knowledge of information security/assurance within the organization. (K3)
2. Understanding of physical, information security concepts and policy development. (K2,K6)
3. Analyze and explain various authentication methods and cryptography techniques.(K2,K4)

DEAF CULTURE, HISTORY, IDENTITY AND SIGN LANGUAGE

COURSE OUTCOMES :

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

1. Understand the role of sign languages and deaf culture in the formation of deaf identity. (K2)
2. Analyze the role of technology in sign language telecommunication producing signlanguage information and materials. (K4)
3. Evaluate the rights and laws for deaf people in terms of their deafness. (K5)

ENTREPRENEURSHIP DEVELOPMENT

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Analyse the business environment in order to identify business opportunities. (K4)
2. Evaluate the effectiveness of different entrepreneurial strategies. (K5)
3. Create their own business plan. (K6)

COMPUTER INSTALLATION AND SERVICING

COURSE OUTCOMES :

Upon Completion of the course, the students will be able to:

1. Apply information technology to a variety of systems including financial, production and manufacturing Systems. (K3)
2. Analyze system requirements for a variety of computer applications. (K4)
3. Understand the present technical information in oral and written reports. (K2)

MASTER OF COMPUTER APPLICATIONS (MCA)**DATA STRUCTURES****COURSE OUTCOMES:**

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

S. No	OUTCOMES	Cognitive Level
	Upon completion of the course, the students will be able to	
CO1	Evaluate the efficiency of an algorithm and identify the usage of different data structures.	K1 – K5
CO2	Classify and Select the linear and nonlinear data structures for solving realworld problems.	K1 – K4
CO3	Explain the representation of linked lists, stacks, queues, trees, and graphs in memory,	K1, K2
CO4	Know when and where to apply iterative and recursive algorithms.	K1 – K5
CO5	Demonstrate the concept of advanced data structures like Heap, Hashing, Special Trees, etc.	K2

FUNDAMENTALS OF DIGITAL LOGIC DESIGN**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Figure out simplification of complex Boolean functions.	K3/K4
2	Build digital circuits using combinational logical Cs and PLDs.	K1/K2/K3
3	Understand the characteristics of various Flip-Flops.	K1/K2/K3
4	Construct combinational and sequential circuit for adder, encoder, decoder	K2

5	Design digital circuits with combinational and sequential components.	K1/K3/K6
6	Use HDL to build digital systems.	K3/K4
7	Analyze digital system designs.	K2/K3/K4

PROGRAMMING IN PYTHON

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Understand the basics of python programming	K2
2	Analyze the application of Strings, Tuples, List, Sets for data processing	K3/K4
3	Implement File Handling and Data base concepts	K3/K6
4	Build Graphical and Networking applications	K2/K3/K6
5	Develop code using python to solve real time problems	K2/K3/K6

JAVA LAB

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Understand the fundamentals of java and data structure concepts.	K2
2	Construct different data structures using array and linked lists.	K3
3	Implement Linear search, Binary search, Binary search tree and graph using java	K2/K3
4	Formulate different tree traversals with recursive and non-recursive functions.	K6

PRACTICAL – II: PYTHON LAB**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Develop Simple Python programs.	K3/K6
2	Apply various data structures using Python.	K2/K3
3	Demonstrate file processing using Python.	K3
4	Utilize OOPS concepts using Python.	K3
5	Develop database connection with Python and MYSQL.	K3/K6

MULTIMEDIA SYSTEM DESIGN**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Describe fundamental concepts in multimedia	K2
2	Handle and differentiate the file formats	K2, K3
3	Observe in depth knowledge in compression, decompression techniques	K1, K2
4	Construct multimedia databases	K2, K3
5	Develop Multimedia systems and its applications	K1,K2, K3

SOFTWARE ENGINEERING**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Identify the key activities in managing a software project. Compare different process models.	K1/K2
2	Illustrate the concepts of requirements engineering and Analysis Modeling.	K2/ K3
3	Apply systematic procedure for software design and deployment.	K1/ K2/K3
4	Compare and contrast the various testing and maintenance.	K3/K4
5	Analyze the project schedule, project cost and the effort required to complete the project	K1,K2, K3

OPERATING SYSTEMS

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Interpret the operating system components and its services	K1/K2
2	Implement the algorithms in process management and solving the issues of IPC	K3/K4/K5
3	Demonstrate the mapping between the physical memory and virtual memory	K1/K2/K3
4	Summarize and sketch the file handling concepts in OS perspective	K1/K2/K3
5	Understand the operating system components and services with the recent OS	K1/K2

EDES COURSE I: RESOURCE MANAGEMENT TECHNIQUES

COURSE OUTCOMES:

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

S.No	OUTCOMES	COGNITIVE LEVEL
1	To learn about the overview faces and limitations of operations research.	Evaluation
2	To formulate the linear programming problem and to find solutions by different methods.	Application
3	To optimize the transportation cost and to find the optimal assignments using Hungarian method.	Application
4	To find the optimal sequence of jobs to machines in sequencing problem.	Application
5	To study the optimal project duration in network analysis	Knowledge

COMPUTER ORIENTED STATISTICAL METHODS**COURSE OUTCOMES:**

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

S.No	OUTCOMES	COGNITIVE LEVEL
1	To learn about the basic concepts of probability, random variables and expectations.	Evaluation
2	To know about the different discrete and continuous distributions.	Knowledge
3	To find the correlation and to fit the linear and non-linear curves.	Application
4	To apply the parametric test and to interpret the results of Z test, t test, F test and ANOVA.	Application
5	To study the about ANOVA and time series analysis.	Application

EDES COURSE I: MOBILE COMMERCE**COURSE OUTCOMES :**

Upon Completion of this course, the students should be able to:		Cognitive I
1	Understand the need to design E-Commerce and M-Commerce applications.	K1, K2 &K
2	Apply their knowledge to select their mobile devices and service providers.	K1, K2&K
3	Analyze various mobile payment models.	K4 &K5
4	Illustrate and Analyze various M-Commerce technologies.	K3&K6
5	Apply and assess various Mobile security mechanisms.	K3 &K5

SOFT SKILL - I : ESSENTIALS OF LANGUAGE AND COMMUNICATION**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Develop their fluency in their LSRW communication	K3
2	Know how to do conversation in GD, Telephone by following etiquettes	K1/K2
3	Understand various forms of letter correspondence	K1/K2

DESIGN AND ANALYSIS OF ALGORITHMS**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Outline the general concepts of algorithms and its complexity	K1/K2/K3/K4
2	Choose suitable techniques to solve real time problems	K3/K4/K5
3	Evaluate the algorithmic complexity that best suits for sorting and searching techniques.	K3/K4/K5
4	Illustrate different hashing techniques	K1/K2/K3/K4

ARTIFICIAL INTELLIGENCE**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Use appropriate search algorithms for any AI problem.	K1/K2
2	Represent a problem using Search Strategies.	K2/K3
3	Provide the suitable agent strategy to solve a given problem.	K2/K3
4	Design software agents to solve a problem.	K2/K3/K6

CRYPTOGRAPHY AND NETWORK SECURITY**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Examine and compare various cryptographic techniques	K2/K3/K4/K5
2	Design secure applications	K6
3	Inject secure coding in the developed applications	K1/K2/K6
4	Observe different key management techniques for security	K2/K3

PRACTICAL – IV: CRYPTOGRAPHY LAB**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Compare various cryptographic techniques with coding complexity.	K3/K4
2	Design and secure applications in real life environment.	K6
3	Construct secure coding in the developed applications.	K6

PRACTICAL – IV: WEB TECHNOLOGY LAB**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Design and develop both Static and Dynamic web site using HTML, Cascading Styles Sheets, JavaScript, Servlets and XML.	K3/K6
2	Deploy their own web site on internet.	K3/K6
3	Show adequate knowledge about web technology terminologies.	K2/K3

MOBILE AND WIRELESS COMMUNICATION**COURSE OUTCOMES :**

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

S.No	OUTCOMES	Cognitive Level
1	Clarify the fundamental theories of Wireless transmission	K2
2	Generalize the techniques of GSM,GPRS and WAP protocols	K1/K2
3	Interpret the concepts of roaming and messaging in wireless and mobile networks	K1/K2
4	Analyzesecurity issues in mobile phones and wireless networks	K1/K2/K3

DIGITAL IMAGE PROCESSING**COURSE OUTCOMES :**

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

S.No	OUTCOMES	Cognitive Level
1	Understand the basics and fundamentals of digital image processing, such as A simple image formation model-image sampling and quantization	K1/K2
2	Analyze the basics of image compression models- error-free compression, restoration, color image processing	K1/K2/K3
3	Compare the various image restoration and reconstruction techniques for different types of images	K1/K2/K4

ELECTIVE II:MOBILE APPLICATIONS DEVELOPMENT**COURSE OUTCOMES :**

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

S.No	OUTCOMES	Cognitive Level
1	Infer various concepts of mobile programming that make it unique for programming from other platforms.	K1/K2

2	Discuss the requirements for mobile applications	K1/K2
3	Generate mobile application design	K6
4	Implement the design using Objective C and IOS	K5/K6

EDES COURSE II: WEB TECHNOLOGY

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Construct and visually format Tables and Forms using HTML, XML and CSS.	K3
2	Design Server Side application using Servlets	K3/K6
3	Develop Client-Side application using JavaScript.	K3/K6

SOFTSKILL II : EXECUTIVE MANAGERIAL SKILLS

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Understand the concept of stress management	K1/K2
2	Understand conflict management	K1/K2
3	Understand Time management	K1/K2
4	Understand empowerment	K1/K2

MACHINE LEARNING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Describe Machine Learning concepts	K1 /K2
2	Explain and apply Decision Tree Learning	K2/ K3 / K5
3	Determine perceptron Learning and Convolution Network	K4 / K5
4	Illustrate and apply Clustering Models	K3 /K6
5	Explain and relate reinforcement learning	K5

DATA MINING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive level
1	Summarize the basic concepts and techniques of Data Mining	K2
2	Choose and demonstrate different preprocessing techniques for any raw data	K2/K5
3	Discover interesting patterns from the data to solve problems and make prediction of outcomes.	K4/K5
4	Design a hypothesis with respect to the analysis to provide solution for a given problem	K4/K5/K6
5	Develop a model using suitable data mining techniques to solve any real world simple to complex problems.	K3/K4/K5/K6

SOFT COMPUTING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive level
1	Study the structure of neuron – biological background – traditional optimization and search techniques – Genetic basic concepts	K1/K2
2	Articulate different types of associative neural networks paradigm	K1/K2
3	Comprehend the fuzziness concepts intricate in different systems	K2/K3
4	Identify and select proper soft computing techniques to find solution for a taken problem	K2/K3/K5
5	Analyze genetic algorithm and solve problems using genetic approach	K4/K6

ADVANCED DATABASE MANAGEMENT SYSTEMS

OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Understand the concepts of Advance Database Management Systems.	K1/K2
2	Analyze and apply data in various statistical approaches	K3/K4
3	Assess the role of distributed processing	K4//K5/K6
4	Observe knowledge in SQL, alternative data base models	K1/K2
5	Analyze and compose block chain techniques and properties	K2/K3/K6

CLOUD COMPUTING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Demonstrate the different taxonomy of parallel and distributed computing	K2/K3
2	Articulate the main concepts, key technologies, strengths and limitations of Virtualization and Cloud computing	K1/K2
3	Compare and contrast the delivery and deployment models of cloud computing	K3/K4
4	Analyze the core issues of cloud computing such as energy efficiency, security, privacy and interoperability	K3/K4
5	Infer the cloud file systems and their applications in industry. Identify problems, explain, analyze, and evaluate various cloud computing solutions	K2/K3/K4

INTERNET OF THINGS

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Illustrate basic frame work of IOT, devices and IOT enabling technologies.	K1/K2
2	Attain the ideas on programming for IoT and its communications with devices.	K1/K2/K3
3	Identify the various services related to mobile and IOT and the business process in IOT.	K3
4	Apply Different models of IoT architecture	K3
5	Develop an automation with IoT and identify its limitations	K1/K6

CYBER SECURITY

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive level
1	Exhibit knowledge on cybercrime issues and conquer techniques	K1
2	Explore their knowledge in the field of IT and software.	K1/K2/K3
3	Design security models and demonstrate their technical skills and understandings in the areas of forensics, cybercrime organizations, IT, Banks, government and private sectors.	K3/K4/K5/K6
4	Perceive awareness on hacking, phishing, information theft and able to choose their career in the relevant field.	K2/K5

BIG DATA ANALYTICS USING R

COURSE OUTCOMES:

At the end of this course students will be able to Learn

S.No	OUTCOMES	Cognitive Level
1	Compile, Revise and evaluate the Big Data the concepts of Big Data Analytics	K1/K2
2	Understand the syntax of R and its usagePre-process raw data for	K1/K2

	further analysis	
3	Apply and evaluate exploratory data analytics using R	K3/K4/K5
4	Create insightful visualizations to identify patterns of data	K3/K4
5	Execute statistical estimates to make predictions from data	K4/K5

SOFTWARE TESTING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Outline basics of testing strategies and its applications.	K1/K2
2	Analyze and discover the flow in which the testing strategies to be applied to the product development.	K3/K4
3	Demonstrate the testing strategies to be adapted for different platforms.	K2/K3
4	Evaluate the testing tools best suited for automating the testing process	K3/K4/K5
5	Assess the performance levels for ensuring the Quality Management.	K5

COMPUTER VISION

OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Describe Image Processing and Edge Detection Techniques	K2
2	Illustrate Image Formation Processing	K3/K2
3	Determine Feature extraction methods	K2/K3/K4/K5
4	Analyze Image Segmentation methods	K2/K4
5	Construct and evaluate cluster analysis models	K3/K5/K6

MACHINE LEARNING LAB**COURSE OUTCOME:**

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

S.No	OUTCOMES	Cognitive Level
1	Classify the learning models	K2/K3
2	Diagnose and assess the programs	K4/K5
3	Apply and analyse machine learning solutions	K3/K4

‘R’ PROGRAMMING LAB**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Understand fundamental concepts of R	K1/K2
2	Apply suitable R packages for different data cleaning and explore the data	K3/K4
3	Analyse a data set and produce the findings	K4/K5/K6

DIGITAL UPSKILLING AND WORKFORCE RESKILLING SKILLS**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	A well-trained individual with deep Corporate Knowledge will be created	K6
2	An enhanced Acumen with well poised state of mind will be the essence of skill aimed and developed	K3
3	Excellence in Service will be an essential part of the professional	K1
4	Reflexive yet diligent actions to all sorts of official and sundry Matters would become a habitual trait	K2/k3

PROJECT AND VIVA-VOCE**COURSE OUTCOME:**

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

S.No	OUTCOMES	Cognitive Level
1	Analyse and evaluate a given principle and data	K4/k5
2	Research, discover various features in that area and present new concepts and methodologies which offer new prospects	K4/k6
3	A Trailblazing will be accomplished by developing new standards and revealing new methodologies.	K6

ELECTIVE-VI: DEEP LEARNING**OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Understand the basics concepts of deep learning.	K1/k2
2	Obtain knowledge on various deep learning algorithms.	K2/K3
3	Analyze and evaluate CNN and RNN to model for real world applications.	K2/K3
4	Understand the various challenges involved in designing deep learning algorithms for varied applications	K2/K3/K6

SERVICE ORIENTED ARCHITECTURE**COURSE OUTCOMES:**

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

S.No	OUTCOMES	Cognitive Level
1	Understand the basics of SOA	K2/k3
2	Apply SOA techniques to suitable domain	K2/K3
4	Compare and evaluate best strategies and practices of SOA.	K3/K4/K5

PARALLEL COMPUTING

COURSE OUTCOMES:

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

S.No	OUTCOMES	Cognitive Level
1	Understand fundamental concepts of parallel computing	K2/k3
2	Design parallel algorithms for matrix algorithms	K2/K3
3	Write parallel programs in PyPVM and PyMPI	K2/K3/K4
4	Understand connection networks, loop performance and performance issues for parallels programs	K3/K4/K5

PROFESSIONAL LIFE COMPETENCY SKILLS

COURSE OUTCOMES:

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

S.NO	OUTCOMES	Cognitive Level
1	Students are confident to give independent presentations professionally.	K1/k2
2	Prepare for the interviews.	K4/k5

MICROBIOLOGY - PG

GENERAL MICROBIOLOGY

Learning outcomes

- Identify the microbes and compare the differences among the microbes employing microscopic techniques.
- Analyse and apply the systematics of bacteria and archaea to establish the phylogenetic relationship using novelistic approach.
- Utilize various methods for the cultivation of microbes and apply in industry.
- Assess the various methods of sterilization, disinfection thereby ensuring quality.
- Apply various staining techniques in the identification of microbes.
- Evaluate the different antimicrobial susceptibility tests and assess the drug resistance status of microbes.

MICROBIAL PHYSIOLOGY

Learning Outcomes

- Apply the concepts of biophysical chemistry to determine the structure of bio molecules.
- Predict the structure and interaction of bio molecules applying the laws of thermodynamics.
- Analyze fermentation pathways and apply as targets in drug designing.
- Assess the various biochemical pathways of energy generation and employ microbes for the production of bio molecules.
- Discuss the various pathways used in energy synthesis.

BIO INSTRUMENTATION & BIO EXPERIMENTATION

Learning Outcomes

- Utilize the general equipment's available in Microbiology laboratory.
- Employ centrifuge and chromatographic techniques in the separation of bio molecules.
- Measure the different types of radio isotopes used in molecular imaging.
- Employ the instruments working on the principles of electro physiology in diagnosis.

- Formulate the diet employed in the breeding of various laboratory animals.
- Constitute an ethical committee to employ the usage of laboratory animals in research and diagnosis.
- Use appropriate methods of disposal of biomedical waste.

ENVIRONMENTAL MICROBIOLOGY

Learning Outcomes

- Apply the knowledge of biogeochemical cycles in the conservation of environment.
- Identify the sources of airborne and water borne infections.
- Assess and monitor the microbial quality of air, indoors and outdoors.
- Formulate the methods for treatment of solid and liquid wastes.
- Assess the microbial quality of the given water sample and can formulate a method to disinfect water.
- Utilize various methods of sewage disposal and its recycling.
- Apply the learnt methods in the degradation of xenobiotic compounds

MEDICAL BACTERIOLOGY

Learning Outcomes

- Able to differentiate a large number of medically important bacteria employing their unique characteristic features.
- Design the nutritional requirements of bacteria required for their growth.
- Assess the importance of clinically important enteric organisms causing various human infections.
- Perform basic laboratory tests to identify medically important microorganism in clinical samples.
- Identify the different vectors involved in various zoonotic diseases.
- Prepare the community to face an outbreak of an epidemic.

- Formulate methods to curb nosocomial and zoonotic infections.
- Plan a safe mode of disposal of biomedical waste.
- Discuss and follow the guidelines of ethical committee.

MEDICAL VIROLOGY

Learning Outcomes

- Recognize the characters of different types of viruses.
- Differentially diagnose medically important viruses employing suitable techniques.
- Able to differentiate RNA, DNA, emerging, reemerging, oncogenic viruses by molecular techniques causing outbreaks in the community.
- Understand and apply bacteriophages in diagnosis and treatment

IMMUNOLOGY

Learning Outcomes

- Able to conceptualize the role and mechanisms of immune system and its response to pathogenic microorganisms.
- Able to distinguish antigenicity and immunogenicity.
- Apply the mechanisms of antigen-antibody reactions to identify various diseases.
- Comprehend vaccine development for prophylaxis.
- Identify and evaluate the status of immunodeficiency diseases, autoimmune disorders and hypersensitivity reactions.
- Discuss the mechanisms and genetics underlying cancer development and create awareness to the community.

MEDICAL MYCOLOGY & PARASITOLOGY

Learning Outcomes

- Classify pathogenic fungi based on the microscopic characters.
- Differentiate the different types of mycoses.
- Diagnose and plan control of mycoses.
- Differentiate the types of parasitic infections.
- Apply the knowledge on the mechanisms of pathogenesis in the

transmission and control of parasitic diseases.

- Identify the parasites causing infections in immunocompromised hosts.

TECHNIQUES IN MICROBIOLOGY (EDES- I)

Learning outcomes

- Assess the various methods of sterilization, disinfection thereby ensuring quality.
- Identify the microbes and compare the differences among the microbes employing microscopic techniques.
- Apply various staining techniques in the identification of microbes.
- Utilize various media for the cultivation of microbes.

MICROBIAL GENETICS & BIOINFORMATICS

Learning Outcomes

- Apply Mendelian principles and its extension.
- Predict gene map distance.
- Apply different methods of genetic transfer in experiments.
- Analyze mutations in microbes
- Apply principles and knowledge of bioinformatics in phylogenetic analysis, prediction of active sites and identifying targets for drugs and drug designing.

MOLECULAR BIOLOGY & NANOTECHNOLOGY

Learning Outcomes

- Analyze the conformation of nucleic acids.
- Understand the mechanisms of replication and repair.
- Understand RNA synthesis and its processing
- Discuss about protein synthesis and its inhibitors.
- Control gene expression in cloning experiments.
- Apply principles of Nanotechnology in the production of nanoparticles.

BIOTECHNOLOGY

Learning Outcomes

- Design cloning experiments by incorporating rDNA technology.
- Analyse DNA, RNA and Protein sequences.
- Construct transgenic models.
- Formulate bio-fertilizers and bio-pesticides.
- Apply technology in the production of enzymes and algae as food, feed and fodder.
- Apply the knowledge of genomics in health and agriculture.
- Utilize various application of biotechnology.
- Apply IPR and ethical issues in the production of Biotechnological products.

FOOD AND DAIRY MICROBIOLOGY

Course outcomes

- Identify the microorganisms in spoiled food and evaluation.
- Apply various preservation techniques in food and related industry.
- Assess the growth factors of food pathogens in food and dairy industry.
- Detect food pathogens in clinical and food samples.
- Identify and analyze the role of pathogens in food borne infections.
- Create awareness towards food borne outbreaks in community.
- Discuss food laws and standards for quality in food production.

CLINICAL MICROBIOLOGY (EDES- II)

Course Outcomes

- Assess the importance of clinically important enteric organisms causing various human infections.
- Perform basic laboratory tests to identify medically important microorganism in clinical samples.
- Recognize the characters of different types of viruses.
- Differentially diagnose medically important viruses employing suitable techniques.
- Able to differentiate RNA, DNA, emerging, reemerging, oncogenic viruses by

molecular techniques causing outbreaks in the community.

- Differentiate the different types of mycoses, diagnose and plan control of mycoses.
- Apply the knowledge on the mechanisms of pathogenesis in the transmission and control of parasitic diseases.

SOIL AND AGRICULTURAL MICROBIOLOGY

Learning Outcomes

- Conceptualize the characterization and classification of soils. Discuss about interaction between microorganisms.
- Appreciate the symbiotic and asymbiotic nitrogen fixation. Discuss about biogeochemical cycles.
- Competently explain plant pathogens, classification of plant diseases, defense mechanism in plants and molecular aspects of host defense reactions
- Learn the plant disease management and biotechnological approaches to disease management.
- Descriptive understanding of principles of plant infection and defense mechanisms.

MEDICAL LABORATORY TECHNOLOGY

Learning Outcomes

- Understand the role of laboratory technician and safety regulations.
- Learn routine test like blood grouping, typing and procedures in blood bank.
- Acquired knowledge on specimen processing and routine biochemical tests.
- Provides information on examination on body fluids and serological tests.
- Develop skills in specimen collection and diagnostic procedures.

INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY

Learning Outcomes

- Understand the principles of various types of fermenters used for industrial fermentation.
- Learn the production of primary metabolites.
- Acquire knowledge on production of enzymes, biopolymers and bio fuels.
- Study the mode of action of antimicrobial agents.
- Develop skills in sterilization control and sterility assurance.

**GENERAL MICROBIOLOGY & MICROBIAL PHYSIOLOGY,
BIOINTRUMENTATION AND BIOEXPERIMENTATION AND
ENVIRONMENTAL MICROBIOLOGY**

Learning outcomes:

- Follow sterilization and disinfection methods with proper quality control in microbiology laboratories for effective growth and disposal of microbes.
- Employ microscopes and appropriate staining techniques in determining the morphology of microbes.
- Formulate the parameters for achieving optimal growth in bacteria.
- Apply antibiotic susceptibility tests for an effective control of microbes.
- Assess the quality of air and water using suitable methods.
- Understand the biochemical activities of microorganisms.

**IMMUNOLOGY, MEDICAL BACTERIOLOGY, VIROLOGY, MYCOLOGY AND
PARASITOLOGY**

Learning outcomes

- Execute various immunological tests routinely used for diagnosis.
- Identify bacteria, fungi and parasites in clinical specimens.
- Assess the phage from sewage samples.
- Diagnose virus by serological, molecular and cultivation methods.

**MICROBIAL GENETICS, MOLECULAR BIOLOGY,
BIOTECHNOLOGY&BIOINFORMATICS**

Learning outcomes

- Understand the various genetic tests used in various research fields..
- Assess the molecular weight of DNA, RNA and its amplification by various methods.
- Apply the tools of bioinformatics for construction of phylogenetic tree.

- Gain knowledge on the use of chromatography techniques for separation of amino acids.
- Study the isolation of mutants by replica plating techniques.

FOOD, DAIRY, SOIL, AGRICULTURAL, INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY AND MEDICAL LABORATORY TECHNOLOGY

Learning outcomes

- Employ various quality control methods during the screening of milk and milk products.
- Check and assess the quality of various food samples.
- Gain entrepreneurial skill in production of products related to food and beverage industry.
- Apply the various experimental medical laboratory techniques used in diagnosis.
- Assess the various enzymatic activities of microorganisms employing various tests.

MASTER OF SOCIAL WORK – PG

RURAL AND URBAN COMMUNITY DEVELOPMENT

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To develop in students an in-depth understanding of rural communities.
CO2	To develop knowledge of the various methods, programmes, strategies , efforts towards rural community development
CO3	To provide knowledge on Urban community development.
CO4	To develop skills and techniques of working with urban Community
CO5	To Elaborate various models of professional practice and its application.

SOCIAL WELFARE ADMINISTRATION

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To acquire Knowledge of the basic process of administration
CO2	To develop knowledge of the various methods, programmes, strategies
CO3	To understand the procedures and policies involved in establishing and maintaining social welfare organizations
CO4	To develop skills to participate positively in administrative process
CO5	To understand the role and contribution of professional social work in the development process.

FIELDWORK PRACTICUM - III

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To study the rural and semi rural life in all its ramifications including group dynamics and power structure in rural community
CO2	To develop an understanding of the process of programme formulation and programme management of the rural local bodies, government and non government agencies
CO3	To develop positive attitude to work in a rural community setting and to acquire the skills such as public relations, fact findings, leadership, networking, fund raising, budgeting, report writing, lobbying and advocacy required for a development worker
CO4	To enable to work with disadvantaged groups in rural areas
CO5	To enable to plan and implement methods, tools and techniques for intervention based on the needs of the community

COMMUNITY HEALTH

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To develop an understanding of the health care system in India, health policies and legislative provision relating to health.
CO2	To develop an understanding of the existing programmes and services at local,national and international levels and the need for a preventive and developmental approach in the field of health.
CO3	To develop skill in programmes planning and education for different targetgroups about handling of their health problems.
CO4	To develop a holistic and integrated approach to social approach to social work practice in the field of health.
CO5	To develop critical reflection, action in relation to health problems

DEVELOPMENT ECONOMICS

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the factors influencing the Rural Economics
CO2	To understand the role of various economic institutions in Rural Economic Development.
CO3	To understand various intervention and strategies for Rural Economic Development.
CO4	It examines in depth the consequences of development on the individual and society besides creating linkages between development and contemporary social issues
CO5	To understand the features of the emerging Indian state with dynamic concepts such as decentralisation, role of institutions and people's participation.

HUMAN RIGHTS

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To provide a perspective and foundation for a human rights culture among students.
CO2	To study the Indian Constitution and human rights and how it can be enforce.
CO3	To create awareness on the Indian legal system, rule of law, human rights related to custody and detention.
CO4	To enable students to work for the promotion and protection of children's rights women rights, dalit rights, workers rights (especially unorganized labour) right of the urban poor and victims of displacement and resettlement.
CO5	To understand statutory provision, for protecting the environment, consumer protection, local governance and right to information.

MEDICAL SOCIAL WORK

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To know and understand the beginnings of social work in the medical setting and its development and current status.
CO2	To develop a holistic and integrated approach to social work practice in the field of health.
CO3	To understand the specific problems pertaining to medical social work.
CO4	To develop a deeper understanding of common physical diseases and health problems of vulnerable groups
CO5	To develop the capacity to perceive the relation of environment and socio cultural and psychological factors in the causation, treatment and prevention of diseases.

SOCIAL WORK WITH YOUTH

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the concept of youth development, the need and importance of working with youth.
CO2	To understand the various factors influencing youth.
CO3	To understand the specific problems pertaining to youth.
CO4	To understand different governmental / non governmental programs for the welfare and development of youth.
CO5	To develop an understanding of the different methods of working with youth

DEVELOPMENT PLANNING

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To develop theoretical understanding of development and planning
CO2	To enable students to gain an understanding of the administrative machinery involved in development.
CO3	To understand the role and contribution of professional social worker in the development.
CO4	To provide knowledge on various methods strategies and development efforts.
CO5	To develop an understanding of the various models of professional practice

ENTREPRENEURSHIP DEVELOPMENT

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To develop theoretical understanding of entrepreneurship development
CO2	To enable students to gain an understanding of the administrative machinery involved in entrepreneurship development.
CO3	To understand the role and contribution of professional social worker in entrepreneurship development.
CO4	To provide knowledge on various methods strategies and development efforts.
CO5	To provide an understanding, nature and process of entrepreneurship development

FIELDWORK PRACTICUM - IV

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To sharpen the urban community development skills such as influencing grass root urban leaders, rapport building, organising, resource mobilization, recording, advocacy and lobbying
CO2	To develop skills in communicating, fact finding, fund raising, budgeting, report writing, urban community project formulation, management, appraisal and evaluation
CO3	To help the trainee gain insight into the components of Urban Community Development
CO4	To enhance competencies to assess and analyse urban problems, needs and service delivery.
CO5	To enhance the capacity to recognise the linkage between urban community development and the practices in the field in terms of policy and programmes.

PSYCHIATRIC SOCIAL WORK PRACTICE

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To develop the capacity for critical assessment of mental health needs and problems of various vulnerable groups in the Indian context and develop social work methods in the prevention and promotion of health.
CO2	To acquire knowledge of various treatments approaches and the skill to apply the same to meet mental health needs of the people.
CO3	To appreciate the preventive and promotive approaches to mental health and develop the ability to apply it.
CO4	To critically review the institutional approaches and the need for non-institutional alternatives.
CO5	To understand the application of mental health interventions in special settings.

SOCIAL WORK WITH THE ELDERLY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	To understand the theories, concepts and perspectives in gerontology and gerontological social work
CO2	To examine the historical norms of roles, power and status of older persons and emerging trends and issues in the context of liberalized political economy and changing demography.
CO3	To study the physical, mental, sexual, emotional, economic, social and spiritual aspects of ageing and emerging needs.
CO4	To understand and analyze the policies, laws and programme affecting older persons.
CO5	To acquire skills in developmental programmes for the aging, their family members and the community in general.

CHEMISTRY – UG

GENERAL CHEMISTRY – I

Course Outcome

- After the completion of the course the students will have the ability to
- Discuss about various quantum numbers and occupancy of electrons on various quantum levels
- Revise the periodic properties of elements, its classification and variation of periodic properties
- Explain the hybridization and geometry of organic molecules, electronic effects, bonding and its influences on organic molecules.
- Analyse the reactions between gaseous systems and become aware of their physical properties.
- Create knowledge on chemistry of colloids

PHARMACEUTICAL CHEMISTRY

Course Outcome

Course would provide knowledge to the students regarding

- Drugs and their metabolism.
- Common diseases and their treatment.
- The role and importance of minerals and vitamins
- The specific diagnostic methods of familiar disorders.
- Chemicals used as drugs for specific treatments.

GENERAL CHEMISTRY – II

Course Outcome

After the completion of the course the students will have the ability to

- Discuss about ionic and covalent chemical bonding.
- Demonstrate the structure and bond type of simple inorganic molecules.
- Explain the chemistry of Alkanes and Cycloalkanes
- Discuss the chemistry of alkyl and aryl halides
- Analyse the Liquid and Solid systems

CHEMISTRY IN EVERYDAY LIFE

Course learning outcomes:

After the completion of the course, the students will have ability

- To describe theory, classification and preparation of dyes.
- To the types, preparation and determination of molecular weight of polymers.
- To describe the manufacture and applications of soaps and detergents.
- To study the composition and applications of paints and varnishes.
- To explain the properties and preparation of fertilizers and uses of pesticides, herbicides and fungicides.

EVS

Course Outcomes:

After the completion of this course, students will

CO1: Understand about Natural resources, Renewable and Non renewable resources

CO2: Expert in Echo system, Biodiversity and its conservation

CO3: Get the knowledge in controlling the Environmental Pollution

CO4: Got social responsibility

GENERAL CHEMISTRY – III

Course learning Outcomes: After the completion of the course the students will have the ability to:

- Explain the characteristics of Boron, Carbon and Nitrogen family elements.
- Discuss the preparation, properties and important reactions of alkenes and alkynes.
- Illustrate the chemical reactions of Alcohols, Phenols and Ethers.
- Impart knowledge on the concepts, laws and applications of thermodynamics and thermochemistry.
- Understand non- conventional energy sources and their conservation.

BIO-INORGANIC CHEMISTRY AND ORGANOMETALLIC COMPOUNDS

Course Learning Outcomes

After the completion of the course the students will have ability to

- Discuss the basic characteristic features about bio- inorganic compounds.
- Account for the functions of essential trace elements and which consequences a deficiency or an excess have for health.
- Explain the biological functions and mechanism of proteins.
- Outline the preparation, properties, uses and structures organometallic compounds.
- Enable the students to appreciate the importance of metal carbonyls and nitrosyls.

GENERAL CHEMISTRY – IV

Course Learning outcomes

After the completion of the course the students will have ability to

- Impart the theories about metallurgy
- Identify the characteristics of p block elements
- Outline the preparation of Aldehydes and ketones
- Explore oxidation, reduction and addition reactions of aldehydes and ketones

Compare second and third law of thermodynamics

REACTION KINETICS AND QUANTUM MECHANICS

Course learning Outcomes:

After the completion of the course the students will have the ability to

- Understand the basic principles of reaction kinetics and its mechanisms.
- Understand kinetics and theory of reaction rate concepts.
- Understand the fundamentals of quantum chemistry and its postulates.
- Describe the photochemical and photophysical processes.
- Define the concepts of surface chemistry and the principles of catalysis.

INORGANIC CHEMISTRY

Course Outcome

After the completion of the course the students will have the ability to

- Discuss coordination compounds and different types of isomerism
- Demonstrate the structure of coordination compounds and types of ligands
- Explain the theories of coordination compounds
- Discuss the chemistry of crystal field theory and their ligands
- Study the lanthanides and actinides and discuss their electronic configuration

PHYSICAL CHEMISTRY

Course learning Outcomes

After the completion of the course the students will have the ability to

- Learn the concepts and applications of phase equilibria.
- Study the phase diagrams conjugate solutions.
- Understand the principles and applications of laws of electrochemistry.
- Describe the energy devices and their operations.
- Identify symmetry elements of different molecules, point groups and its operations.

CHEMISTRY OF NATURAL PRODUCTS

Course Learning Outcome

After the completion of the course, the students will have the ability to

- Explain and demonstrate the role of carbohydrates
- Identify and compare the basic structural differences and the biological importance of proteins and nucleic acids.
- Identify the common alkaloids and terpenoids in natural resources and explain their extraction and establish their structures.

FOOD CHEMISTRY

Course Learning Outcomes

After the completion of the course the students will have ability to

- Describe about different foods and their compositions, adulteration in food and methods for the detection of adulterated food,
- Critique the compositions of food additives, beverages and edible oils.
- Apply different methods for the detection and prevention of food adulterants
- Identify the problems caused owing to alcoholic beverages, food additives and food adulterants.
- Acquire knowledge on food quality regulations and standards

ADVANCED ORGANIC CHEMISTRY

Course Learning Outcomes

After the completion of the course, the students will have the ability to

- Explain and demonstrate the properties of carboxylic acids
- Compare and explain the properties of nitrogen containing compounds.
- Apply the knowledge of rearrangement reactions in designing new reactions.
- Predict the wide applications of Dyes.
- Identify the properties and structural features of heterocyclic compounds
- Explain the importance of stereochemistry of molecules.

SPECTROSCOPY

Course Learning Outcomes

After the completion of the course, the students will have the ability to

- Have advanced knowledge about the interactions of electromagnetic radiation and matter and their applications in spectroscopy.
- Analyse and interpret spectroscopic data
 - Solve problems related to the structure, purity and concentration of chemicals and
 - Identify molecular interactions by choosing suitable spectroscopic methods
 - Assess the theoretical knowledge of the various spectroscopic methods on the basis of the examples from the science and industry.

- Analyze the modern spectrometers and methods, which are applied in industrial and scientific laboratories in the field of synthesis and structural determination.
- Evaluate the structure of simple organic compounds from UV, IR, NMR and Mass spectral data.

ANALYTICAL CHEMISTRY

Course Learning Outcomes

After the completion of the course, the students will have the ability to

Identify of finding error in analytical results and minimize it and compile the Stoichiometric calculations

- Explain the concepts and methods of precipitation techniques and Thermal Gravimetric Analysis.
- Design the methods of separation techniques and their applications and demonstrate the isolation of the compounds in a mixture by chromatographic techniques
- Evaluate the ionic state of the analyte by electro analytical techniques and outline the interpretation of the thermal analysis data
- Formulate the proper method to do the various chemical analysis

ALLIED CHEMISTRY – I

Course Learning Outcomes:

- After the completion of the course, the students will have ability to
- Describe the existence of metals in the and the methods used for extraction and refining
- Identify various types of nuclear changes including nuclear fission and nuclear fusion reactions
- Understand the symmetry elements, isomerism and separation of enantiomers
- Apply the principles of chromatography for separation of mixtures and study about dyes.
- Explain about photochemical reactions and e applications of phase rule to various systems of phase equilibria.

ALLIED CHEMISTRY – II

Course learning outcomes:

After the completion of the course, the students will have ability to

- Understand the coordination compounds and theories of coordination compounds.
- Study the applications of fuel gases and fertilizers.
- Describe the types and uses of carbohydrates.
- Describe different levels of protein structure and their interdependence
- Demonstrate the electroplating process, batteries and fuel cells, corrosion and its prevention , determination of pH and importance of buffer solutions.

CHEMISTRY – PG

INORGANIC CHEMISTRY – I

Course Learning Outcomes

After the completion of the course the students will have ability to

- Explain the theories about bonding and structure of various inorganic compounds and few analytical techniques.
- Identify the nature of bonding in coordination compounds.
- Know the nature of metal-ligand bonding in coordination compounds and bonding parameters.
- Enable the students to appreciate the importance of electronic spectra and magnetic properties of complexes
- Prepare an insight into the Preparation, bonding and structures of cluster compounds.

ORGANIC CHEMISTRY – I

Course outcome

After completion of this paper the students will have

- Clarity on the concepts of stereochemistry in proper perspective.
- Clear understanding about various types of reaction intermediates, controls and mechanisms involving in synthetic organic transformations such as nucleophilic and electrophilic substitution reactions and the factors which will orient the reaction mechanism towards the desirable products.
- In depth knowledge about aromaticity of benzenoid and non-benzenoid compounds.

PHYSICAL CHEMISTRY – I

Course learning outcomes

After the completion of the course the students will have ability to

- Understand the distinction between classical mechanics and quantum mechanics and postulates of quantum mechanics.
- Describe the wave mechanics its application to simple systems.
- Apply theories of reaction rate to study simple and complex reactions.
- Study the phase equilibria of three component systems and adsorption isotherms. Interpret thermodynamic systems of variable composition, fugacity and activity.

ANALYTICAL TECHNIQUES IN CHEMISTRY

Course Learning Outcomes

After the completion of the course the students will have ability to

- Explain various analytical techniques useful for chemistry.
- Learn the principles of Colorimetric analysis.
- Acquire knowledge about the spectral techniques such as UV-Vis, IR, NMR, MS.
- Provide introductory knowledge about the magnetic properties and ESR.
- Understand the basic principles of various chromatographic techniques and instrumentation.

ORGANIC CHEMISTRY – II

Course outcome

After completion of the course the students will have

- Through knowledge about the mechanisms involved in elimination and, addition reactions and their application in specific reactions.
- Get exposure on the importance of oxidation and reduction reagents and reactions involving in reactions of great industrial importance.
- Clarity on rearrangement reactions and their mechanism in designing novel molecules of synthetic importance as well as academic interests.

PHYSICAL CHEMISTRY – II

Course learning outcomes

After the completion of the course, the students will have ability to

- Study the applications of quantum mechanics to rigid rotor and harmonic oscillator.
- Apply approximation methods to molecular system and its importance.
- Describe the kinetics of reactions in solution, catalysis and fast reaction kinetics.
- Learn the significance of statistical approach of thermodynamic properties.
- Describe the applications of statistical thermodynamics to various systems.

ADVANCED INORGANIC CHEMISTRY

Course Learning Outcomes

After the completion of the course the students will have ability to

- Provide knowledge required to appreciate and analyse the chemistry of structurally important coordination compounds.
- Give an overview and understanding of transition metal compounds and organometallic compounds
- Compare fundamental knowledge about industrially important non-transition metal compounds.
- Compile quantify bonding parameters and structures of clusters.
- Discuss coordination compounds with magnetic and spectral properties.

NANOTECHNOLOGY**Course Learning Outcomes**

After the completion of the course the students will have ability to

- Learn the basics of nanoscience and nanotechnology.
- Understand the various types of nanostructures .
- Get the knowledge on the structural importance of industrially important materials and methods of generation
- Explain the various properties of nanomaterials.
- Analyse the use of nanomaterials for routine processes and for betterment of the society.

INORGANIC CHEMISTRY-II**Course Learning Outcomes**

After the completion of the course the students will have ability to

- Discuss the theories about the mechanisms of reactions of coordination compounds.
- Analyse the nature of bonding and structures in coordination compounds.
- Explain the application of organometallic compounds in catalysis and biology.
- Discuss the Industrial application of organometallic compounds.
- Compile the nuclear reactions and applications.

ORGANIC APPLICATIONS OF SPECTROSCOPY

Course outcome

After the completion of the course the students will

- Apply the principles of UV-Visible and IR spectral techniques in analysing the structure of organic molecules.
- Apply the principles of ^1H -NMR and ^{13}C NMR and their advanced techniques in analysing the structure of molecules and reaction mechanisms.

Apply the mass spectrometry and utilise other spectroscopic techniques given in this paper for flawless assessment of the structure of organic molecules.

ADVANCED PHYSICAL CHEMISTRY

Course learning outcomes:

After the completion of the course, the students will have ability

- To know the concept of ion-solvent and ion-ion interactions in solution.
- To apply quantitative treatment of ion transport mechanism in solution.
- To analyse the significance of electrode-electrolyte interface through various double layer models .
- To study the corrosion methods and electrochemical energy systems.
- To describe the interaction radiation with matter using photochemical and photophysical processes and radiation chemistry.

APPLIED MATERIALS

Course learning Outcomes

Upon completion of the course, students will have the opportunity to:

- Become familiar with the water treatment methods and their applications.
- Study the various types of fuels and its combustion processes.
- Understand the corrosion factors and its control.
- Gain knowledge of the mass production of lubricants, adhesives, cements and ceramic materials and their applications.
- Describe the preparation, properties and uses of soaps, detergents & sanitizers.

INORGANIC CHEMISTRY-III

Course Learning Outcomes

After the completion of the course the students will have ability to

- Explain the fundamentals of different branches of spectroscopy.
- Elucidate the structures of molecules using different spectral techniques.
- Discuss about the Industrial and medicinal applications of coordination complexes.
- Explain about the preparation and magnetic properties of coordination complexes.
- Outline theory of radioactivity and applications of radioisotopes.

ORGANIC CHEMISTRY-III

Course outcome

After completion of the course the students will

- Apply and demonstrate the mechanism of free radical reactions in various important reactions involving free radical intermediates.
- Utilise these important reagents in formulating reaction sequences in the synthesis of valuable molecules
- Predict the importance of hetrocyclic compounds in biology.
- Assess the advantages of concerted photochemical reactions over the other reactions and design new mechanistic pathways.
- Identify steps involved in extraction of natural products and their structural elucidation.

PHYSICAL CHEMISTRY-III

Course learning outcomes

After the completion of the course, the students will have ability to

- Describe the symmetry operations in molecules which are useful for construction of point groups.
- Demonstrate the spectroscopic and nature of bonding applications of group theory.

- Explain rotation and vibrational spectra for structure determination and identification of molecules.
- Interpret and relate the electronic and nuclear spectra with structure in the identification of molecules.
- Describe the interaction radiation with matter using photochemical and photophysical processes and radiation chemistry.

SYNTHETIC STRATEGIES AND BIOMOLECULES

Course Outcome

After completion of the course the students will be able to

- Use retrosynthetic method for the logical disconnection of complex organic molecules and devise synthetic methods
- Use retrosynthetic strategy to synthesise complex molecules
- Analyse the use of various reagents and organic reactions in organic synthesis
- Explain the structure and biological functions of metalloproteins and non-enzyme electron transfer reactions
- Discuss about the different enzymes participating in the chemical reactions inside the body and their functions

Revise nitrogen fixation reaction and photosynthetic sequence

GEOGRAPHY – UG

GEOMORPHOLOGY

Course Outcomes:

After end of the lesson students able to hone their scientific understanding, illustration, skill and developed themselves as self- confident learner in the field of landforms study.

CARTOGRAPHY

Course Outcomes:

After end of this course, individuals will understand the art and science of map making.

OCEANOGRAPHY

Course Outcomes:

The expected learning outcome of this course would be; construct and compare different hydrological cycles and ocean's dynamic at spatial context and

CARTOGRAPHIC TECHNIQUES IN GEOGRAPHY

Course Outcomes:

At the end of this course, individuals will be able to identify, describe, create, construct and prepare different cartographic features such as maps, scales, relief and able to do field survey.

BASICS OF GEOGRAPHY

Course Outcomes:

The expected learning outcome would be; understanding, identification and description of physical aspects of basic geographical phenomenon.

CLIMATOLOGY

Course Outcome

At end of this course, students will be able to know about daily weather and climatic phenomenon determining the atmosphere of local, regional and global level.

RESOURCE GEOGRAPHY

Course Outcome

This course is designed to achieve; understanding, applying and evaluate different types resources and their judicious and sustainable uses.

BIOGEOGRAPHY

Course Outcome

The expected learning outcome of this course would be; make them understand and take role in environmental conservation and management.

GEOGRAPHY OF NATURAL REGIONS OF THE WORLD

Course Outcome

To discuss the fundamental elements of the geographic grid, time zones, and how the world is mapped; discuss the historical, social, and environmental processes that have shaped the world's major cultural regions and influenced the human landscape; compare and contrast the climate, physical landscape, and natural environment of world regions;

Practical - II

PROJECTIONS, TOPOSHEET AND WEATHER MAP INTERPRETATION

Course Outcome

At the end of the lesson, students should be able to determine different and appropriate uses of map projection in various aspects of geographic representation.

HUMAN GEOGRAPHY

Course Outcome

The expected learning outcome would be the student will able to understand, identify and describe social, cultural and economic dynamics of society.

POLITICAL GEOGRAPHY

Course Outcome

After the completion of course, the students will have ability to: Learn the concept of nation and state and geo-political theories. Understand the different dimensions of electoral geography and resource conflicts. Knowledge of politics geography and integration of Indian states, India bilateral relationship with SAARC countries.

REMOTE SENSING AND GIS

Course Outcome

This course expects the analysis, assessments and application of aerial photographs and satellite based data.

MAP READING AND NAVIGATION

Course Outcome

This course expects to understand various maps, symbols and navigation based data.

GEOGRAPHY OF INDIA

Course outcome

After studying geography of India, students will become aware about the country's beautiful and diverse landscapes. This will acquire knowledge about the economy and valuable resources.

DISASTER MANAGEMENT

Course Outcome

After end of this lesson, it is expected that students will prepare project on given topic varying from natural calamities to disaster impact region.

POPULATION GEOGRAPHY

Course outcome

At the end of the course students are able to

Explain the concepts and attributes of population

Explain various theories of population and concept of socio -economic development

GEOGRAPHY - PG

APPLIED GEOMORPHOLOGY

Outcomes	Students will critically evaluate the interactive spaces of physical, human and environmental components of Earth. The course enables the students to analyze the fundamental concepts of lithosphere and established the relations with geo-physical changes of geomorphic environment. Students will provide the geomorphic concepts for economic manifestations in everyday life.
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APPLIED CLIMATOLOGY

Outcomes	Students will able to conceptualize, analyze and apply the concepts of weather and climate and correlate it with daily weather events. Students will develop the causal relations of climate with other social, economic and cultural activities. Students will be able to utilize the techniques for modeling the climate, covering both theoretical and technical aspects.
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HYDROLOGY AND OCEANOGRAPHY

Outcomes	The course enables the students to analyze the fundamental concepts of ocean and established the relations with geo-physical changes of the environment.
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GEOGRAPHICAL THOUGHT

Outcomes	After the end of course, students will be able to visualize the basic theme, ideas, dichotomies and approaches of geographic knowledge with relation to historical juncture, varying schools and era of their emergence. Students will be able to critically evaluate the nature of geography as spatial science with changing space and time.
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SOIL GEOGRAPHY (OPTIONAL)

Outcomes	The expected learning outcome of this course would be; identify the causes of pollution and management.
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POPULATION AND SETTLEMENT GEOGRAPHY

Outcomes	Course Outcome-At the end of this course, it is expected that students will enable to describe and evaluate spatial dimension of population dynamics.
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ENVIRONMENTAL GEOGRAPHY

Outcomes	Students will able to know the various aspects of ecological degradation and evolved and generate the enthusiasm for protection, planning, preservation and sustainable management of environment.
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REMOTE SENSING AND ITS APPLICATION

Outcomes	After the end of course, students will efficiently assess the scientific principles and law involved in Remote sensing technique. Students will be able to observe the component and application of satellite based remote sensing data
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QUANTITATIVE TECHNIQUES AND COMPUTER APPLICATION

Outcomes	The expected learning outcome of this course would be; appropriate use of statistical techniques in varying avenues of geographical studies and applying these concepts in various computer applications
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CULTURAL GEOGRAPHY (OPTIONAL)

Outcomes	The expected learning outcome of this course would be; knowledge of culture and races in geographical regions.
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GEOGRAPHY OF INDIA

Couse Outcome:

After studying geography of India, students will become aware about the country's beautiful and diverse landscapes. This will acquire knowledge about the economy and valuable resources.

RESEARCH METHODOLOGY

Course Outcome: After studying this paper, students will be able to understand fundamentals of research, their concepts and designs, relating it with social life and collecting samples using various sources to overcome the problems of research and write research work with proper care and reliability.

MEDICAL GEOGRAPHY

Course outcome: students acquire knowledge about causes, effects and preventive measures of various diseases

NATURAL RESOURCE MANAGEMENT (Optional)

Outcomes	The expected learning outcome of this course would be; appropriate use of natural resource, conservation and management.
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GIS AND GPS TECHNIQUES IN GEOGRAPHY

Course outcome: students acquire knowledge about data structure and data base management system

BASICS OF REMOE SENSING AND GIS

Course Outcome: Students acquire knowledge about the basics and functions of remote sensing and GIS.

REGIONAL PLANNING

Course Outcome: Through this paper the students will internalise the importance of the role

played by planning commissions and their objectives. They will also get to know about the various problems faced by society in relation to development in micro and macro level.

ECONOMIC GEOGRAPHY

Course outcome: students acquire knowledge about the various economic activities in the world .

QUANTITATIVE TECHNIQUES IN GEOGRAPHY

Course Outcome:

By the end of this syllabus, student will be able to differentiate and recognize the specific method to fulfil the desired outcome to show geographical data with the help of statistical tool.

REMOTE SENSING AND GIS APPLICATIONS

Course Outcome:

By the end to the lesson, students should be able to determine and differentiate various techniques to extract the processed data using GIS tool and appreciate the use of GIS software for representation of data.

GEOGRAPHY OF TOURISM

Course Outcome: Students acquire knowledge about the role played by the tourism industry in India. Students will also get to know about the various important destinations and their ecological setting in India.

PHYSICS – UG**MECHANICS AND MATHEMATICAL PHYSICS****COURSE OUTCOMES**

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Apply the laws of impact and law of gravitation in different physical situations	K2
CO2	Assimilate the concept of Moment of inertia & Bernoulli's theorem and apply them to different physical problems	K2
CO3	Apply the concept of centre of gravity and centre of pressure to different physical objects	K3
CO4	Appreciate physical significance of differentiation and integration of vectors	K3
CO5	Demonstrate gamma, beta functions and the basics of group theory	K3

HEAT AND THERMODYNAMICS**COURSE OUTCOMES**

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Convert temperature in one scale to another scale, determine specific heat capacities of liquids and gases	K2
CO2	Discuss the principles and methods to produce low temperature, refrigeration and to liquefy gases.	K3
CO3	Determine thermal conductivity of good and bad conductors, appreciate Planck's law of radiation	K4

CO4	Learn laws of thermodynamics and to appreciate the working of heat engines and refrigerators.	K2
CO5	Derive Maxwell's thermo dynamical relations and to learn their applications.	K4

ALLIED PHYSICS I

COURSE OUTCOMES

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

	COURSE OUTCOMES	Knowledge level
CO1	gain an understanding of various elastic moduli and to experimentally determine them.	K3
CO2	determine surface tension , interfacial surface tension and comparison of viscosities of two liquids.	K3
CO3	appreciate direct vision prism and learn how to minimise aberrations due to lenses.	K1
CO4	gain knowledge on laws of thermodynamics and low temperature physics.	K1
CO5	explain the uses of potentiometer and Carey Foster bridge.	K3

PROPERTIES OF MATTER AND ACOUSTICS

COURSE OUTCOMES

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	to gain an understanding of various elastic moduli and the experimental aspects of rigidity modulus.	K1
CO2	to know the insights of deriving formulae for young's modulus by uniform bending and non uniform bending.	K3

CO3	to appreciate the intelligence of methods employed in determining viscosity and to gain knowledge on the variation of viscosity with temperature and pressure.	K1
CO4	to understand the significance of surface tension and the applications of surface tension	K3
CO5	to identify Lissajous' figures, to produce ultrasonic waves and to design a good auditorium.	K1

ALLIED PHYSICS II

COURSE OUTCOMES

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

	COURSE OUTCOMES	Knowledge rel
CO1	Appreciate the various phenomena of physical optics for their applications.	K3
CO2	Configure elements in periodic table with an idea about various atom models.	K1
CO3	Discuss inertial and non inertial frames of reference.	K1
CO4	Analyze how quantum mechanics is successful than classical mechanics and to solve Schrodinger's equation.	K2
CO5	Describe Zener diode characteristics, transistor configurations and to appreciate decimal, binary, octal, hexadecimal number systems.	K3

ELECTRICITY, MAGNETISM AND ELECTROMAGNETISM

COURSE OUTCOMES

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Apply the concept of Gauss' law , Coulomb's theorem and electric potential to different physical objects	K3
CO2	Apply the concept of vector and scalar potentials to find the magnetic potential of different objects	K3
CO3	Use the principle of meter bridge and potentiometer to analyze circuits and to explain the different thermal effects of current and their uses	K3
CO4	Analyze the magnetic effects of current under different situations	K4
CO5	analyze the growth and decay of current in transient circuits and also to analyze the alternating current in resonance circuits	K4

OPTICS AND SPECTROSCOPY

COURSE OUTCOMES

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Understand geometrical optics, plan and conduct simple experiments using lens systems.	K1, K4, K5
CO2	Understand the optical phenomenon Interference and the cause or origin of it.	K1, K3
CO3	Appreciate the phenomenon of Diffraction, discuss technical applications of simple optical instruments	K2, K3, K4
CO4	Assimilate the concept of polarization, explore the optical activity, effect of magnetic and electric field on optical activity	K1, K3
CO5	Understand the basic concepts of spectroscopy and scrutinize its	K1, K4, K5

	applications in the qualitative and quantitative analyses.	
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ATOMIC PHYSICS

COURSE OUTCOMES

After completing the course the students have the ability to

	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Outline the behaviour of electrons and positive ions in electric and magnetic fields and	K2
CO2	apply and demonstrate the photo electric effect	K3
CO3	explain atom models and also to explain the periodic classification of elements and arrangement of electrons in an atom	K4
CO4	Analyze Zeeman effect, ionization and critical potentials	K4
CO5	Analyze the characteristic and applications of X-rays in realm of physics	K5

SOLID STATE PHYSICS

COURSE OUTCOMES

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	classify various lattices and find simple crystal structures.	K2
CO2	identify various crystal defects and appreciate the use of X-ray diffraction.	K2
CO3	illustrate the bond formation in solids and free electron theory of metals.	K4
CO4	identify and classify magnetic materials based on their properties.	K1, k2
CO5	choose dielectric materials for various applications.	K3

BASIC ELECTRONICS

COURSE OUTCOMES

After completing the course the Students will be able to

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Understand potential barrier formation when junction is formed. Identify that diodes conduct during FB and do not conduct under RB. Summarize the characteristics of CB, CE and CC configuration.	K1, K2
CO2	Interpret that biasing the tr. is the way to realize the faithful amplification. Discover through load line analysis that Operating point keeps the biasing unaltered.	K2
CO3	Analyses that rectifier circuit with Zener diode provides good voltage stabilization which results the design of power supplies. Complete ac and dc load line analysis to evaluate operating pt and stability factor	K2, K3
CO4	Grade the Public addressing system includes the multistage amplifiers through RC, transformer and direct couplings Conclude that oscillator circuits produce sustained sinusoidal oscillations. Judge the actions of Tr. as either amplifier or switches	K4, K5
CO5	Defend that wave shaping and differentiator & integrator circuits plays an important role to change shape of sinusoidal wave and convert from one wave into another wave pattern.	K5
CO6	Solve the problems of the various circuits involving diode, transistor and oscillator circuit, amplifier circuits to determine the operating point, frequency of oscillation, voltage regulation, rectification efficiency and ripple factor and hence to analyze the system performance as amplifier and oscillator circuits.	K3

NUCLEAR PHYSICS

COURSE OUTCOMES

After completing the course the Students will be able to

	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Explain the basic properties of the nucleus and nuclear models for study of the nuclear structure behaviour	K3
CO2	Compute half life, age of the earth and Q values of nuclear reaction	K4
CO3	Apply the concept of nuclear fission and fusion in the working of different types of nuclear reactor	K5
CO4	Compare the working of different types of particle detector and particle accelerators	K3
CO5	Explain the fundamental interactions, quantum numbers associated with elementary particles and also to analyze the geomagnetic effect of cosmic rays	K5

I(A) NUMERICAL METHODS AND C PROGRAMMING

COURSE OUTCOMES

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Explain and apply the least square errors method numerically and algebraically to find the curve of best fit.	K4
CO2	Student will be able to investigate numerical solutions of differential and integral equations.	K3
CO3	Evaluate to define and manage data structures based on problem subject domain	K5
CO4	Apply programming processes within the programming language environment.	K2
CO5	Use to implement the algorithms and draw flowcharts for solving problems.	K1

I(B) COMMUNICATION ELECTRONICS AND MICROPROCESSOR 8085**COURSE OUTCOMES**

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

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	describe the working of AM transmitter and different types of receiver,	K2
CO2	explain the working of FM. Transmitters and different receivers, and also to compare between AM and FM transmission	K2
CO3	analyze the basics of microcomputer system.	K4
CO4	Apply the instruction set and addressing modes of 8085 to write programs	K3
CO5	Develop simple programmes like addition, subtraction etc.	K6

ASTROPHYSICS**COURSE OUTCOMES**

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

#	COURSE OUTCOME	KNOWLEDGE LEVEL
CO1	Apply advanced methods to solve astronomical and astrophysical problems	K5
CO2	Analyze the scale of items within the universe, the wide variety of objects contained in the universe.	K4
CO3	Outline the understanding the relative sizes of the planets within the solar system.	K3
CO4	Explain the principles that underlie the ability of various natural phenomena to deliver <i>solar energy</i> .	K2
CO5	Apply the scientific knowledge to interpret astronomical phenomena and also to solve problems in Astronomy using analytical thinking and problem solving strategies.	K1

CLASSICAL, QUANTUM AND STATISTICAL MECHANICS & RELATIVITY**COURSE OUTCOMES**

Having passed the exam, students will be able to

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Define and understand basic mechanical concepts related to discrete and continuous mechanical systems, Lagrange formulation	K1, K2
CO2	Describe and understand the motion of a mechanical system using Hamilton formulation	K2, K4
CO3	Understand the need of quantum mechanics and various postulates of it.	K1, K2
CO4	Set up Schrödinger equation and obtain eigenvalues for simple problems	K2, K3
CO5	Define and discuss the concepts of microstate and macrostate of a model system, discuss the concept and role of indistinguishability in the theory of gases; know the results expected from classical considerations	K2, K4
CO6	Can perform basic calculations in relativistic kinematics and dynamics	K4, K5

ANALOG AND DIGITAL ELECTRONICS**COURSE OUTCOMES**

Having passed the exam, the students will be able to

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Describe the 2's complement method to add negative numbers Apply minimization techniques K maps to design of digital circuits. Interpret combinational and sequential circuits	K1, K2
CO2	Explain the operation of Flip-Flops and its applications. Illustrate the design of shift registers using FFs for serial to parallel converter and vice-versa	K1, K4

CO3	Classify the counters and understand the circuits to design digital clocks	K2
CO4	Understand and summarize the operation and V-I characteristics of Field effect Transistors and MOSFET Recognize and infer the V-I characteristic of UJT and SCR as a power switch	K4, K5
CO5	Infer that Op-Amp circuits used for voltage conversion and amplify the difference of voltage between two inputs. Discover that integrator and differentiator circuits used to solve simultaneous equation	K2,K3
CO6	Evaluate the op-amp circuits to generate sinusoidal oscillations. Utilize the circuit using 555 timer IC to construct switches through multivibrators	K3,K5

II (A) MEDICAL PHYSICS

COURSE OUTCOMES

At the end of the course the students should be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	Describe the bodily structure of humans	K3
CO2	To illustrate the laws of physics in the functioning of different parts of human body	K3
CO3	analyze the working of different types of transducers	K4
CO4	Explain the use of X-rays and the functioning of ECG	K4
CO5	Explain the use of different biopotential recorders in the study of human ailments	K5

PHYSICS IN EVERYDAY LIFE**COURSE OUTCOMES**

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

	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	gain an understanding on gravity and communication satellites.	K4
CO2	demonstrate the working of pressure cooker, air conditioner, digital thermometer and aeroplane.	K3
CO3	point out the importance of basic principles of electromagnetism.	K1 &K3
CO4	Grasp the simple applications of lenses ,optical recording and highlight bar code reader.	K3
CO5	Appraise the essentials of basic medical physics and nuclear physics.	K1

II (B) BIOMEDICAL INSTRUMENTATION**COURSE OUTCOMES**

At the end of the course the students should be able to

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Know and describe the origin and significance of the bio-signals that emanate from the body	K2
CO2	Identify and analyze the working principle of different types of electrodes used to carry out bio-potential signal	K4
CO3	Evaluate the electrical signal from ECG, EEG and other Physiological system and explain their recording setup	K5
CO4	Explain and justify the working of medical equipments and medical imaging techniques and interpret the results	K3
CO5	Realize the importance of physiologically assist devices and different imaging techniques	K4

III(A) LASERS, HOLOGRAPHY AND FIBRE OPTICS**COURSE OUTCOMES**

At the end of the course the students should be able to

#	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Outline the laser fundamentals, principles, processes of laser systems.	K3
CO2	Evaluate the different types of lasers, its principle, properties of laser beam.	K3
CO3	Identify how experimentally holograms and speckle grams could be recorded and reconstructed.	K4
CO4	Explain different types, characteristics and fabrication of optical fibers.	K5
CO5	Apply knowledge in communication equipments, construction and working of optical communication networks.	K4

III(B) ENERGY PHYSICS**COURSE OUTCOMES**

After completing the course the students have the ability to

	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO1	Assess the availability of conventional, nonconventional, renewable and non renewable energy sources in India	K3
CO2	Apply the principle of heat transfer in different solar energy storage systems	K3
CO3	describe and practice power generation from solar energy	K4
CO4	Use wind energy and biogas energy for energy production	K4
CO5	apply the principle of geothermal energy and ocean thermal energy for energy production	K4

PHYSICS – PG**MATHEMATICAL METHODS FOR PHYSICISTS I****COURSE OUTCOMES**

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

#	COURSE OUTCOMES	Knowledge Level
CO1	Apply the knowledge of vector analysis to understand the concepts/phenomena/wave propagation especially in the paper Electromagnetic Theory.	K3
CO2	Apply the knowledge of linear vector spaces and matrices in the paper Quantum Mechanics.	K3
CO3	Appreciate the simple applications of tensors in non-relativistic physics, nonlinear optics.	K6
CO4	Assess the analyticity nature of any given complex function and categorize the singular points admitted by it and evaluate the definite integrals through contour integration.	K6
CO5	Examine the applicability of various probability distributions.	K4

CLASSICAL MECHANICS**COURSE OUTCOMES**

After completing the course, the students are able to

#	COURSE OUTCOMES	Knowledge Level
CO1	Differentiate Newtonian, Lagrangian and Hamiltonian mechanics.	K2
CO2	Solve the problem of constrained motion using Lagrangian and Hamiltonian.	K3
CO3	Solve the mechanical problems by formulating Hamilton-Jacobi equation when Hamiltonian involves time.	K3
CO4	Apply the theory of small oscillations in several areas of physics like vibrations of atoms in solids, coupled mechanical oscillators etc	K3
CO5	Apply variational principle to solve Lagrange's equations of motion for physical systems.	K3

ANALOG & DIGITAL ELECTRONICS

COURSE OUTCOMES

After completing the course, the students are able to

#	COURSE OUTCOMES	Knowledge level
CO1	Compile the steps of photolithography, doping, metallization and packaging to produce IC for different applications.	K1
CO2	Identify that any future technology would be based on present technology through PLL, D/A & A/D convertors and Modem interfacing.	K2
CO3	Analyze that the functions of PLL are very much used in demodulation of FM and FSK and recovery of small signal from the noise.	K3
CO4	Evaluate that digital modulation avoids transmission noise and offers improved robustness to interference.	K4
CO5	Predict that the methods of D/A and A/D converters and those principles are applied in digital image systems, FAX and smart phone.	K2
CO6	Form suitable external circuits with R and C, 555 timer IC that could be used as PWM, PPM and FSK generator.	K5

(A) CRYSTAL GROWTH & CRYSTALLOGRAPHY

COURSE OUTCOMES:

#	COURSE OUTCOMES	Knowledge Level
CO1	Gain understanding about Nucleation and its types. Know about surface energy and diffusion theory.	K2
CO2	Acquire knowledge about crystal growth from solution with different methods.	K2
CO3	Understand about crystal growth from Melt Growth and Flux Growth	K3
CO4	Grasp about different methods of solving three dimensional structures by using X-ray.	K3
CO5	Understand about refinement of crystal structure and different ring	K3

	conformations.	
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(B) MICROPROCESSOR AND MICROCONTROLLER

COURSE OUTCOMES

On Successful completion of the course, the students will be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	acquire in-depth knowledge of 8086 microprocessor architecture.	K1
CO2	write and Execute Programs using 8086 instructions and try different logic to implement it.	K4
CO3	select different modes and apply techniques of interfacing memory and interrupt handling.	K6
CO4	a) Compare the other series of 86 based microprocessor with 8086 microprocessor. Study the salient features of Pentium based microprocessors. b) Differentiate the use of DOS and UNIX platform Operating system.	K1
CO5	Gain knowledge of Microcontrollers and design small applications using microcontrollers.	K3

MATHEMATICAL METHODS FOR PHYSICISTS II

COURSE OUTCOMES

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

#	COURSE OUTCOMES	Knowledge Level
CO1	Identify and apply the knowledge about Legendre, Bessel, Laguerre and Hermite polynomials to understand the quantum mechanical treatment of several physically interesting problems such as linear harmonic oscillator, hydrogen atom, rigid rotator, etc.	K4
CO2	develop knowledge on the basic concepts of Fourier series and apply the integral transform techniques to solve the given linear ordinary differential equations.	K5

CO3	solve the partial differential equations frequently occurring in physics.	K3
CO4	explain the properties of dirac-delta function and apply the Green's function technique to solve Poisson's equation.	K5
CO5	point out the idea of group theory and its applications.	K4

ELECTROMAGNETIC THEORY

COURSE OUTCOMES

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

#	COURSE OUTCOMES	Knowledge Level
CO1	Apply the boundary conditions in electrostatics to the solutions of problems relating to electric field and electric potential, boundary conditions and electric energy density.	K3
CO2	Apply the principles of magnetostatics to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.	K3
CO3	Understand the concepts related to Faraday's law, induced emf and Maxwell's equations.	K2
CO4	Analyze Maxwell's equations in different forms (differential and integral) and apply them to wave propagation in different media.	K4
CO5	Evaluate the phenomena of wave propagation in guided medium, in different media and its interfaces and in applications.	K5

QUANTUM MECHANICS I**COURSE OUTCOMES**

At the end of the course the students will be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	Explain the basic postulates and operator formalism of Quantum Physics.	K2
CO2	Solve eigen value problems in Linear Harmonic oscillator, and hydrogen atom.	K3
CO3	Analyze the commutation relation for angular momentum, Eigen value spectrum of angular momentum matrices and addition of angular momenta.	K4
CO4	Identify and deduce the time independent perturbation, various approximation methods for perturbation calculation and solve the Schrodinger equations for real time applications.	K5
CO5	Apply the knowledge of interaction of identical particles to construct the symmetric and anti-symmetric wave functions for various quantum systems.	K3

(A) BIO AND MEDICAL PHYSICS**COURSE OUTCOMES**

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

#	COURSE OUTCOMES	Knowledge Level
CO1	Outline an understanding about scope of biophysics.	K2
CO2	Evaluate knowledge on conformation of symmetry carbon.	K2
CO3	Discuss about DNA and RNA. Explain about structure and function of different viruses.	K3
CO4	Use the methods of detecting and recording the ionizing radiation and its interaction with matter.	K3

CO5	Prepare practically competent in handling radiation emergency situations	K3
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(B) NANOSCIENCE**COURSE OUTCOMES**

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

#	COURSE OUTCOMES	Knowledge Level
CO1	Gain knowledge on the morphology and types of nanomaterials.	K1
CO2	Appreciate the distinguished properties of nanomaterials.	K2
CO3	Differentiate various synthesis methods of nanomaterials.	K5
CO4	Analyse the manifold characterisation techniques	K2
CO5	Appreciate the applications of nanomaterials in distinctive fields.	K3

NON-CONVENTIONAL ENERGY SOURCES AND ENERGY STORAGE DEVICES**COURSE OUTCOMES**

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

#	Course Outcomes	Knowledge Level
CO1	Estimate and tap solar energy, wind energy and tidal energy.	K2
CO2	Design photo voltaic cell, gohar gas plant and fuel cell.	K4
CO3	Understand the nature and power of geothermal energy.	K2
CO4	Gain knowledge on the applications of chemical energy and hydrogen energy.	K1
CO5	Identify the proper distribution and conservation of energy.	K1

THERMODYNAMICS AND STATISTICAL MECHANICS

COURSE OUTCOMES

After successfully completing the course, the students will be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	Analyze the kinetic theory of transport theory, macroscopic analysis of non-equilibrium that has been studied.	K4
CO2	Identify that the theory of transport phenomenon is concerned with determining this distribution function for given external fields.	K5
CO3	analyze the probability distribution can be determined using Boltzmann transport equation.	K4
CO4	understand that the partition function is calculated for all three types of motion and to evaluate the thermodynamical functions.	K2
CO5	understand in FD distribution the system of identical, independent, non-interacting particles sharing a common volume and obeying antisymmetrical statistics.	K2

QUANTUM MECHANICS II

COURSE OUTCOMES

At the end of the course the students should be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	know and discuss time dependent perturbation, transition probability and selection rules of transition in atomic and molecular quantum system.	K2
CO2	identify different scattering phenomena and to determine scattering amplitude for the problems from asymptotic wave function.	K5
CO3	analyze the emission and absorption process of radiation in atomic system and obtain the dispersion relations.	K4
CO4	describe Thomas Fermi model of the atom and develop Hartree-Fock equations for interacting system.	K5

CO5	apply Dirac equation to explain spin and negative energy state of electron and Klein- Gordon equation for particles in electromagnetic field.	K3
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(A) NONLINEAR PHYSICS

COURSE OUTCOMES

On successful completion of the course, the students will be

#	COURSE OUTCOMES	Knowledge level
CO1	able to identify the nonlinear systems and the equilibrium points admitted by any dynamical system	K1
CO2	able to differentiate the chaotic solution from the regular solution for a given dynamical system	K4
CO3	able to appraise the nature of soliton type solutions	K5
CO4	able to explain the second harmonic generation and third harmonic generation.	K2
CO5	able to describe the multiphoton processes and frequency upconversion.	K1

(B) SOLAR ENERGY UTILIZATION

COURSE OUTCOMES

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

#	COURSE OUTCOMES	Knowledge Level
CO1	categorize the various Solar energy measuring instruments.	K4
CO2	describe the principle and working of solar collectors	K1
CO3	appreciate the use of solar energy for water heating.	K5
CO4	explain the principle and working of photovoltaic cells.	K1
CO5	discover the ways to improve the efficiency of solar cells.	K3

(A) MATERIALS SCIENCE**COURSE OUT COMES**

#	COURSE OUTCOMES	Knowledge level
CO1	To design nucleation processes, phase transformations and to outline heat treatment processes.	K2 & K4
CO2	To discuss diffusion processes and deformation of materials.	K2 & K5
CO3	To outline electric and optical properties of materials and formulate their uses.	K2 & K4
CO4	To expose magnetic behaviour of materials and layout polymer mechanisms.	K2
CO5	To gain an understanding on elastic, inelastic and viscoelastic behaviour of materials.	K2

NUMERICAL METHODS AND PROGRAMMING IN C++ AND MATLAB**COURSE OUTCOMES**

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

#	COURSE OUTCOMES	Knowledge level
CO1	solve different problems in different areas of physics using numerical methods.	K3
CO2	extend the numerical methods to analyze the experiment data.	K2 & K4
CO3	interpret the behavior of approximations and have capability to solve system of equations.	K3
CO4	choose different curve fitting methods which leads to develop empirical equations.	K6
CO5	write MATLAB programs to solve physical problems.	K3

DOMESTIC APPLIANCES AND GADGETS IN DAILY LIFE

COURSE OUTCOMES

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

#	COURSE OUTCOMES	Knowledge Level
C01	Explain and Relate the science behind our day-to-day electrical appliances and tell the Role-Play of RO Purifier, AC, Fridge for daily lifestyle	K1, K2,K6
C02	Compare and Connect the various display types available in every day usage.	K2 & K4
C03	Identify and Categorize how to use solar energy effectively for our life style.	K1 & K4
C04	Explain and plan various types of Computer related gadgets suitable for individuals and Teams.	K1& K5
C05	Describe the usage of EM spectrum for mobile communication/networks and teach the need for Android Based Phones and their Applications.	K1 &K3

SOLID STATE PHYSICS

COURSE OUTCOMES

On successful completion of the course, the students will

#	COURSE OUTCOMES	Knowledge level
CO1	be able to relate crystalline structure of a crystalline material to its X-ray diffraction data and to its reciprocal lattice.	K1
CO2	be able to demonstrate the effect of the lattice vibrations on thermal behavior of solids.	K3
CO3	describe the electronic behavior in a solid through the free electron theory.	K1
CO4	be able to explain the origin of energy bands, and how they influence electronic behavior.	K2
CO5	choose various superconductors for various applications.	K6

ADVANCED SPECTROSCOPY

COURSE OUTCOMES

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

#	COURSE OUTCOMES	Knowledge Level
CO1	apply IR and Raman spectra to analyze functional groups.	K2
CO2	use NMR Spectroscopy for analysis of structural determination.	K4
CO3	correlate NQR spectroscopic information of known molecules with their physical description.	K3
CO4	apply NQR and Mossbauer spectroscopy.	K2
CO5	analyze the enhancement mechanisms.	K4

COMMUNICATION ELECTRONICS

COURSE OUTCOMES

Having passed the exam, students will be able to

#	COURSE OUTCOMES	Knowledge Level
CO1	Understand the basic terminology and concepts of Antennas, and wave propagation mechanisms.	K2, K4, K5
CO2	Understand basic concepts and applications of microwave systems, make a logical reasoning of selection of microwave generator for a given circuit.	K2, K3
CO3	Explain the fundamentals of Radar, Different types of Radar and their working, Radar signal Detection techniques, Radar Navigation Techniques.	K3
CO4	Describe and analyze the generation and reception of amplitude or angle modulated signals, address the effect of noise in the reception of AM, FM, pulse-modulated signals.	K3, K4
CO5	Appreciate the relatively new technology in communication viz. fiber optics and understand its overall prospective in communication.	K2, K3

PSYCHOLOGY – UG**INTRODUCTION TO PSYCHOLOGY I****COURSE OUTCOME**

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

	Course outcome
CO1	Define the fundamental processes of fields in Psychology, knowledge gained from the comprehensive overview of research methods, fields, and the various scopes in Psychology
CO2	Apply the basic principles of Sensation, Attention, and Perception.
CO3	Demonstrate the theoretical foundations of Learning and its types.
CO4	Outline the principles of Memory with its theoretical perspectives.
CO5	Explain the importance of Cognition and its processes.

PSYCHOLOGY OF HUMAN DEVELOPMENT-I**COURSE OUTCOME**

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

	Course outcome
CO1	Define the basic concepts, significant facts and research methods in the fields of Developmental Psychology.
CO2	Identify the importance of conception and illustrate the hazards during prenatal period.
CO3	Summarize the physical development, cognitive development, and emotional development in infancy and toddlerhood.
CO4	Interpret the characteristics, physical development, cognitive development, and emotional development in early adulthood.
CO5	Explain the characteristics, physical development, cognitive development, emotional and social development in late childhood.

BIOLOGICAL PSYCHOLOGY – I**COURSE OUTCOME**

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

	Course outcome
CO1	Summarize the importance and the fundamental process of Divisions in Bionsychology.
CO2	Apply the methods of physiological research, visualizing human brain and Neuropsychological testing.
CO3	Infer the Neurons conduction, transmission of electro chemical signals and communication between Neurons.
CO4	Relate brain location, connection and fundamentals of brain autonomy.
CO5	Explain the causes of Brain damage and Neuropsychological diseases.

INTRODUCTION TO PSYCHOLOGY II**COURSE OUTCOME**

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

	Course outcome
CO1	Summarize the fundamental processes underlying human behavior on Personality.
CO2	Explain the principles of Intelligence on theoretical perspectives.
CO3	Define the theories and importance of Motivation.
CO4	Outline the components and functions of Emotions on theoretical perspectives.
CO5	Demonstrate the nature of stress, causes and effects of stress.

BIOLOGICAL PSYCHOLOGY–II**COURSE OUTCOME**

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

	Course outcome
CO1	Explain the significance of Physiological and Neural mechanism of Motivation.
CO2	Identify the general principles of Hormones and its influence on growth and behavior.

CO3	Label the common beliefs on Neurophysiology of sleep, stages, functions, and sleep disorders.
CO4	Outline the Biology of Learning, Memory, the roles of various brain structures and its impairments.
CO5	Define the Bio psychological investigation of Emotion and the role of Autonomic Nervous System in Facial Expressions.

PSYCHOLOGY FOR EFFECTIVE LIVING

COURSE OUTCOME

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

	Course outcome
CO1	Develop Positive Thinking and overcome negative thoughts.
CO2	Interpret an enhancement of Positive traits.
CO3	Construct an effective method of academic stress and management.
CO4	Label the elements of procrastination and construct effective time management techniques.
CO5	Compare and contrast the determinants of risk taking behaviours and demonstrate good anger management skills.

SOCIAL PSYCHOLOGY

COURSE OUTCOME

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

	Course outcome
CO1	Demonstrate and identify the causes of social behavior and methods of social psychology.
CO2	Explain the theories of attribution and attitude formation.
CO3	Illustrate social influence and interpersonal attraction.
CO4	Explain social perspectives of prejudice.
CO5	Define the theories and causes of aggression.

PSYCHOLOGY OF HUMAN DEVELOPMENT II**COURSE OUTCOME**

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

	Course outcome
CO1	Infer the changes and effects that taking place during puberty.
CO2	Demonstrate the characteristics, physical, cognitive development, emotional and social development in adolescence.
CO3	List the physical development, Erikson theory, career develop and hazards during early adulthood.
CO4	Illustrate the physical, cognitive development and vocational life in middle adulthood.
CO5	Identify the emotional, social development in early adulthood. Outline the career changes and planning for retirement in middle adulthood.

PSYCHOLOGICAL STATISTICS I**COURSE OUTCOME**

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

	Course outcome
CO1	Illustrate the importance and fundamentals of statistics.
CO2	Build the frequency distribution of groups and ungroups data.
CO3	Demonstrate the measures of Central tendency.
CO4	List out the measures of variability.
CO5	Compare and contrast the types of Correlation.

EDUCATIONAL PSYCHOLOGY**COURSE OUTCOME**

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

	Course outcome
CO1	Explain the historical background, knowledge and skills of effective teachers and the research methods in Educational Psychology.
CO2	Organise the implications of motivation, teaching and learning.
CO3	Identify the various approaches to learning.
CO4	Outline the knowledge on the strategies for effective class room management.
CO5	Classify the different exceptionalities of learners.

GERIATRIC PSYCHOLOGY**COURSE OUTCOME**

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

	Course outcome
CO1	Demonstrate the scope of Geriatric psychology and explain the impact of aging.
CO2	Illustrate the characteristics, motor abilities, interest and hazards of adjustments in old age.
CO3	List the vocational and family adjustments in old age.
CO4	Develop the attitudes in successful aging.
CO5	Identify the quality of life and social supports in old age.

PSYCHOLOGICAL STATISTICS II**COURSE OUTCOME**

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

	Course outcome
CO1	Explain the characteristics and applications of normal curve.
CO2	Illustrate the distribution of sample mean.

CO3	Construct the hypothesis testing on basic concepts.
CO4	Develop the different techniques on Parametric and Non-parametric statistics.
CO5	Explain the Analysis of variance.

PSYCHOLOGICAL DISORDERS I

COURSE OUTCOME

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

	Course outcome
CO1	Define abnormal behavior and explain Historical perspectives of Abnormal Behaviour, causes and different research approach.
CO2	Label the types of Assessment and Ethical issues in assessment.
CO3	Explain stress; Adjustment disorders and name the types of Anxiety disorders.
CO4	Compare and contrast Unipolar and Bipolar mood disorders. Illustrate the Suicide prevention and intervention.
CO5	Outline Somato form and Dissociative disorders and explain the causes and

RESEARCH METHODOLOGY

COURSE OUTCOME

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

	Course outcome
CO1	Demonstrate the foundations of research.
CO2	Illustrate the importance of research problem and types of samplings.
CO3	Summarize the basic concepts and types of research design.
CO4	Explain the methods and types of Data collection.
CO5	Construct the use of APA style in writing research reports.

ORGANIZATIONAL BEHAVIOR

COURSE OUTCOME

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

	Course outcome
CO1	Illustrate the discipline of organizational behavior and the organizational behavior model.
CO2	Demonstrate organizational behavior management function, roles and skills.
CO3	Construct the organizational structure of departmentalization, centralization, formalization and explain its designs.
CO4	Compare the strong organizational culture versus weak organizational culture and outline organizational climate.
CO5	Identify the influence, outcomes, causes, measurement and the impact of job satisfaction.

EXPERIMENTAL PSYCHOLOGY

COURSE OUTCOME

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

	Course outcome
CO1	Illustrate and interpret the attention test.
CO2	Interpret the different types of perception.
CO3	List out the different learning test.
CO4	Demonstrate the concept formation and creativity.
CO5	Infer the various aptitude test.

COUNSELLING PSYCHOLOGY I

COURSE OUTCOME

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

	Course outcome
CO1	Explain the goals, and the importance of counselling.
CO2	Extend the different theories of counseling and illustrate the implications.

CO3	Illustrate the counseling skills and its importance.
CO4	Define group counseling and its process.
CO5	Identify the special areas and the importance of counseling for people in need.

COUNSELLING PSYCHOLOGY II

COURSE OUTCOME

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

	Course outcome
CO1	Explain the goals, characteristics and ethics of counseling.
CO2	Infer the different theories of counseling and examine the implications.
CO3	Summarize the group counseling process and counseling skills.
CO4	Explain the importance of counseling in special situation.
CO5	Identify the special areas and the importance of counseling for people in need.

PSYCHOLOGY OF RELATIONSHIPS

COURSE OUTCOME

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

	Course outcome
CO1	Summarize the types of relationships.
CO2	Organize the role of factors influencing interpersonal attraction.
CO3	Explain the function of Emotional Intelligence in understanding oneself and others.
CO4	Apply the guidelines for creating effective communication.
CO5	Outline the types of conflicts and demonstrates skills for effective conflict resolution.

PSYCHOLOGICAL DISORDERS II

COURSE OUTCOME

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

	Course outcome
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CO1	Demonstrate the types and causes of Eating disorders.
CO2	List out the characteristics of Personality disorders.
CO3	Summarize the Addiction disorders causes and treatment.
CO4	Classify the sub types of Schizophrenia and explain the causes, treatments and outcomes.
CO5	Outline the Therapeutic approaches of pharmacological and Psychological perspectives.

HEALTH PSYCHOLOGY

COURSE OUTCOME

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

	Course outcome
CO1	Demonstrate the need for Health Psychology and research done in this field.
CO2	Construct the practice of good health behaviours for primary prevention of diseases.
CO3	Apply the promotion of health behaviours and ways of coping.
CO4	Explain the management of chronic health disorders.
CO5	Utilise the health services to improve the quality of life.

LEADERSHIP AND TEAM BUILDING

COURSE OUTCOME

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

	Course outcome
CO1	Interpret leadership management and its effectiveness.
CO2	Explain the leadership skills, traits, attribute effective leaders and how to develop leadership skills
CO3	Demonstrate the team building, characteristics of team and managing teams.
CO4	Illustrate the skills of team leaders to build high performance teams.
CO5	Construct the team effectiveness and explain the purpose of team building.

PSYCHOLOGICAL TESTING**COURSE OUTCOME**

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

	Course outcome
CO1	List the various Memory tests.
CO2	Illustrate the appropriateness and quality of Mental health settings.
CO3	Demonstrate and interpret the Personality test.
CO4	Infer the various Intelligence test.
CO5	Interpret the Motivation test.

SPORTS PSYCHOLOGY**COURSE OUTCOME**

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

	Course outcome
CO1	Explain the scope, role of sports psychologists and demonstrate the ethical standards of sports and exercise.
CO2	Illustrate the approaches to motivation and concept of aggression in participants.
CO3	Identify the strategies to enhance the achievement motivation on Performance.
CO4	Construct the Sports Psychological intervention in improving athletic performance.
CO5	Find the role of other Psychological intervention and techniques.

CONSUMER BEHAVIOR**COURSE OUTCOME**

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

	Course outcome
CO1	Define the consumer motivation and identify its measurements.
CO2	Explain the consumer personality and its cognitive factors.

CO3	Summarize the consumer decision making.
CO4	Show the influences in consumer buying decision.
CO5	List the applications of consumer behaviour.

HUMAN RESOURCE DEVELOPMENT

COURSE OUTCOME

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

	Course outcome
CO1	Define the concept and scope of human resource development.
CO2	Summarize the human resource policies and its advantage.
CO3	Infer the importance of human resource planning.
CO4	Label the training concept and its types.
CO5	Construct the steps and methods of training process.

WORK PLACE PSYCHOLOGY

COURSE OUTCOME

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

	Course outcome
CO1	Infer the historical context and explain the research methods in work and organization.
CO2	Build the importance of recruitment process and illustrate the strategies of selection in organization.
CO3	Illustrate the need, importance, and ratings in performance appraisal.
CO4	Identify the Ergonomics and applications in workplace.
CO5	Find the nature, causes of accidents and prevention techniques in workplace. Outline the ethics and work.

PSYCHOLOGY – PG**ADVANCED RESEARCH METHODOLOGY****COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Develop an understanding on the kinds of research, its objectives and process.
CO2	Discuss the notion of variables, concepts, constructs and samples.
CO3	Maximize their knowledge about the various types of research designs in different settings.
CO4	Improve their proficiency in the numerous methods of data collection and its analysis.
CO5	Formulate an effective report and widen their horizons for future research.

BEHAVIOR MODIFICATION**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Explain the foundation and concepts for Behaviour Modification
CO2	Evaluate the basic principles of Behaviour Modification and examine the different assessment methods
CO3	Compare and contrast the classical conditioning and social learning techniques ion Behaviour Modification
CO4	Analyse operant conditioning strategies in Behaviour Modification
CO5	Appraise the role of various cognitive Behaviour Modification techniques

PERSONALITY PSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Examine the different domains and levels of personality analysis.
CO2	Determine the importance of dispositional domain in understanding in personality.
CO3	Estimate the role of biological and evolutionary domain to personality
CO4	Discuss the intrapsychic approaches to personality.
CO5	Elaborate the component of cognition or experiential domain to personality.

ADVANCED COUNSELLING PSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Explain the professional boundaries and the principles of intervention in counselling.
CO2	Elaborate the importance of Psychoanalytic approach.
CO3	Discuss the basic concepts and the practice of cognitive Behavior Therapy
CO4	Determine the hope and the ability to reach self-actualization of Humanistic Approaches.
CO5	Evaluate the importance and the practice of cognitive Analytic Therapy and solution focused therapy.

PSYCHOLOGICAL DISORDERS IN CHILDHOOD

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Determine the causes, diagnosis and treatment of Tics, Tourette"s and Stereotypic movement Disorders and infer the reasons for formation of habits in children.

CO2	Evaluate the features, assessment and treatment of fear and anxiety in children and analyse toileting problems in children.
CO3	Explain the normal structure of sleep and interpret the various disorders in sleep.
CO4	Discuss the diagnosis, causes, treatment of autism and ADHD
CO5	Elaborate on the types of learning disabilities, compare and contrast on the remediation models and examine the various school problems in children.

NEUROPSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Determine the history Neuropsychology
CO2	Discover the methods of investigating the brain
CO3	Appraise the various assessment techniques in Neuropsychology
CO4	Explain the functional Neuroanatomy of brain
CO5	Discuss the various Neuropsychiatric disorders

TEST CONSTRUCTION AND STANDARDIZATION

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Discuss the measurement methods in modern psychological research.
CO2	Examine the steps involved in test construction.
CO3	Determine the problems of scoring and highlight the importance of scoring.
CO4	Analyse the concept of norms and interpret the methods of calculating norms.
CO5	Elaborate on the importance of reliability and validity of tests.

POSITIVE PSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Discuss the rationale behind positive psychology.
CO2	Examine the key cultural aspects underpinning positive psychology.
CO3	Determine the processes involved in the role of emotions in one's life.
CO4	Analyse the basic concepts of cognition for their own lives and personal strength.
CO5	Elaborate on the influence on a positive approach to mental health.

PSYCHOTHERAPY I

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Explain the scope, educational approaches and the importance of Psychotherapy.
CO2	Examine the Principles of Psychotherapy and the Equipment of Psychotherapist.
CO3	Evaluate how and when to do Supportive therapy as a routine reasoning.
CO4	Estimate the actual remodeling of Patient's attitude and behavior through re-educative therapy.
CO5	Interpret the awareness of crucial unconscious conflicts and its derivatives.

PSYCHOLOGICAL ASSESSMENT – I

COURSE LEARNING OUTCOMES

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

	Course outcomes	BTCL
CO1	Construct an understanding of the basic principles of psychological assessment.	06
CO2	Develop the skills of observation and scientific reporting in psychology.	06
CO3	Compile interpretations and draw conclusions based on the norms given in the manual.	06

CO4	Design a report which reflects the details of the test, the aim, applications, procedure for administration and the subject's results.	06
CO5	Combine simple statistical techniques for carrying out group based small quantitative research projects.	06

PSYCHOPATHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Develop and understanding of disorders classified according to DSM-5
CO2	Examine the criteria's for diagnosis for Bipolar, Depressive and Anxiety disorders
CO3	Determine the diagnostic criterias and causes for Schizophrenia and Obsessive Compulsive Disorder
CO4	Discuss the causes, diagnosis and risk factors for trauma, stress dissociative and somatic symptoms disorder
CO5	Explain the diagnosis of sexual dysfunctions, Gender Dysphoria and Paraphilic disorders

PSYCHOLOGICAL DISORDERS IN ADOLESCENCE

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Discuss the causes, features and intervention strategies for depression, suicide and parasuicide.
CO2	Explain the risk factors involved in substance abuse and evaluate the treatment and rehabilitation models for children in conflict with law.
CO3	Elaborate on the treatment of eating disorders in adolescents.
CO4	Compare and contrast the intervention for school adjustment and school achievement problems.
CO5	Perceive the changes with puberty and the problems of sex roles in adolescence.

INTERPERSONAL SKILLS

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Discuss the concept of interpersonal skills.
CO2	Analyse the importance of appropriateness for self-disclosure.
CO3	Determine the essentials for self-awareness of feelings and congruence of verbal and non-verbal messages.
CO4	Improve knowledge about developing and maintaining trust.
CO5	Discuss the barriers for interpersonal effectiveness.

COGNITIVE PSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Analyse the history, theories and methods in Cognitive Psychology
CO2	Justify the role of perception and attention in cognition
CO3	Develop a thorough knowledge on the concepts of thinking and problem solving
CO4	Elaborate on the understanding of reasoning and different approaches to effective decision making
CO5	Assess the importance of memory and causes of forgetting

TRAINING AND DEVELOPMENT

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Examine the concept behind training and discover the benefits of it.
CO2	Discuss the needs for training and evaluate its importance.

CO3	Improve their knowledge in uses of different aids in designing training programs.
CO4	Compare and contrast the various methods and techniques in training.
CO5	Determine the strategies for effective training and recommend their execution.

PSYCHOLOGICAL ASSESSMENT – II (PRACTICAL)
COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	List the various tests used in clinical and educational settings.
CO2	Interpret and conduct the psychological tests used in a variety of settings.
CO3	Create an understanding to effectively evaluate the appropriateness and quality of psychological tests and their psychometric properties.
CO4	Prove the ability to work effectively in both independent and group settings.
CO5	Evaluate the psychological traits of a person and exhibit effective measurement of individual differences.

INTERVENTION STRATEGIES FOR CHILDREN AND
ADOLESCENCE
COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Analyse the different behavior therapies for children.
CO2	Explain the mechanism of change through various child psychotherapies.
CO3	Discuss the variety of individual child psychotherapies.
CO4	Appraise the various models of family therapy.
CO5	Evaluate the models of treatment

PSYCHOTHERAPY II**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Measure the primary goals of the initial interview and practical arrangement for therapy.
CO2	Explain the importance of collating data for a correct evaluation of the problem.
CO3	Analyze the diagnosis on the basis of total picture irrespective of the emphasis placed on symptoms.
CO4	Estimate the prognosis by considering the factors, environmental situation and the post therapeutic failures.
CO5	Inspect the need of Psychotherapy and its benefit.

ENHANCEMENT OF EMOTIONAL INTELLIGENCE**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Identify the impact and skills necessary for Emotional Intelligence
CO2	Interpret the strategies essential for being aware of self.
CO3	Illustrate effective approaches and techniques for self-management.
CO4	Relate to the social awareness strategies for becoming emotionally intelligent.
CO5	Develop techniques for efficient relationship management.

PSYCHOLOGY OF GENDER**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Examine the history of Psychology of Gender
CO2	Explain the theoretical perspective on gender
CO3	Compare and contrast the gender based role attitudes

CO4	Estimate the comparisons made based on the gender in cognitive and moral development
CO5	Develop and understanding on Gender related comparisons in emotions

ENHANCEMENT OF SELF –ESTEEM

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Discuss the importance of Self-Esteem
CO2	Inspect the various psychological pathogens to self-concept development
CO3	Value the role of social system in enhancing Self-Esteem
CO4	Estimate the progress of intervention and identify reasons to resistance
CO5	Explain the importance of development transitions

INTERNSHIP – Specialization

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Integrate theory and practice.
CO2	Assess interests and abilities in their field of study.
CO3	Develop communication, interpersonal and other critical skills in for employability process.
CO4	Build a record of work experience.
CO5	Acquire employment contacts leading directly to a full-time job following graduation from college.

CYBER PSYCHOLOGY

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Maximize their knowledge in understanding Cyber Psychology and Cyberspace
CO2	Discuss the issues involved in online consumer behaviour
CO3	Analyse the concerns entailed in the cyberspace relationships and cybersex addiction
CO4	Survey the various kinds of internet addiction
CO5	Explain the types of treatment for internet addiction and propose self-help tips

DISSERTATION

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Select a research process and develop research designs.
CO2	Construct research questions and formulate hypothesis and test them.
CO3	Propose the research and prepare dissertation in the area of their choice.
CO4	Analyse the data with appropriate statistical test
CO5	Develop report writing skills.

BLOCK PLACEMENT

COURSE LEARNING OUTCOMES

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

	Course outcomes
CO1	Select an institution of their area of interest to carry out their practicum.
CO2	Take part in the activities as an intern to work in that respective field.
CO3	Maximize their knowledge in the chosen area through pre-employment work experiences.
CO4	Assume professional responsibilities and gain experience.
CO5	Develop report writing skills.

CASE STUDIES**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Select area of specialization and do their case study.
CO2	Take part in making note of the activities in that respective field.
CO3	Maximize their knowledge in the chosen area work with those problem areas/ disorders.
CO4	Improve their awareness of the various problem areas/ disorders.
CO5	Develop report writing skills.

PSYCHOLOGY OF EXCEPTIONAL CHILDREN**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Discuss the need for education of Exceptional Children and compare special and integrated education
CO2	Determine the characteristics of both gifted and creative children
CO3	Elaborate on the causes and identification of slow learners and the intellectually disabled
CO4	Analyse the relationship of communication, speech and language disorders
CO5	Explain the extend of problems in the physically challenged

PSYCHOTHERAPY III**COURSE LEARNING OUTCOMES**

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

	Course outcomes
CO1	Construct the Supportive and Re educative Techniques as a principle form of therapy and complete

	goal-limited form of treatment.
CO2	Predict the practice of Behavior Modification techniques on immediate and its ultimate goals.
CO3	Distinguish the advantages of Group versus Individuals Therapy and awareness of inner psychological operations.
CO4	Explain the importance of short-term psychotherapy categories and its remedial measures to environmental difficulties.
CO5	Examine the principles of psychotherapy and technical modifications encountered in the treatment of neurotic, psychophysiological, personality and psychotic disorders.

STATISTICS – UG

DESCRIPTIVE STATISTICS

LEARNING OUTCOMES:

At the completion of this paper, you should be able:

- To describe the scope, functions, applications and limitations of Statistics. Also to explain the statistical survey, collection of data, sampling and presentation of data.
- To discuss the importance and uses of central values and dispersions for the various types of data. Also to measure the various measures of averages and scatteredness of the mass of data in a series.
- To study about the lack of symmetry, r^{th} moments and peakedness of the frequency distributions.
- To measure the relationship among the variables and to estimate and predict the unknown and future value through the regression lines. Also to study about the non-linear form can be reduced to linear form by simple transformation of variables. To differentiate between variables and attributes and to examine the conditions for the consistency of given set of data. Also to demonstrate the concept of association of attributes and to obtain a quantitative measure of association between two attributes.

PROBABILITY AND RANDOM VARIABLES

LEARNING OUTCOMES

- To identify the different approaches of probability theory like mathematical and statistical probabilities and use of their day to day life situations.
- To formulate the random variable and its respective probability values and to compare a discrete and continuous random variable.
- To compute the expected value of a random variable through this able to find the variance, covariance, moments etc. and find the conditional expectation and variance of bi-variate random variable.
- To determine the measures of central values, Dispersions, Skewness and Kurtosis through the generating function and also determine the mean and variance through some inequalities.
- To find the mean and variance through some law of large numbers.

STATISTICS PRACTICAL –I

LEARNING OUTCOMES:

Students should be able

- To construct univariate and bivariate frequency distribution tables for the grouped data.
- To draw diagrams and graphs for the ungrouped and grouped data sets.
- To compute the descriptive statistics for the ungrouped and grouped data sets.
- To fit the straight line, second degree, exponential and power curves for the data sets.
- To compute the association of attributes for the data.
- To determine the different approaches of probability for the events.
- To compute the probability functions for discrete and continuous random variables.
- To find the expected value of a random variable.
- To estimate the mean and variance using characteristic function.

MATHEMATICS FOR STATISTICS-I

LEARNING OUTCOMES:

- Distinguish between proper and improper fractions.
- Express an algebraic fraction as the sum of its partial fractions.
- Able to solve a complicated fraction into a sum of simple fractions.
- To determine the sums , expansion and approximation of series including binomial, exponential , logarithmic and fourier.
- Solve problems about polynomials with real coefficients, imaginary and irrational roots .

- Explain the relationship between the derivative of a function as a function and the notion of the derivative.
- Compare the idea of continuity and differentiability
- Able to calculate limits of a function.
- Able to obtain the nth derivative in successive differentiation
- To apply Euler's theorem on homogenous function.

DISTRIBUTION THEORY-I

LEARNING OUTCOMES:

- To define and explain the different statistical distributions (eg. Binomial, Poisson, Normal).
- To calculate moments and generating functions of various distributions.
- To calculate raw moments and central moments including their special cases the mean and variance.
- To develop problem solving techniques needed to calculate probabilities and to solve real-world events,
- To apply selected probability distributions to solve problems.

MATHEMATICS FOR STATISTICS-II

LEARNING OUTCOMES:

- To describe the Integrals of rational and irrational functions. Also to calculate Algebraic functions involving irrational quantities.
- To examine various techniques of integration and apply them to definite integrals. Also to use the properties of definite integrals to evaluate them. To use Integration by parts, the reduction formula can be derived.
- To evaluate a double integral using a change of variables. To use Gamma and Beta functions to evaluate integrals. To compute the Jacobian transformation.
- To expose the basic ideas of Differential Equations. To learn about first order differential equations and linear equations.
- To use Laplace and Inverse Laplace transform methods to solve ordinary and partial differential equations.

BASIC STATISTICS FOR COMPETITIVE EXAM

LEARNING OUTCOMES:

- To describe the scope, functions, applications and limitations of Statistics. Also to explain the statistical survey, collection of data, sampling and presentation of data. To discuss the importance and uses of central values for the various types of data. Also to measure the various measures of averages of the mass of data in a series.

- To discuss the importance and uses of dispersions for the various types of data. Also to measure the various measures of dispersions of the mass of data in a series.
To study about the lack of symmetry, r^{th} moments and peakedness of the frequency distributions.
- To measure the relationship among the variables and to estimate and predict the unknown and future value through the regression lines.

DISTRIBUTION THEORY II

LEARNING OUTCOMES:

At the end of this course, students should be able

- To know the distributions and to find the properties of the distribution through MGF and Characteristic function.
- To know the derivatives of the distributions.
- To know the function of the distributions.
- To derive the limiting distributions.
- To know the order statistics.

MATRIX ALGEBRA

LEARNING OUTCOMES:

- To know the basic concepts transpose and inverse of matrices
- To identify the rank of matrices
- To use the linear independence of vector spaces and sub-spaces

STATISTICS PRACTICAL-II

LEARNING OUTCOMES

To find the rank of matrices using Echelon's form and by using row column transformations.

To estimate the Eigen roots and Eigen vectors for a give real matrix and to verify Cayley- Hamilton theorem.

APPLIED STATISTICS

LEARNING OUTCOMES:

- 1) Identifying the various components of Time Series and to solve them.
- 2) Master the various methods of generating indices and apply them to solve practical problems

NUMERICAL METHODS

LEARNING OUTCOMES:

- To Compute Solution for Algebraic and Transcendental Equation.
- To Construct Simultaneous Linear Algebraic Equations, Finite Difference and Interpolation for Equal Intervals.
- To Compute Central Difference Interpolation Formula for Equal Intervals.
- To Construct Interpolation with Unequal Intervals.
- To Evaluate Numerical Solution of Ordinary Differential Equation.

APPLIED STATISTICS**LEARNING OUTCOMES:**

- Identifying the various components of time series and be able to isolate them.
- Fitting different time series models
- Forecasting future values of the time series
- Generating various methods of indices and apply them to solve practical problems

REAL ANALYSIS**LEARNING OUTCOMES:**

- To define basic concepts of sets of real numbers
- To identify the convergence or divergence of a real sequence
- To use the relation between integrals and differentials

DEMOGRAPHY AND ACTUARIAL STATISTICS**LEARNING OUTCOMES:**

- To analyze critically and construct all the mathematical procedures that measure population change and its underlying factors.
- To visualize the future prospects of population growth.
- To familiarize with the concepts of Vital statistics.
- To learn basic concepts in Actuarial statistics
- To train students to take up a career in Actuarial practice

STATISTICAL ESTIMATION THEORY**LEARNING OUTCOMES:**

- To Demonstrate the Concepts of Parameter, Statistic, Sampling Distribution of a Statistic.

- To Explain and Estimate Confidence Interval and Confidence Limits.
- To develop models based on Bayesian estimation.
- To train students to take up a carrier in biological and data science.

SAMPLING TECHNIQUES

LEARNING OUTCOMES:

- To develop sampling schemes for real time applications
- To compare relative efficiency of different types of sampling
- To use Stratification to reduce the variance of estimators

STATISTICS PRACTICAL-III

LEARNING OUTCOMES

To select appropriate tests based on the available information

To carry out statistical tests of significance and drawing inference from them

TATISTICS PRACTICAL-IV

LEARNING OUTCOMES:

- To Generation of samples under SRSWR and SRSWOR
- To find the unbiased estimator of Population mean in SRSWR and SRSWOR
- To find the Estimator of variance of sample mean in SRSWR and SRSWOR

DESIGN OF EXPERIMENTS

LEARNING OUTCOMES:

- To analyze CRD, RBD, and LSD
- To analyze 2^2 , 2^3 , 3^2 factorial experiments
- To Analyze of split – plot designs

OPERATIONS RESEARCH

LEARNING OUTCOMES:

At the end of this course, students should be able

- To describe the Origins, Developments, Models, Advantages, Limitations and Applications of OR and study concepts and problems of LPP.

- To learn the concepts and determination of initial basic feasible and optimum solutions in transportation and assignment.
- To able determine sequencing problem and determination of game strategies.
- To learn inventory models and to find EOQ value.
- To draw Net work diagram and to find the project duration for CPM and PERT.

BIO STATISTICS

Learning Outcomes :

- 1.To know the areas of applications and common misuses of Biostatistics
- To understand the major study designs that contribute to the understanding of disease Aetiology.
- To introduce the basic concept of probability and to understand few probability distributions that are of importance in Biostatistics
- To explain why the method of selecting a sample is important especially random sampling.
- To perform the appropriate significance tests and to meaningfully interpret the findings from the significance tests.
- To know when a chi-square test to be used and to understand the uses of chi-square tests. -

TESTING OF STATISTICAL HYPOTHESES

LEARNING OUTCOMES:

- To develop Most powerful critical region
- To use Likelihood ratio tests for practical problems
- To use Non-parametric approach for samples from unknown distributions

DESIGN OF EXPERIMENTS

Learning Outcomes :

- Explain the principles of Experimental Design and determine the size of the experimental unit
- Explain in detail analysis and interpretation of one-way, Two-way classification .

- Explain the need for post-hoc test and differentiate between Newman-Keul's test, Duncan's multiple range test and Tukey's test,
- Basic Designs CRD, RBD and LSD and their applications.
- Analysis of RBD with more than one but equal number of observations per cell.
- Derive the formula and the analysis for one missing and two missing observation in RBD and LSD
- Introduce and Explain the need and significance of Factorial Experiment.
- Explain the analysis and interpretation of 2^2 , 2^3 and 3^2 factorial experiments , the principles of Partial and complete confounding in 2^3 factorial experiment and its analysis.
- Explain Split plot design and its analysis.

STATISTICAL QUALITY CONTROL

LEARNING OUTCOMES

1. The learner able construct Control charts for variables.
2. The learner able to distinguish between defective and defect, distinguish between 100% inspection and sampling inspection and compute the probability of accepting or rejecting a lot.
3. The learner able to define acceptance quality level (AQL) and lot tolerance percent defective(LTPD) of the lot; and compute the producer's risk and consumer's risk for an acceptance sampling plan.
4. The able to describe Acceptance Sampling Plans for variables.

STOCHASTIC PROCESSES

LEARNING OUTCOMES:

- To define basic concepts from the theory of Markov chains and compute transition probabilities between states.
- To identify classes of states in Markov chains and characterize the classes.
- To derive differential equations for Markov processes with discrete state space.

STATISTICS – PG

MATHEMATICAL ANALYSIS

LEARNING OUTCOME:

The students will able to

- Define open set, Countable sets, accumulation points, closet set, interior point of a set
- Definition of concepts related to metric space, such as continuity, compactness, completeness and connectedness.
- Determine if subsets of metric space are open, closed, connected, bounded, compact
- Determine if a function on a metric space is discontinuous, continuous or uniformly continuous.
- Apply mathematical concepts and principles to perform numerical and symbolic computation.
- Write clear and precise proofs
- Demonstrate the ability to read and learn mathematics independently.
- Explain the concepts of functions of complex variable, constructions of an analytic functions

ADVANCED DISTRIBUTION THEORY

LEARNING OUTCOMES

Upon completion of the course, learners will be able:

1. To explain and interpret about the properties of power series distributions, compound distributions and truncated distributions.
2. To interpret the properties of special univariate continuous distributions, truncated normal distribution and few non-central distributions for continuous univariate data.
3. To explain the moments for the data come from Bivariate distributions.
4. To interpret the distributions of order statistics with regard to Median, Sample Range and Joint distribution of order two.
5. To identify the data distribution based on One sample and two samples using KS tests.

SAMPLING TECHNIQUES

LEARNING OUTCOMES:

- To apply various sampling methods for different types of data.
- To draw a conclusion about the best sampling procedure.
- To use practical applications of ratio and regression method of estimations.
- To analyze data from multi-stage surveys.
- To use R-Package.

LINEAR ALGEBRA

LEARNING OUTCOMES:

- To define basic terms and concepts of matrices and vectors.
- To use computational techniques and algebraic skills for the study of system of linear equations, Matrix Algebra, Vector spaces, Eigen values and Eigen vectors, orthogonality and diagonalization.
- To analyze critically and construct mathematical arguments that relate to the study of introductory Linear Algebra.

COMMUNICATION SKILLS

Course Outcomes:

After the completion of this course, students will

CO1:become familiarwith basics of LSRW skills.

CO2:sensitize themselves to the appropriate usage of body language.

CO3:understand the effective role of social media in communication.

CO4:comprehend the significance of communication skills in the professional life.

MEASURE AND PROBABILITY THEORY

LEARNING OUTCOMES:

- Will demonstrate the ability to resolve problems that occur in the fieldof Classes, Fields and Sigma Fields. Will develop and apply effective problem-solving skills that will enable one to solve the problems in Measure and Measurable spaces.
- Will demonstrate critical thinking skills in the areas of Integrals and their application to Probability Theory.

- Will demonstrate the ability to evaluate, integrate, and apply appropriate tools in Probability and Conditional Probability measures and in marginal and conditional expectations.
- Will demonstrate the ability to apply basic methods in analyzing the convergence in Probability and r^{th} mean and in Distribution and Characteristics functions.
- Will demonstrate critical thinking skills, such as problem solving using weak and strong law of large numbers and different forms of Central Limit Theorems.

MULTIVARIATE STATISTICAL ANALYSIS

LEARNING OUTCOMES

Upon completion of the course, learners will be able:

1. To explain and interpret the importance of data that come from high dimensional setup using appropriate properties.
2. To draw inference based on multi-variate statistical analysis concerning Mean vector and Covariance matrix.
3. To reduce dimensions and identify factors from multi-dimensional data using Principal Component and Factor Analysis respectively.
4. To classify and assign a new item/object to any of the two or more populations using Discrimination and Classification.
5. To group variables or items that belong to multi-dimensional data using Cluster algorithms.

STATISTICAL ESTIMATION THEORY

LEARNING OUTCOMES:

At the completion of this paper, you should be able to:

1. To understand the consistency, sufficiency and unbiasedness.
2. To understand the concepts and derive the uniformly minimum variance unbiased estimators.
3. To derive the inequality including CR inequality, KCR inequality and Bhattacharya inequality.
4. To estimate the parameter using method of moments, method of MLE, Interval estimation and shortest with confidence intervals.

5. To learn the concepts and to apply simple numerical illustration for Loss function, Risk function and Bayes estimate.

STATISTICAL PRACTICAL I

LEARNING OUTCOMES

Upon completion of the course, learners will be able to:

- Fit univariate discrete, continuous, bivariate distributions and write interpretations for the given data.
- Determine the distribution of r^{th} order statistics, joint distribution of order two (r,s) , median and range based on order statistics data and write interpretations based on data.
- Perform KS One-sample and two-sample tests and identify the distribution of given sample data.
- Obtain Partial and Multiple Correlation.
- Perform Hotelling T^2 statistic for testing Single Mean Vector, Equality of Two Mean Vectors and draw conclusions.
- Determine Principal Components, Factors, Factor Scores and write interpretations.
- Classify items or variables in to groups using appropriate algorithms and write interpretations.

STATISTICAL PRACTICAL II

LEARNING OUTCOMES:

- To obtain the ration estimator for simple random sampling and stratified random sampling.
- To find the efficiency and precision of ratio and regression estimators.
- To compare separate and combined regression estimators.
- To study the intra class coefficient and efficiency of various clusters taken as sampling units.

STATISTICAL ESTIMATION THEORY

LEARNING OUTCOMES

- To estimate the point estimates of biased and unbiased.
- To find the inequality of Cramer-Rao.
- To estimate the parameter using method of Moments and MLE for the various parametric distribution.

- To determine the interval estimate of mean(s), proportion(s) and variance for the small and large samples.
- To compute the prior and posterior estimates.

ADVANCED OPERATIONS RESEARCH

LEARNING OUTCOMES:

- Perform sensitivity analysis on various parameters in an LP model without affecting the optimal solution by introducing a new variable and a constraint in the existing LP model with reformation.
- Evaluate the need of parametric analysis to find various basic feasible solutions of any LP problem, which become optimal one after the other due to continuous variations in its parameters of LP problem.
- Use integer LP problem in several areas of managerial decision-making.
- Assess the use of some of the non-linear programming techniques such as quadratic programming and solve quadratic programming problem using Wolfe's method and Beale's method.
- Develop recursive function based on Bellman's principle of optimality to get an optimal solution of any multi-stage problem and develop minimum path using Dynamic programming approach.
- Identify and examine situations that generate queuing problems and understand various components (or parts) of a queuing system and description of each of them.
- Explain the meaning of inventory control as well as various forms and functional role of inventory.

RESOURCE MANAGEMENT TECHNIQUES

LEARNING OUTCOMES:

- To describe the Origins, Developments, Models, Advantages, Limitations and Applications of OR and study concepts and problems of LPP.
- To learn the concepts and determination of initial basic feasible and optimum solutions in transportation, assignment and sequencing problems.
- To learn the concepts and determination of game strategies and Network diagram, project duration in Game theory, CPM and PERT.

PERSONALITY ENRICHMENT

Course Outcomes:

After the completion of this course, students will

CO1:handle difficult situations with grace, style, and professionalism.

CO2:exhibit accurate sense of self.

CO3:develop an understanding of and practice personal and professional responsibility.

CO4:nurture a deep understanding of personal motivation.

APPLIED REGRESSION ANALYSIS AND FORECASTING TECHNIQUES

LEARNING OUTCOMES:

- To fit and predict a k-variable regression model
- To discuss about Auto-Correlation, Heteroscedasticity and Multicollinearity of a k-variable data
- To forecast time series data using smoothing methods and ARIMA models
- To develop Autoregressive regression models for time series data

LINEAR MODELS AND DESIGN OF EXPERIMENTS

LEARNING OUTCOMES

- To make use of linear model concepts to test specific design of parameters.
- To use the relation between theoretical models and their practical applications for experiments in agricultural and industrial designs.
- To use Block designs and Factorial experiments to optimize the available resources.
- To use fractional factorial designs for experiments with more number of treatments.

STATISTICAL PRACTICAL III

LEARNING OUTCOMES

- To estimate parameters of simple and multiple linear regression using R-language
- To test of Autocorrelation, Heteroscedasticity and multicollinearity in linear regression using R-language
- To understand the concept of stationarity of time series data with ACF and PACF
- To fit time series data using smoothing methods and ARIMA models using R-language

TESTING STATISTICAL HYPOTHESES

LEARNING OUTCOMES:

- To Calculate UMPU for parametric distribution
- To test the hypotheses for Non-parametric distributions.
- To apply the data to both parametric and non-parametric test.
- To test for randomness for the given data.

STATISTICAL PRACTICAL IV

LEARNING OUTCOMES:

- To use R for data input for block designs
- To compare treatments from balanced and partially balanced designs.

STATISTICAL QUALITY CONTROL & RELIABILITY

LEARNING OUTCOMES

- To learn and construct control charts for variables using R-language
- To draw Operating characteristic curve for continuous sampling plans and chain sampling plans using R-language
- To compute failure, hazard and reliability functions using R-code
- To find system reliability for mixed model failure model
- To compute the number of redundant units by optimizing reliability using R-language

SURVIVAL ANALYSIS

LEARNING OUTCOMES:

At the end of this course, students should be able

- To discuss the introduction of Survival analysis and formulate the Functions of survival time.
- To describe the Non-parametric methods and Comparing Survival distributions for the given survival time.
- To formulate the different survival functions through the parametric methods and Estimate its parameter.

- To study the Cox Proportional Hazards Model and Non-proportional hazards models for the survival time.
- To demonstrate the Graphical Methods for the given survival time and to describe the tests of Goodness of fit and distribution selection. Also to identify the prognostic factors through the Parametric Regression models.

STATISTICAL QUALITY CONTROL AND RELIABILITY

LEARNING OUTCOMES:

- To create control charts for fraction non-confirming items with fixed and variable sample size
- To understand process capability analysis using different methods
- To impart knowledge about different accepting sampling plans that are used in industries
- To discuss about the concepts on reliability and hazard models
- To create models on system reliability for parallel and series systems

RESEARCH METHODOLOGY

LEARNING OUTCOMES:

At the end of this course, students should be able

- To study the introduction of research methodology.
- To construct research problems and design.
- To learn the Measurement and Scaling Techniques.
- To learn the Sampling Fundamentals.
- To Interpret the results and able develop Report Writing.

CAREER Skills

Course Outcomes:

After the completion of this course, students will

CO1:actively participate in group discussions towards gainful employment.

CO2:prepare their resume/CV in an appropriate template using proper syntax.

CO3:cut an edge over other candidates in interviews and presentations.

CO4:identify career opportunities in consideration of their own potential and aspirations.

TESTING STATISTICAL HYPOTHESES

LEARNING OUTCOMES:

1. To train the students in mastering the techniques of parametric and non-parametric test.
2. To motivate the students to apply the techniques in research activities.

STOCHASTIC PROCESSES

LEARNING OUTCOME:

- Student will equip their knowledge with theoretical and practical skills which are necessary for the analysis of stochastic dynamical system in economic, financial mathematics, engineering, business and other fields.
- Classify the various types of time parameter and states space.
- To attain knowledge about stochastic process in the time domain such as Markov processes with a discrete state space, including Markov chains, Poisson processes and birth and death processes.
- Demonstrate the specific applications to Poisson and Gaussian processes.
- Carry out derivations involving conditional probability distributions and conditional expectations.
- Define basic concepts from the theory of Markov chains and present proofs for the most important theorems.
- Explain the stochastic processes can be grouped into various categories which include random walks, Martingales, branching process, renewal processes, queuing processes based on mathematical properties.
- Applications in many disciplines including sciences such as biology, chemistry, physics, signal processing, telecommunications.

BAYESIAN INFERENCE

LEARNING OUTCOMES:

At the end of this course, students should be able

- To determine posterior distributions, Bayesian point and interval estimates.
- To find Akaike's Information Criterion, AIC, BIC and DIC.
- To learn Laplace Approximation, Monte Carlo Integration, Markov Chain Monte Carlo and their numerical calculations.
- To predict Plug-in, Likelihood, Bootstrap, Bayesian, Posterior Predictive Distribution and its computations.

LEADERSHIP AND MANAGERIAL SKILLS

Course Outcomes:

After the completion of this course, students will

CO1:examine various leadership models and understand/assess their skills, strengths and abilities that affect their own leadership style and can create their leadership vision.

CO2:demonstrate a set of practical skills such as time management, self-management, solving problems and team leadership.

CO3:understand the basics of entrepreneurship and develop business plans.

CO4:Appreciate the importance of ethics and moral values for making of a balanced personality.

PLANT BIOLOGY & PLANT BIOTECHNOLOGY – UG**PHYCOLOGY & MICROBIOLOGY****COURSE OUTCOMES**

CO No.	Course Outcomes On completion of the course, students will be able to	Level
CO-1	Recognize and differentiate diverse life forms	K1
CO-2	Understand the importance of algae and microbes in human welfare	K2
CO-3	Develop an idea to place the organisms in respective groups	K3
CO-4	Analyze the importance of perpetuation with respect to living world	K4
CO-5	Value the contributions of various phycologists and microbiologists	K5
CO-6	To improve their ability to self-study and acquire knowledge about algae and microbes other than that presented by the lecturer	K6

ALLIED BOTANY – I

CO No.	Course Outcomes On completion of this course, students will be able to	Level
CO-1	Gather basic information on plant kingdom	K1
CO-2	Understand the importance of various groups of plants	K2,
CO-3	Evaluate and create methods for understanding plant physiology	K3, K4, K5
CO-4	Understand, predict and analyze the basics of Genetics and plant biotechnology	K1, K2, K3,
CO-5	Develop techniques to carry out mushroom culture and grow medicinally important plants	K4, K5

HORTICULTURE**COURSE OUTCOMES**

CO No.	Course Outcomes On the completion of this course students will be able to	Level
CO-1	Gain knowledge on horticulture and organic farming	K-1

CO-2	Understand the importance of plant propagation	K-2
CO-3	Evaluate and create more methods to propagate commercially important horticulture crops	K-5
CO-4	Understand and analyze the basics of organic farming	K-2,K-4
CO-5	Apply various techniques to enhance biofertilizers	K-3

MYCOLOGY AND PHYTOPATHOLOGY

COURSE OUTCOMES

CO No.	Course outcome	Level
	On completion of this course students will be able to	
CO -1	Understand the diversification of fungal forms	K2
CO -2	Gain knowledge on the structure, reproduction of certain fungal and lichen forms.	K1
CO -3	Compare and analyze the life cycle patterns	K3,K4
CO -4	Identify disease infected plants and its causal organisms	K5
CO -5	Appreciate the economic and ecological importance of lichens	K6

PRACTICAL I – PHYCOLOGY AND MICROBIOLOGY; MYCOLOGY AND PHYTOPATHOLOGY; HORTICULTURE

COURSE OUTCOMES

CO No.	Course Outcomes	Level
	On completion of this course, students will be able to	
CO-1	Gather elementary knowledge on classification	K1
CO-2	Understand the importance of plant identification with characters	K2,
CO-3	Provides details on various types of tissues	K3, K4, K5
CO-4	Enlighten students with the microorganisms around us	K1, K2, K3,

CO-5	Get acquainted with various horticulture techniques in establishing gardens	K4, K5
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BIODIVERSITY AND ENVIRONMENTAL BIOTECHNOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes	Level
	On completion of this course, students will be able to	
CO-1	Acquire basic knowledge on biodiversity, examine the problems and develop solutions	K1,K2, K3, K4, K5
CO-2	Predict the consequences of climate change, analyze and apply these principles in controlling climate change	K1,K2, K3, K4, K5
CO-3	Discuss biodegradation and come out with interpretations	K1, K2
CO-4	Solutions for biological waste management	K3
CO-5	Analyze and develop methods for restoring degraded land	K4, K5

BRYOPHYTES AND PTERIDOPHYTES

COURSE LEARNING OUTCOMES:

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Outline the characteristics of bryophytes their classification and phylogeny and relate the thallus organization	K2, K4
CO2	Compare the vegetative and reproductive structure of bryophytes and compile its economic importance	K3, K4
CO 3	Paraphrase and the characters, and economic importance of Pteridophytes and analyse its classification	K2, K4
CO4	Discuss the structure, reproduction and life cycle patterns of Pteridophytes	K3, K4
CO5	Compare the spore producing organs and stele types	K2, K4

GYMNOSPERMS, PALAEOBOTANY AND EVOLUTION

Course Outcomes:

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

1. Enrich their knowledge of gymnosperms.
2. Discriminate the fossils and living plant and their values.
3. Apply the theories of evolution.

PLANT MOLECULAR BIOLOGY

COURSE OUTCOMES

CO No.	Course Outcomes	Level
	On completion of this course, students will be able to	
CO-1	Describe the structure and functions of various cell organelles	K2
CO-2	Differentiate and explain the chromosome types, cell signaling and cell cycle patterns	K2, K4
CO-3	Compare and interpret the properties of DNA and the enzymes involved in replication and DNA repair mechanisms	K3, K4
CO-4	Develop insight about the central dogma of molecular biology – replication, transcription and translation	K6
CO-5	Develop the ability to relate the operon concept and the gene regulation in prokaryotes and eukaryotes	K6

PLANT ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS

COURSE OUTCOMES

CO No.	Course Outcomes	Level
	On completion of this course, students will be able to	
CO-1	Identify dicotyledonous and monocotyledonous plants and their parts using anatomical features.	K2
CO-2	Explain different tissue systems occupying different plant parts, and the process of pollination and fertilization	K2, K4
CO-3	Differentiate the structure of stem, root and leaf, and male and female reproductive organs	K3, K4
CO-4	Evaluate the growth patterns of stem and root, dicotyledonous and	K3, K4

	monocotyledonous plants, and their reproductive biology	
CO-5	Comparing: the process, types and agencies of pollination; the different seed structures and dispersal mechanisms; and reasoning out the phenomena of apomixis and polyembryony	K5, K6

TAXONOMY AND ECONOMIC BOTANY OF ANGIOSPERMS

COURSE OUTCOMES

At the end of successful completion of the course, our students are capable of;

CO No.	Expected Course Outcomes	Cognitive Level
1	Identifying the Plants and Plant parts based on their Morphology and modifications;	K1
2	Classifying the Plant parts based on their vegetative and Reproductive Morphology;	K2
3	Analyzing the concepts of classifications and recognizing the given plant practically;	K4
4	Distinguishing the closely related families based on their characters;	K3
5	Formulating Taxonomical description with floral diagrams and floral formula for the given plant dissecting the floral parts; and	K6
6	Explaining the Economic significance of the cultivated plants with their product values.	K2

PLANT ECOLOGY AND PHYTOGEOGRAPHY

COURSE OUTCOMES

After completion of the course students will be able to

CO No.	CO statement	Cognitive Level
CO1	Gain knowledge on the factors affecting vegetation, adaptations in plants and development of plant communities	K1
CO2	Identify the types of ecosystem and the nutrient cycles that exists in an environment.	K2
CO3	Acquire knowledge on biodiversity and the methods of conservation of natural resources.	K2

CO4	Analyse the impact of pollution on natural resources and the remedial measures to solve the issues.	K3 & K4
CO5	Apply the principles of phytogeography and identify the vegetational types of India and Tamil Nadu	K5 & K6

PHYTOANALYTICAL TECHNIQUES

Course outcomes –

Upon completion of this course, the student should be able to

CO No.	Course outcomes	Cognitive Level
CO1	Acquires basic knowledge in Phytochemistry and Phytochemicals	K1
CO2	Identify the active principles of medicinal plants	K2
CO3	Apply the analytical techniques in Plant Biology	K3
CO4	Experiment with the appropriate methods to separate and evaluate the active principles	K4
CO5	Select analytical methods for different classes of natural products, and investigate the phytochemicals present in medicinal plants	K5 & K6

HERBAL BOTANY

COURSE OUTCOMES

CO NO.	On completion of the course the students will be able to	Level
CO-1	value the traditional Indian system of medicine	K1
CO-2	understand the vast knowledge of herbal plants	K2
CO-3	recognize the importance of herbs as medicinal plants and their usage in common ailments	K3
CO-4	prepare some Ayurvedic and Siddha formulations	K4

CO-5	carry out research on organoleptic studies of medicinal plants.	K5
CO-6	become an herbal entrepreneur	K6

VALUE EDUCATION

Course Outcome:

- Students will understand the importance of value based living.
- Students will gain deeper understanding about the purpose of their life.
- Students will emerge as responsible citizen with clear conviction to practice values and ethics in life.
- Students will contribute in building a healthy nation.

GENETICS AND PLANT BREEDING

COURSE LEARNING OUTCOMES

CLO NO.	STATEMENT	LEVEL
CO1	Describe the principles of Genetics	K2
CO2	Explain linkage, Crossing Over.	K2
CO3	Identify the types of mutations, Analyse the outcomes of Mutations	K1, K4
CO4	Interpret the Hardy-Weinberg's principle	K3
CO5	Develop Skills in Plant Breeding	K4, K5

PLANT BIOCHEMISTRY AND PHYSIOLOGY

Learning Outcomes

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

CO No.	Expected Course Outcomes	Level
1	Understand the various physiological aspects in plants	K2
2	Understand the basic aspects of plant metabolism	K2
3	Examine the role of minerals and growth regulators, structure and importance of biomolecules in plants	K3

4	Evaluate the role of enzymes in plant life	K5
5	Formulate methods to improve basic skills and techniques related to plant physiology and biochemistry	K6

PLANT BIOTECHNOLOGY

CO No.	Course Learning Outcomes: After the completion of this course the students will be able to	LEVEL
CO1	Acquire knowledge about modern plant biotechnology	K1
CO2	Understand the principles and the processes in plant biotechnology.	K2
CO3	Apply the acquired knowledge in biotechnological, pharmaceutical, medical, ecological and agricultural fields	K3
CO4	Analyze the biotechnological techniques to explore the molecular biology of plants	K4
CO5	Evaluate how biotechnology is used to for plant improvement, the biosafety concern and the ethical issues	K5
CO6	Create a small-scale laboratory and can design <i>invitro</i> experiments	K6

BIONANOTECHNOLOGY AND BIOINFORMATICS

CO No	Course Outcomes On completion of this course, students will be able to	Level
CO-1	Gather basic information on computers and internet	K1
CO-2	Understand the importance of bioinformatics	K2,
CO-3	Evaluate and construct methods for sequence DNA	K3, K4, K5
CO-4	Understand, Predict and analyze the basics and the importance of plant nanotechnology	K1, K2, K3,
CO-5	Develop and analyse biosensors and applications of nanotechnology	K4, K5

PLANT BIOLOGY & PLANT BIOTECHNOLOGY – PG
MICROBIOLOGY & MICROBIAL TECHNOLOGY

COURSE LEARNING OUTCOMES:

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Recognize and describe the basic microbial structure, reproduction and function	K1,K2
CO 2	Classify the various culture media: designing of industrial strains and various media optimization strategies	K2, K5
CO 3	Analyse the production, evaluation of fermented products and organic acids	K3, K4
CO 4	Examine the strategies of product recovery from a fermentation broth	K4, K5
CO 5	Evaluate the role of microbes of varied environment in mitigating environmental pollution	K5. K4

ALGAE AND ALGAL BIOTECHNOLOGY

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Explain and interpret why few algae are included in the plant kingdom while others are not	K2,K3
CO 2	Discuss the role of algae in	K2, K4

	biogeochemical cycling	
CO 3	Describe and compare the structure and reproduction of algae represented from different groups	K2, K4
CO 4	Analyse the importance of algae in biotechnology	K4
CO 5	Evaluate the role of algae in industries and bioremediation	K5

FUNGI AND FUNGAL BIOTECHNOLOGY

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Describe the fungal and lichen diversity, nutrition and reproduction,	K1
CO 2	Differentiate the salient features in major groups of fungi	K2, K3
CO 3	Identify and classify different genera	K1, K3
CO 4	Examine the design of a fermenter	K3, K4
CO 5	Evaluate the potentiality of fungi as feed and in industries in the production of compounds	K5

PALAEOBOTANY AND EVOLUTION**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Explain the Palaeo environment, fossilization process and the types of fossils	K2, K3
CO 2	Apply the fossil study in oil exploration and coal excavation	K3
CO 3	Analyze the evolutionary history and various theories of Evolution	K4
CO 4	Evaluate the phylogeny of extinct and extant forms	K5
CO 5	Create fossil DNA data base and design radio carbon dating techniques	K6

ALGAL CULTIVATION**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Classify and analyse the various cultivation methods of algae (Micro and macroalgae)	K2, K3
CO 2	Compare photobioreactors and open ponds for algal cultivation	K3
CO 3	Discuss the cultivation	K4

	methods of commercial sea weeds	
CO 4	Develop methods for biofuel synthesis	K6
CO 5	Devise methods for carbon sequestration with algae	K5

ARCHEGONIATAE: BRYOPHYTES, PTERIDOPHYTES AND GYMNOSPERMS

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Summarize their knowledge of Archegoniate taxonomy, extant and extinct species of archegoniate	K2, K4
CO 2	Examine and compare the structure, reproduction, life cycles Bryophytes.	K2, K3
CO 3	Compare and contrast the structure and reproduction of various Pteridophytes	K3,K4
CO 4	Analyse and illustrate the lifecycle patterns of different Gymnosperms	K3,K4
CO 5	Evaluate and discuss the stress responsiveness of Bryophytes and conifers; Construct a list on the economic importance of Bryophytes, Pteridophytes and Gymnosperms	K5, K6

CELL AND MOLECULAR BIOLOGY**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Describe membrane structure and their properties	K2
CO 2	Explain detailed structure and function of cell organelles	K2
CO 3	Differentiate between cell cycle patterns	K4
CO 4	Interpret cell signaling pathways and functions of proteins involved in it	K3
CO 5	Evaluate the central dogma of molecular biology	K5

PLANT ANATOMY AND REPRODUCTIVE BIOLOGY OF ANGIOSPERMS**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Identify different plant groups and their parts using anatomical features	K1
CO 2	Explain different plant tissue systems, and their relationship in different habitats.	K2
CO 3	Examine the anatomical features of stem, root and leaf	K4
CO 4	Analyse the process of pollination and fertilization, and fruit development.	K4
CO 5	Evaluate the significance of	K5

	plant anatomy and reproductive biology of angiosperms	
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RESEARCH METHODOLOGY

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Employ different concepts in plant research	K3
CO 2	Analyze research outcomes using various techniques	K4
CO 3	Develop effective presentation skills	K3, K4
CO 4	Interpret and analyse data	K4
CO 5	Evaluate the different methods of scientific writing and reporting	K5

BIOSTATISTICS

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Examine the fundamental concepts related to descriptive and inferential biostatistics	K3
CO 2	Develop skills in data tabulation, its treatment, analysis, interpretation and graphical representation of data	K4, K5

CO 3	Analyze the implications of inferential statistics in biology	K3, K4
CO 4	Evaluate the correlation and regression data solutions	K4
CO 5	Construct the hypothesis and derive a statistical inference	K5

HORTICULTURE AND FLORICULTURE

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Outline the scope and importance of horticulture, gardening and landscaping	K2, K4
CO 2	Employ the techniques of gardening & tools	K3, K5
CO 3	Analyse weed types and management	K2, K4
CO 4	Compile the achievements of Plant breeding and IPR	K3, K4
CO 5	Assess the techniques of germplasm and plant breeding	K5

PLANT SYSTEMATICS AND ECONOMIC BOTANY**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Identify and classify the plant parts based on their vegetative and reproductive morphology	K4
CO 2	Analyse the concepts of classifications and apply the modern concepts of classifications to explore the biochemical, biotechnological potency	K4
CO 3	Distinguish the closely related families based on their characters	K3, K4
CO 4	Devise technical description with floral diagrams and floral formula for the given plant dissecting the floral parts	K5, K4
CO 5	Assess the techniques of germplasm and plant breeding Explain the economic significance of the cultivated plants with their product values.	K5

PLANT ECOLOGY, PHYTOGEOGRAPHY AND CONSERVATION BIOLOGY
COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Remember the concepts of ecosystem and biogeochemical cycles	K2
CO 2	Assess the methods of population ecology and plant communities	K4
CO 3	Evaluate energy sources of ecological system	K5, K4
CO 4	Analyse phytogeographical division of India and world	K4
CO 5	Develop new strategies of conservation	K6

BIOINFORMATICS AND BIONANOTECHNOLOGY
COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Acquire fundamental knowledge and basic understanding on plant nanotechnology	K1, K2
CO 2	Utilize the concepts of nanotechnology, analyze and apply these principles	K3, K4
CO 3	Evaluate the utilization and application of plant nanotechnology	K5, K4
CO 4	Predict and analyze the databases and interpret	K4, K6

	protein structures	
CO 5	Develop and analyse the phylogeny trees and CADD	K4, K6

NATURAL RESOURCE MANAGEMENT

COURSE LEARNING OUTCOMES:

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Express the concept of different natural resources and their utilization.	K2
CO 2	Remember and apply the concepts of Biodiversity in resource management	K3, K1
CO 3	Critically analyze the sustainable utilization of land, water, forest and energy resources.	K4
CO 4	Evaluate the management strategies of different natural resources.	K5
CO 5	Create awareness upon the different national and international efforts in resource management and their conservation	K6

BIOINSTRUMENTATION AND PHYTOCHEMICAL TECHNIQUES**Course Learning Outcomes**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Appreciate the principles and working of microscopes	K1, K2
CO 2	Apply the methodology of centrifugation and spectrophotometry in sample study.	K3
CO 3	Analyse the principle , applications and types of chromatography and electrophoresis	K4
CO 4	Evaluate the extraction techniques in phytochemistry	K5
CO 5	Synthesize and characterize the phytocompounds.	K6

BIO-ANALYTICAL TECHNIQUES**Course Learning outcomes:**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Develop conceptual understanding of cell wall degradation and cell fractionation..	K2
CO 2	Classify the different separation methods and types of chromatography techniques	K2

CO 3	Differentiate and analyse the working of Light microscopy, compound microscopy and Fluorescence microscopy	K2, K4
CO 4	Evaluate the phytochemicals qualitatively and quantitatively	K5
CO 5	Create suitable strategies in data collections and disseminate research findings.	K6

HERBAL TECHNOLOGY

Course Learning outcomes:

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Classify the Natural drugs and apply the different methods of drug preparation and storage	K2, K3
CO 2	Recognizing the major Indian medicinal herbs for their medicinal importance.	K1, K2
CO 3	Apply the knowledge in preparation, evaluation, and quality control techniques of Herbal drugs.	K1, K3
CO 4	Analyze and evaluate the Pharmacological aspects of medicinal plants.	K4, K5
CO 5	Synthesize natural medicines	K6

	from herbs through herbal technology and create herbal banks.	
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GENETICS AND PLANT BREEDING

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Explain the of laws of inheritance, genetic basis of alleles and their linkage.	K2
CO 2	Analyse the chemical basis of genes and their interactions at population and evolutionary levels	K4
CO 3	Examine and analyse the structure, function and replication of DNA	K1, K3
CO 4	Distinguish the achievements of plant Breeding and assess the germplasm techniques	K3, K5
CO 5	Develop innovative methods of crop improvement technology and create herbal banks.	K6

APPLIED PLANT BIOTECHNOLOGY**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Explain the concepts, tools and techniques related to <i>in vitro</i> propagation of plants.	K2
CO 2	Apply the different methods used for genetic transformation of plants,	K3
CO 3	Analyze various case studies related to basic and applied research in plant sciences using transgenic technology.	K4
CO 4	Evaluate different methods used for phenotypic, genetic and molecular analysis of transgenic plants	K3, K5
CO 5	Create next generation technologies in current research involving various plants of economic value.	K5, K6

PLANT BIOCHEMISTRY AND PHYSIOLOGY**COURSE LEARNING OUTCOMES**

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Assess the various biochemical and physiological aspects in plants	K2, K3
CO 2	Analyse the basic aspects of	K3, K4

	plant metabolism	
CO 3	Examine the role of plant growth regulators and secondary metabolites, structure and importance of biomolecules in plants	K2, K4
CO 4	Evaluate the role of enzymes in plant life	K5
CO 5	Formulate methods to improve basic skills and techniques related to plant physiology and biochemistry	K6

PRINCIPLES OF PLANT PATHOLOGY

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Explain the reasons for the occurrence plant disease (s) and suggest control measures.	K2
CO 2	Apply the knowledge of plant pathology during the cultivation of crop plants and during storage of produce.	K3
CO 3	Examine the infected plant material and identify the causative organism (s) and suggest control measures.	K6, K4
CO 4	Evaluate the impact of plant diseases on plant growth and yield.	K5

CO 5	Synthesize new information about the occurrence of disease, symptoms, and disease cycle of locally available plants.	K6
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PLANT-MICROBES INTERACTION

COURSE LEARNING OUTCOMES

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

CLO No.	STATEMENT	KNOWLEDGE LEVEL
CO 1	Understand the interaction between plant and non-pathogenic symbiotic bacteria/fungi.	K1, K2
CO 2	Analyse the interactions between plants and pathogenic fungi, bacteria and viruses	K4
CO 3	Illustrate the defense reactions of the host plant	K3
CO 4	Evaluate the concept of plant immunity	K4, K5
CO 5	Design methods of studying and analysing plant – microbe interactions	K6