
NEWMAN COLLEGE THODUPUZHA

NAAC Accredited with 'A' Grade (3rd Cycle, CGPA 3.30) in 2015 (Affiliated to Mahatma Gandhi University, Kottayam)



LEAD KINDLY LIGHT

LEARNING OUTCOMES

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PROGRAMME OUTCOMES

Under graduate Programme Outcomes-BA/BSc/BCom

Students of BA/BSc/BCom Under graduate Degree Programs at the time of graduation will be able to:

PO1.	<ul style="list-style-type: none">• Develop skill-based knowledge in specific disciplines.
PO2.	<ul style="list-style-type: none">• Work effectively and independently in multi-disciplinary and multicultural teams.
PO3.	<ul style="list-style-type: none">• Engage in lifelong learning and understand the need to keep abreast with the developments.
PO4.	<ul style="list-style-type: none">• Practice professional, social and ethical attitudes, values and responsibilities.
PO5.	<ul style="list-style-type: none">• Create awareness about human values.
PO6.	<ul style="list-style-type: none">• Imbibe the concept of sustainable development and prepare them to be global citizens.
PO7.	<ul style="list-style-type: none">• Develop the ability to analyse critically.

Post graduate Programme Outcomes–MA/MSc/MCom

Students of all Post graduate Degree Programs at the time of graduation will be able to:

PO1.	<ul style="list-style-type: none">• Apply and nurture critical and creative thinking
PO2.	<ul style="list-style-type: none">• Use of education as a tool for emancipation and empowerment of humanity
PO3.	<ul style="list-style-type: none">• Understand the basic concepts, fundamental principles, and various theories in their corresponding subjects.
PO4.	<ul style="list-style-type: none">• Develop ability to understand social, ethical, global, environmental responsibilities for the benefit of society.
PO5.	<ul style="list-style-type: none">• Engage in independent and life- long learning.

**PROGRAMME SPECIFIC
OUTCOMES AND COURSE
OUTCOMES OF
BA PROGRAMMES**

PROGRAMME- BA ENGLISH LANGUAGE AND LITERATURE

PROGRAMME SPECIFIC OUTCOME (PSO)

PSO1: The students master proficiency in English language and literature.

PSO2: Develops the formal and informal English communication skills.

PSO3: Use English for formal communication effectively.

COURSE OUTCOMES

SEMESTER 1

COMMON COURSE 1 (EN1CC01) – FINE TUNE YOUR ENGLISH

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

COMMON COURSE-2 (EN1CC02)- PEARLS FROM THE DEEP

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

COMMON COURSE-SECOND LANGUAGE (ML1CCT01)- KATHASAHITHYAM

CO1: To understand the new trends in the literary field of short stories

Or

COMMON COURSE-SECOND LANGUAGEHNN1CCT01- PROSE & ONE ACT PLAYS

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyse Hindi Literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE-1

Course code and Title: **EN1CR01- Methodology of Literary Studies**

CO1 The course seeks to introduce the student to the major signposts in the historical evolution of literary studies from its inception to the current postcolonial realm.

CO2 The emergence of literature as a specific discipline within the humanities.

CO3 The tenets of what is now known as ‘traditional’ approaches and also that of formalism.’

CO4 The shift towards contextual-political critiques of literary studies

CO5 The questions raised by Cultural Studies and Feminism(s)

CO6 The issues of sublaternity and regionality in the literary domain

COMPLEMENTARY COURSE

Course code and Title:**HY1CMT02- Social Formations in Pre-Modern India**

CO1: To introduce the dynamics of antiquity in Indian subcontinent with emphasis on Harappancivilization, Vedic Age, Mauryan empire and Sangam age

CO2: To analyse early medievalism and the debate over the nature of Indian feudalism

CO3: To evaluate the political economy of Delhi Sultanate and Vijayanagara society

CO4: To learn Mughal social formation with emphasis on its agrarian system

SEMESTER -2

COMMON COURSE -3

Course code and Title- **EN2CC03- Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

COMMON COURSE -4

Course code and Title- **EN2CC03- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

CORE COURSE – 2

Course code and Title- **EN2CR02- Introducing Language and Literature**

CO1: The course seeks to introduce the student to the basics of English language and literature.

CO2: The evolution and the differential traits of the English language till the present time.

CO3: The evolution of literature from antiquity to postmodern times.

CO4: The diversity of genres and techniques of representation and narration

CO5: The links between literature and film as narrative expressions.

CO6: The emergence of British and American Literature through diverse periods

COMMON COURSE -SECOND LANGUAGE

Course code and Title- **ML2CCT02 -Kavitha**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

COMPLEMENTARY COURSE – 2

Course code and Title- **HY2CMT03 -Transition to the Contemporary World**

CO1: To explain the turbulences in Europe since French Revolution

CO2: To analyse the transitions that the world had experienced over the years with particular emphasis on the Age of Imperialism

CO3: To survey the geo-political developments in twentieth century

CO4: To analyse the political developments in the contemporary world

SEMESTER -3

COMMON COURSE -5

Course code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitivise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE – 3

Course code and Title- **EN3CR03 - Harmony of Prose**

CO1: The student is given space to mature in the presence of glorious essays, both Western and Non-Western.

CO2: familiar with varied prose styles of expression.

CO3: Aware of eloquent expressions, brevity and aptness of voicing ideas in stylish language

CORE COURSE – 4

Course code and Title- EN3CR04 - Symphony of Verse

CO1: To acquaint the student with the rich texture of poetry in English.

CO2: an understanding of the representation of poetry in various periods of the English tradition.

CO3: an awareness of the emerging cultural and aesthetic expressions that poetry makes possible.

COMMON COURSE -SECOND LANGUAGE

Course code and Title: ML3CCT03 – DrushyakalaSahithyam

CO1: To generate interest in appreciating art by seeing it

Or

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

COMPLEMENTARY COURSE – 3

Course code and Title- **EN3CM03 - Evolution of Literary Movements: The Shapers of Destiny**

CO1: To make the learner aware of the way in which history shapes the life and literature of people.

CO2: To give the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world.

CO3: To enable him to understand English literature in the light of historical events.

CO4: To analyse the manner in which a person is moulded by the historical events of his personal and communal life.

SEMESTER -4

COMMON COURSE -6

Course code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide

CORE COURSE – 5

Course code and Title- **EN4CR05 - Modes of Fiction**

CO1: To acquaint students with various modes of fiction.

CO2: The student will have comprehended the categories of British and non- British short fiction, and also the novel as a form of literary expression

CORE COURSE – 6

Course code and Title- **EN4CR06 - Language and Linguistics**

CO1: This course is an introduction to the science of linguistics. It seeks to give an overview of the basic concepts of linguistics and linguistic analysis to the students.

CO2: To show the various organs and processes involved in the production of speech, the types

and typology of speech sounds, segmental & suprasegmental features of the English language, and transcription using IPA.

CO3: To describe and explain morphological processes and phenomena.

CO4: To show the various processes involved in the generation of meaning.

CO5: To enhance students' awareness that natural language is structure dependent and generative and to develop their ability to observe, describe and explain grammatical processes and phenomena.

COMMON COURSE -SECOND LANGUAGE

Course code and Title: **ML4CCT04 – MalayalaGadhyarachanakal**

CO1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

COMPLEMENTARY COURSE – 4

Course code and Title- **EN4CM04 - - Evolution of Literary Movements: The Cross Currents**

CO1: To enable students to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature

CO2: students will be competent to understand literature against the backdrop of history.

CO3: students will be inspired to contribute dynamically to historical and literary processes.

SEMESTER -5

CORE COURSE – 7

Course code and Title- **EN5CR07- Acts on the stage**

CO1: The course seeks to introduce the student to select theatre texts that form the canon of English drama.

CO2: familiar with the works of the playwrights included in the course.

CO3: informed about the broad genre-based nuances in the realm of drama.

CO4: able to appreciate and critique drama as an art form.

CORE COURSE – 8

Course code and Title- **EN5CR08- Literary Criticism and Theory**

CO1: The course seeks to introduce students to the major signposts in Literary Criticism, Literary Theory and Indian Aesthetics.

CO2: Will have awareness about the major developments in literary criticism from the ancient times to the twentieth century.

CO3: will be initiated to the realm of literary theory and major theoretical schools.

CO4: will have awareness about the chief strains of Indian literary criticism.

CO5: will be able to analyse short poetical pieces critically.

CORE COURSE -9

Course code and Title- **EN5CR09: Indian Writing in English**

CO1: The course is intended to sensitise students to the various ways in which literature written in English, in the Indian sub-continent serves as a platform for forming, consolidating, critiquing and re-working the issue of national identity 'at various levels. On completion of the course, the student should be aware of the following:

- The subtle flavours that distinguish the Indian quotient in English writings from India.
- The different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.

CORE COURSE-10

Course code and Title :**EN5CREN01- Environmental Science and Human Rights**

CO1: Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.

CO2: Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future. It encourages character building, and develops positive attitudes and values.

CO3: To develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment and helps to protect the nature and natural resources.

CO4: To help the students in acquiring the basic knowledge about environment and the social norms that provides unity with environmental characteristics and create positive attitude about the environment.

OPEN COURSE

Course code and title-**EN5CROP02 Theatre Studies**

CO 1: The students will be introduced to a selection of plays from the West and the East, ranging from the tragic and the comic, the folk and the street, so as to generate interest in theatre and make them aware of the new trends in modern theatre.

CO 2: An understanding of a selection of well-discussed plays across the world.

CO 3: The classical and modern theatre in the West and the East.

CO 4: The form and content of various kinds of theatre.

CO 5: Colonial and subversive postcolonial aspects in Indian theatre.

CO 6: Issues of gender, identity, caste, tradition, morality, etc dealt with by modern theatre

SEMESTER -6

CORE COURSE – 10

Course code and Title- **EN6CR10- Postcolonial Literatures**

Course outcomes

CO1: The course familiarize the students the varied dimension s of postcolonial subjectivity through theory and literature.

CO2: To be aware of the social, political, cultural aspects of postcolonial societies.

CO3: To realise the impact of colonialism and imperialism on native cultural identities.

CO4: To get an insight into the links between language, history and culture.

CORE COURSE – 11

Course code and Title- **EN6CR11- Women writing**

Course outcomes

CO1: To introduce the theoretical and literary responses by women and the concerns that govern

feminist literature.

CO2: Enable students to critically respond to literature from a feminist perspective.

CO3: To realize how the patriarchal notions pervade in the social and cultural scenario and how feminism exposes these notions.

CO4: Analyse how stereotypical representations of women were constructed and how these are subverted by feminist writing

CORE COURSE -12

Course code and Title- **EN6CR12: American Literature**

Course outcomes

CO1: To enable the students to have a holistic understanding of the heterogeneity of American culture and to study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts.

CO2: To familiarize the students with the evolution of various literary movements in American literature.

CO3: Acquaint the students with the major authors in American Literary History.

CORE COURSE-13

Course code and Title- **EN6CR13- Modern World Literature**

Course outcome

CO1: To make the students aware of the stupendous variety that resides in Literatures over the world.

CO2: Introduce literatures of the modern world and how they engage in very deep ways with the vicissitudes of life.

CO3: To make students more insightful about World literatures and the ways they defy genres/regionalities and canonical assumptions to emerge as a platform where poetics and politics fuse.

CO4: Persuade the notion of Major and Minor, Central and Peripheral literatures is a myth.

CHOICE BASED COURSE

Course code and Title- **EN6CBT03 - Regional Literatures in Translation**

Course outcome

CO1: The students will be introduced to a selection of regional literatures translated into English.

CO2: An understanding of much discussed writers/literary pieces in the vernaculars.

CO3: Enable students to comprehend the modern trends in regional literatures.

PROGRAMME- BA ECONOMICS

PROGRAMME SPECIFIC OUTCOME(PSO)

PSO1.The students will be able to recognize and identify various economic phenomena and the working of the economy.

PSO2: Students will be able to improve their economic vocabulary

PSO3: Students will learn to apply economic theories and concepts to contemporary social issues, as well as analysis of policies.

PSO4: Students will be able to understand the impact of government policies and will be able to assess the consequences of the policies.

PSO5: Students will get an awareness of career choices and the option for higher studies.

COURSE OUTCOMES

SEMESTER 1

COMMON COURSE 1 (EN1CC01) – FINE TUNE YOUR ENGLISH

CO1 The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2 Confidently use English in both written and spoken forms.

CO3 Use English for formal communication effectively.

COMMON COURSE-2 (EN1CC02)- PEARLS FROM THE DEEP

CO1 To introduce students to the different genres of literature and to the niceties of literary expression.

CO2 Appreciate and enjoy works of literature.

CO3 Appreciate the aesthetic and structural elements of literature.

COMMON COURSE-SECOND LANGUAGE (ML1CCT01)- KATHASAHITHYAM

CO1 To understand the new trends in the literary field of short stories

OR

COMMON COURSE-SECOND LANGUAGEHN1CCT01- PROSE & ONE ACT PLAYS

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE-1

COURSE CODE AND TITLE: EC1CRT01- PERSPECTIVE AND METHODOLOGY OF ECONOMICS

CO1: The students will familiarize with the broad contours of Social Sciences, specifically Economics and its methodologies, tools and analysis procedures.

CO2: The course will create an enthusiasm among students about different schools of Economic thought and various aspects of social science research, methodology, concepts, tools and various issues.

COMPLEMENTARY COURSE

COURSE CODE AND TITLE- HY1CMT02- SOCIAL FORMATIONS IN PRE-MODERN INDIA

CO1: To introduce the dynamics of antiquity in Indian subcontinent with emphasis on Harappan civilization, Vedic Age, Mauryan empire and Sangam age

CO2: To analyse early medievalism and the debate over the nature of Indian feudalism

CO3: To evaluate the political economy of Delhi Sultanate and Vijayanagara society

CO4: To learn Mughal social formation with emphasis on its agrarian system

SEMESTER- 2

COMMON COURSE -3

Course code and Title- **EN2CC03- Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

COMMON COURSE -4

Course code and Title- **EN2CC03- Savouring the classics**

CO1: To introduce the students to the taste of time tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

CORE COURSE – 2

Course code and Title- **(EC2CRT02) - Micro Economic Analysis-I**

CO1: The students will achieve the quality of economic analysis and problem solving.

CO2: This course provides an introduction to supply and demand and the basic forces that determine equilibrium in a market economy.

CO3: It introduces a framework for learning about consumer behaviour and analyzing consumer decisions.

CO4: able to understand introductory microeconomic theory, solve basic microeconomic problems and use these techniques to think about a number of policy questions related to the operation of the real economy.

COMMON COURSE -SECOND LANGUAGE

Course code and Title- **ML2CCT02 - KAVITHA**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

COMPLEMENTARY COURSE – 2

Course code and Title- **HY2CMT03 -Transition to the Contemporary World**

CO1: To explain the turbulences in Europe since French Revolution

CO2: To analyse the transitions that the world had experienced over the years with particular emphasis on the Age of Imperialism

CO3: To survey the geo-political developments in twentieth century

CO4: To analyse the political developments in the contemporary world

SEMESTER -3

COMMON COURSE -5

Course code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE – 3

Course code and Title-**EC3CRT03-Microeconomic Analysis -II**

CO1: By the end of this course, students will be able to understand consumer and firms' behaviour and to analyze different types of market structures.

CO2: The students will be able to analyze the behaviour of firms in a monopoly or oligopoly, and calculates the resulting changes in producer or consumer surplus.

CO3: The students become able to use economic tools to analyze economic policies.

CORE COURSE – 4

Course code and Title- **EC3CRT04- Economics of Growth and Development**

CO1: This course enables the student to acquaint with the basic concepts and issues of growth and development from Adam Smith.

CO2: It makes a student more insightful about the modern approaches to development presented by DGoulet and Amartya Sen.

COMMON COURSE -SECOND LANGUAGE

Course code and Title-**ML3CCT03 – DrushyakalaSahithyam**

CO1: To generate interest in appreciating art by seeing it

OR

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

COMPLEMENTARY COURSE – 3

Course code and Title- **PS03CL001- An Introduction to Political Science**

CO1: The course follows a basic historical-analytical framework of the discipline.

CO2: It stresses upon a critical understanding of constitutional design and institutional framework of government. Integral to the course is the understanding that ideas of democracy and freedom and corresponding social relations and political and institutional practices took shape the discipline in a more meaningful way.

CO3: The course aims therefore to develop among students the ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes.

SEMESTER -4

COMMON COURSE -6

Course code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide

CORE COURSE – 5

Course code and Title- **EC4CRT05- Macroeconomic-1**

CO1: This course will equip the students to understand systemic facts and the latest theoretical developments in Macro Economics.

CORE COURSE – 6

Course code and Title- **EC4CRT06 – Public Economics**

CO1: The students will learn about the working of the public finance system and to gain knowledge about the working of the Indian public finance

COMMON COURSE -SECOND LANGUAGE

Course code and Title- **ML4CCT04 – MalayalaGadhyarachanakal**

CO1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

COMPLEMENTARY COURSE – 4

Course code and Title- **PS4CMT05 Indian Constitution: Social Issues in India.**

CO1: This course acquaints students with the constitutional design of state structures and institutions, and their actual working overtime. The Indian Constitution accommodates conflicting impulses (of liberty and justice, territorial decentralization and a strong union, for instance) within itself.

CO2: The course traces the embodiment of some of these conflicts in constitutional provisions, and show how these have played out in political practice.

CO3: It further encourages a study of state institutions in their mutual interaction, and in interaction with the larger extra constitutional environment.

SEMESTER -5

CORE COURSE – 7

Course code and Title- **EC5CRT07- Quantitative Techniques**

CO 1: Students get good exposure to solutions of equations, applications of functions in economics, matrix operations, problems related to probability and their applications in economics.

CORE COURSE – 8

Course code and Title- **EC5CRT08- Maroeconomics -II**

CO1: This course will provide the students with empirical and analytical knowledge regarding the macro-economic conditions.

CORE COURSE -9

Course code and Title- EC5CRT09- Environmental Economics

CO1:The course will provide the students with great concern for the conservation of our environment.

CO2: Create a responsibility of protection of environment

CO3: The students will achieve the importance of environment in human life

CORE COURSE-10

Course code and Title- **EC5CRT10- Introductory Econometrics**

CO1:It helps the students to understand economic issues and test theories.

CO2: It will enable the students to conduct applied econometric studies of their own – which can be veryuseful for doing a dissertation.

OPEN COURSE

Course Code and Title- **EC5OPT01-Fundamentals of Economics**

CO 1: The students will get an idea on the basic economic concepts.

CO 2: The students will understand the functioning of the economic system and the economic activities of the government.

CO 3: The course will enrich the students with basic knowledge on the Indian and Kerala Economy.

SEMESTER -6

CORE COURSE – 11

Course code and Title- **EC6CRT11- Quantitative Methods**

CO 1: The students will learn various statistical methods and tools which are used in economics.

CORE COURSE – 12

Course code and Title- **EC6CRT12- International Economics**

CO1: The course will provide the students a thorough understanding and deep knowledge about the basic principles that tend to govern the flow of trade in goods and services at the global level.

CORE COURSE -13

Course code and Title- **EC6CRT13- Money and Financial markets**

CO1: It provides preliminary idea about the working of various financial market segments as well as the functioning of major regulators

CORE COURSE-14

Course code and Title- **EC6CRT14- Indian Economy**

CO1: The course will equip the students with the theoretical, empirical and policy issues relating to the society, polity and economy of India.

CHOICE BASED COURSE

Course code and Title- **EC6CBT02- Business Economics**

CO1: This course helps students understand how analytical tools of micro and macroeconomics are applied for solving many practical business problems.

PROGRAMME- B.A HISTORY

PROGRAMME SPECIFIC OUTCOME(PSO)

PSO1. To cultivate an appreciation and understanding among students for the various historical processes that have gone into the making of societies, cultures and civilizations.

PSO2: To train students not to take ideas, institutions and practices as given, but as aspects that have evolved over a period of time across different spatial contexts, and continue to be engaged in the process of becoming.

PSO3: To take students beyond the mundane textbook oriented history that is so prevalent in our times, which reduces history to certain disembodied facts that need to be memorized and regurgitate.

PSO4: To introduce students to the exciting ways in which a historian practices his/her craft using highly developed tools and skills, and produces history.

COURSE OUTCOMES

SEMESTER 1

COMMON COURSE 1 COURSE CODE AND TITLE-(EN1CC01) – FINE TUNE YOUR ENGLISH

CO1 The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2 Confidently use English in both written and spoken forms.

CO3 Use English for formal communication effectively.

COMMON COURSE-2 (EN1CC02)- PEARLS FROM THE DEEP

CO1 To introduce students to the different genres of literature and to the niceties of literary expression.

CO2 Appreciate and enjoy works of literature.

CO3 Appreciate the aesthetic and structural elements of literature.

COMMON COURSE-SECOND LANGUAGE (ML1CCT01)- KATHASAHITHYAM

CO1 To understand the new trends in the literary field of short stories

or

COMMON COURSE-SECOND LANGUAGEHN1CCT01- PROSE & ONE ACT PLAYS

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE-1

Course code and Title-**HY1CRT01- Perspective and methodology of Economics**

CO1: To study social sciences in historical setting and to discuss its basic principles, concepts and Epistemology

CO2: To understand history vis-à-vis other social sciences

CO3: To comprehend the notions of objectivity and subjectivity and the application of theories in history

CO4: To study the nature and kinds of history

COMPLEMENTARY COURSE

Course code and title-**EC13CMT01- Principles of Economics**

CO1: To introduce the dynamics of antiquity in Indian subcontinent with emphasis on Harappan civilization, Vedic Age, Mauryan empire and Sangam age

CO2: To analyse early medievalism and the debate over the nature of Indian feudalism

CO3: To evaluate the political economy of Delhi Sultanate and Vijayanagara society

CO4: To learn Mughal social formation with emphasis on its agrarian system

SEMESTER- 2

COMMON COURSE -3

Course code and Title- **EN2CC03- Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

COMMON COURSE -4

Course code and Title- **EN2CC03- Savouring the classics**

CO1: To introduce the students to the taste of time tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

CORE COURSE – 2

Course code and Title- **HY2CRT02- Understanding Early India -From Hunting Gatherers to Land Grants**

CO1: To understand Prehistoric and early historic periods in India

CO2: To comprehend Vedic and Sangam Age Social Formation

CO3: To study Early State formation (Mauryas) and the age of Land grants medieval India

COMMON COURSE -SECOND LANGUAGE

Course code and Title- **ML2CCT02 - KAVITHA**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

COMPLEMENTARY COURSE – 2

Course code and Title- **EC2/4CMT02-Basic Economic studies**

CO1: Make a basic understanding in Macro Economics and National Income calculation

CO2: Explain how government policy influences microeconomic choices and macroeconomic outcomes.

CO3: Develop a critical analysis on the various issues on the Indian Economy

SEMESTER -3

COMMON COURSE -5

Course code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE – 3

Course code and Title: **HY3CRT03 - Polity, Society and Economy in Pre-Colonial India**

CO1: To interpret Medieval textual sources

CO2: To analyze the Polity and institutional structures in Delhi Sultanate

CO3: To understand administrative, agrarian and syncretic religious systems of Mughal empire

CO4: To study regional political formations in later

CORE COURSE – 4

Course code and Title- **HY3CRT04**

CO1: To study geography vis-à-vis history in the context of Kerala

CO2: To understand earliest settlements in Tamil macro region

CO3: To comprehend the social formation in the Age of Perumals and Swaroopams

CO4: To learn social control, trade and culture in pre-modern Kerala

COMMON COURSE -SECOND LANGUAGE

Course code and Title-**ML3CCT03 – DrushyakalaSahithyam**

CO1: To generate interest in appreciating art by seeing it

OR

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

COMPLEMENTARY COURSE – 3

Course code and Title- **PS03CL001- An Introduction to Political Science**

CO1: The course follows a basic historical-analytical framework of the discipline.

CO2: It stresses upon a critical understanding of constitutional design and institutional framework of government. Integral to the course is the understanding that ideas of democracy and freedom and corresponding social relations and political and institutional practices took shape the discipline in a more meaningful way.

CO3: The course aims therefore to develop among students the ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes

SEMESTER -4

COMMON COURSE -6

Course code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide

CORE COURSE – 5

Course code and Title- **HY4CRT05 - Making of Modern Kerala**

CO1: To understand the beginning of European colonization in Kerala

CO2: To study the socio-religious reform movements in Kerala

CO3: To learn the early political and cultural movements in Kerala

CO4: To study the outlines of contemporary Kerala

CORE COURSE – 6

Course code and Title- **HY4CRT06 - Researching the Past**

CO1: To familiarize the students the basic terms, concepts and categories of history

CO2: To understand the discipline of history as an intelligent knowledge system

CO3: To comprehend different approaches of history and the methodology of historical writing

COMMON COURSE -SECOND LANGUAGE

Course code and Title: **ML4CCT04 – MalayalaGadhyarachanakal**

CO1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

COMPLEMENTARY COURSE – 4

Course code and Title- **PS04CAB02- Governmental machinery and Process**

SEMESTER -5

CORE COURSE – 7

Course code and Title- **HY5CRT07 - Inheritance and Departures in Historiography**

CO1: To trace the historiographical trends from the traditional phase to the contemporary scene

CO2: To orient students in new trends with a view to improving their understanding of historical writings and perspectives

CORE COURSE – 8

Course code and Title- **HY5CRT08 - India: Nation in the Making**

CO1: To learn the impacts of British rule in India

CO2: To understand the phases of National movement

CO3: To comprehend the period of Freedom and Partition

CO4: To theorise Indian National Movement

CORE COURSE -9

Course code and Title- **HY5CRT09 State and Society in Ancient and Medieval World**

CO1: To study the dynamics of Pre-historic societies and the transition to Metal Age

CO2: To understand the Bronze Age civilizations of the world

CO3: To comprehend Greek and Roman civilizations

CO4: To learn medievalism in Europe and Asia

CORE COURSE-10

Course code and Title **HY5CRT10 - Environmental Studies and Human Rights in Historical Outline**

CO1: To investigate about complex environmental issues and to foster a new generation of informed consumers and policy makers

CO2: To build knowledge and skills to keep environment healthy and sustainable

CO3: To help students in realizing the inter-relationship between man and environment

OPEN COURSE

Course code and title- **EN5CROP02 Theatre Studies**

- The students will be introduced to a selection of plays from the West and the East, ranging from the tragic and the comic, the folk and the street, so as to generate interest in theatre and make them aware of the new trends in modern theatre.
- An understanding of a selection of well-discussed plays across the world.
- The classical and modern theatre in the West and the East.
- The form and content of various kinds of theatre.
- Colonial and subversive postcolonial aspects in Indian theatre.

Issues of gender, identity, caste, tradition, morality, etc dealt with by modern theatre

SEMESTER -6

CORE COURSE – 11

Course code and Title- **HY6CRT11 - Making of Contemporary India**

CO1: To study Indian polity since 1940s

CO2: To comprehend various social and strategic issues in India

CO3: To study various developments in Indian economy

CORE COURSE – 12

Course code and Title- **HY6CRT12 - Understanding Modern World**

CO1: To study colonialism and imperialism in historical setting

CO2: To study developments in Inter-war years

CO3: To study the two World Wars and various developments in their context

CO4: To comprehend international order in Cold War era

CORE COURSE -13

Course code and Title- **HY6CRT13 - Capitalism and Colonialism**

CO1: To trace the emergence and development of capitalism in Europe and the related scramble for colonies and imperialist domination around the world

CO2: To introduce the processes and debates involved in the transition from feudalism to capitalism

CO3: To comprehend the expansion of capitalism in the light of industrial revolution

CO4: To learn the nature of economic development in post-colonial times

CORE COURSE-14

Course code and Title-**HY6CRT14 - Gender in Indian Perspectives**

CO1: To explain the socio-historical constructions of sexual differences in Indian society by emphasizing the plural backgrounds

CO2: To prepare students to challenge the conventional social norms about male-female dichotomy

CHOICE BASED COURSE

Course code and Title :**HY6CBT01 - Archaeology in India**

CO1: To introduce archaeology as a science and social science

CO2: To comprehend the principles and methods of archaeology

CO3: To perceive the history of archaeology in India

CO4: To learn about important archaeological sites in India

PROGRAMME- BA MALAYALAM

PROGRAMME SPECIFIC OUTCOME(PSO)

PSO1. To secure an understanding about Malayalam language and literature

PSO2: To develop the ability to appreciate literature

PSO3:To secure language competence

PSO4:To develop an orientation towards mother tongue

PSO5:To develop the creativity and literary talents

COURSE OUTCOMES

SEMESTER 1

COMMON COURSE 1- (EN1CC01) – FINE TUNE YOUR ENGLISH

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

COMMON COURSE-2 (EN1CC02)- PEARLS FROM THE DEEP

CO1:To introduce students to the different genres of literature and to the niceties of literary expression.

CO2:Appreciate and enjoy works of literature.

CO3:Appreciate the aesthetic and structural elements of literature.

COMMON COURSE-SECOND LANGUAGE (ML1CCT01)- KATHASAHITHYAM

CO1- To understand the new trends in the literary field of short stories

CORE COURSE-1

Course code and title- **ML1CRT01 – Naveenakavitha**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

COMPLEMENTARY COURSE I

Course code and title- **ML1CMT01 - MalayalaPadanathinteReethishasthram**

CO1: To develop an awareness of literature

CO2: To understand the new trends in contemporary Malayalam literature

COMPLEMENTARY COURSE II

Course code and Title-**ML1CMT02 – NADAKAVUM CINEMAYUM**

CO1: To develop more orientation towards art

CO2: To secure an understanding at the technique of script-writing

CO3: To distinguish the various patterns or modern word in the language of different audio-visual media.

SEMESTER- 2

COMMON COURSE -3

Course code and Title- **EN2CC03- Issues that Matter**

CO1:To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

COMMON COURSE -4

Course code and Title- **EN2CC03- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.
CO3: understand the features that go into the making of a classic

CORE COURSE – 2

Course code and Title- **ML2CRT02 – Malayala Kavitha EzhuthachanMuthalKavithrayamVare**

CO1: To distinguish the special features of the poems of each period
CO2: To appreciate the dimensions of meaning and idea in the poem

CORE COURSE – 3

Course code and Title- ML2CMT03 – AadhunikaLokakavitha

CO1: To appreciate world poetry and to understand how it is distinct from Malayalam literature.

CORE COURSE – 4

Course code and Title- **ML2CMT04 – FokloreVijnanam**

CO1: To obtain knowledge about Folklore tradition and indigenous art
CO2:To maintain respect and orientation towards indigenous culture

SEMESTER -3

COMMON COURSE -5

Course code and Title- **EN3CC05- Literature and/as Identity**

CO1:The course is intended to sensitivise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity 'at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE – 3

Course code and Title: **ML3CRT03 –Kerala samskaram: Poorvaghattam**

CO1 To understand the historical aspects of Kerala

CO2: The contributions and of great persons who found a place in history

COMPLEMENTARY COURSE

Course code and title- **ML3CMT05 – OruEzhuthukaran/ Ezhuthukari -Madhavikkutty**

CO1: Able to understand the various aspects of feminism

CO2: To know the writer, Madhavikkutty in depth

COMPLEMENTARY COURSE

Course code and title- **SC3CMT01-Sanskrit – Poetry, Rhetorics and Basics of Grammar**

CO1 Understand the culture of the past

CO2: This is not to say that the rituals of the primitive times were to be understood as culture– distinguishedbehaviour.

SEMESTER -4

COMMON COURSE -6

Course code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide

CORE COURSE-4

Course code and title- **ML4CRT04 – Kerala Samskaram - Utharaghattam**

CO1: To understand the historical aspects of Kerala

CO2: The contributions and struggles of great persons who found a place in history.

CORE COURSE-4

Course code and title-ML4CMT06-Aadhunika Malayala Bhasha

CO1: To create an awareness in the spheres of science, literature and history

COMPLEMENTARY COURSE

Course code and title- **SC3MT02-Prose,Vrutha,Alankara,Theories of Poetics and Grammer**

SEMESTER 5

CORE COURSE –5

Course code and Title- **ML5CRT05** –
ParisthithisoudharyadarsanavumManushyavakashaPadanavum

CO1 :To secure an awareness of human rights

CO2: To generate a genuine interest in protecting nature

CORE COURSE -6

Course code and title- ML5CRT06 – Sahithyameemamsa

CO1: To understand the western as well as eastern philosophy of literature

CO2: To help in finding out the various dimensions of art

CORE COURSE -7

Course code and title-**ML5CRT07 – Cherukatha, Novel**

CO1: To analyse the topic, style if narration and specialties of novel

CO2: To secure knowledge in the story field of literate.

CORE COURSE -8

Course code and title-**ML5CRT08 – Bhashasasthram**

CO1:To secure an understanding about the scientific dimensions of language

CO2: To use language in as efficient

CO3: To distinguish the change taking place in language at different periods or ages

SEMESTER-6

CORE COURSE -9

Course code and title-**ML6CRT09 – Keraeeyadrishyakala**

CO1: If gives an opportunity to know the art forms that are likely to go extinct and to study them in detail

CO2: If helps in developing an orientation towards the traditional art forms

CORE COURSE -10

Course code and title-**ML6CRT10 – Pracheenasahithyam**

CO1: It gives knowledge about ancient forms of literature.

CO2: It helps in knowing the great significance of ancient literature in the development and evolution of Malayalam language.

CO3: It provides an opportunity to familiarize with literary spheres which are likely to become extinct e.g.- Poems of message, champu etc.

CORE COURSE -11

Course code and title-**ML6CRT11 – GadhyasahithyaNiroopanam**

CO1: It provides an opportunity to overview literature in a critical way and to help in literary creation

CO2: It teaches to evaluate literature in a logical and objective way

CORE COURSE -12

Course code and title-**ML6CRT12 – Vyakaranam, Bhashacharithram**

CO1: To understand the pronunciation and the scientific dimension of the language and to handle language in an appropriate manner

CORE COURSE -13

Course code and title-**ML6CBT01 – MalayalathileSthreerachanakal**

CO1: To know how ladies impact the field of literature and make a mark of their own

CO2: To appreciate the idea of Feminism

PROGRAMME- BA COMMUNICATIVE ENGLISH

PROGRAMME SPECIFIC OUTCOME

- PSO1: The students master proficiency in English language and literature.
- PSO2: Develops the formal and informal English communication skills.
- PSO3: The students become well versed in the basics of Print Media and journalism.
- PSO4: The students are familiarized with the modern technologies of Visual Media.
- PSO5: Develops the entrepreneurial skills of the students.

COURSE OUTCOMES

SEMESTER 1

COMMON COURSE 1 (EN1CC01) – FINE TUNE YOUR ENGLISH

- CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.
- CO2: Confidently use English in both written and spoken forms.
- CO3: Use English for formal communication effectively.

COMMON COURSE-2 (EN1CC02)- PEARLS FROM THE DEEP

- CO1: To introduce students to the different genres of literature and to the niceties of literary expression.
- CO2: Appreciate and enjoy works of literature.
- CO3 Appreciate the aesthetic and structural elements of literature.

COMMON COURSE-SECOND LANGUAGE-(ML1CCT01)- KATHASAHITHYAM

CO1: To understand the new trends in the literary field of short stories

or

COMMON COURSE-SECOND LANGUAGEHN1CCT01- PROSE & ONE ACT PLAYS

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE-1

Course code and Title- **EN1CR01- Methodology of Literary Studies**

CO 1: The course seeks to introduce the student to the major signposts in the historical evolution of literary studies from its inception to the current postcolonial realm.

CO 2: The emergence of literature as a specific discipline within the humanities.

CO 3: The tenets of what is now known as traditional‘approaches and also that of formalism.’

CO 4: The shift towards contextual-political critiques of literary studies

CO 5: The questions raised by Cultural Studies and Feminism(s)

CO 6: The issues of subalternity and regionality in the literary domain

CORE COURSE 2

Course code and title- **EN1CS02- Conversational Skills**

CO1: To sensitize students to the nuances of spoken forms of English

CORE COURSE 3

Course code and title- **EN1CS01- English in Informal Situations**

CO1: To speak English with a high degree of confidence, accuracy and fluency.

COMPLEMENTARY COURSE

Course code and title- SO01CA901- An Introduction **to Sociology**

CO1: To enable the students to gain an understanding of the society.

SEMESTER -2

COMMON COURSE -3

Course code and Title- **EN2CC03- Issues that Matter**

CO1:To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

COMMON COURSE -4

Course code and Title- **EN2CC03- Savouring the classics**

CO1: To introduce the students to the taste of time tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

COMMON COURSE -SECOND LANGUAGE

Course code and Title- **ML2CCT02 - kavitha**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

CORE COURSE – 4

Course code and title- **EN2CS03- Introduction to Communication**

CO1: To introduce the basics of human communication.

CORE COURSE -5

Course code and title- **EN2CS04- Business Communication**

CO1: to introduce students of Communicative stream to Business communication and related aspects

COMPLEMENTARY COURSE – 2

1. Development of sociological Theory.

CO1: To familiarize the historical conditions in which sociology emerged.

SEMESTER -3

COMMON COURSE -5

Course code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

COMMON COURSE -SECOND LANGUAGE

Course code and title- **ML3CCT03 – DrushyakalaSahithyam**

CO1: To generate interest in appreciating art by seeing it

OR

Course code and title **HN3CCT03- Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE – 5

Course code and title- **EN3CS05- Print Media and Journalism**

CO 1: To introduce the basics of Print Media.

CORE COURSE – 6

Course code and title- **EN3CR03- Harmony of Prose**

CO 1: To familiarize the students with varied prose styles of expression

CORE COURSE – 7

Course code and title- **EN3CR04- Symphony of Verse**

CO 1: To acquaint the student with the rich texture of poetry in English.

CORE COURSE – 8

Course code and title- **EN3CR05- Indian Writing in English**

CO 1: The course is intended to sensitize students to the various ways in which literature written

in English

COMPLEMENTARY COURSE – 3

Course code and Title- **EN3CM03 - Evolution of Literary Movements: The Shapers of Destiny**

CO1: To make the learner aware of the way in which history shapes the life and literature of a people

CO2: To give the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world

CO3: To enable him to understand English literature in the light of historical events

CO4: To analyse the manner in which a person is moulded by the historical events of his personal and communal life

SEMESTER -4

COMMON COURSE -6

Course code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide

COMMON COURSE -SECOND LANGUAGE

Course code and Title: **ML4CCT04 – MalayalaGadhyarachanakal**

CO1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE – 9

Course code and title- **EN4CS06- Print Media and Journalism**

CO 1: To familiarize students with reporting and Editing

CORE COURSE – 10

Course code and title- **EN4CR05- Modes of Fiction**

CO 1: To acquaint students with various modes of fiction.

CORE COURSE – 11

Course code and title- **EN4CR06- Language and Linguistics**

CO 1: Introduction to the science of linguistics.

CORE COURSE – 12

Course code and title- **EN4CR07- Acts on the Stage**

CO 1: To introduce the student to select theatre texts that form the canon of English drama.

COMPLEMENTARY COURSE – 4

Course code and title- **EN4CM04- Evolution of Literary Movements: Cross Currents of Change**

CO 1: To enable students to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature

SEMESTER 5

CORE COURSE – 13

Course code and title- **EN5CROPG03- English for Careers**

CO 1: To make the students competent in their job-seeking, job-getting and job-holding needs.

CORE COURSE – 14

Course code and title- **EN5CREN01- Environmental Science and HumanRights.**

CO :To develop the sense of awareness among the students about the environment and its variousproblems .

CORE COURSE – 15

Course code and title- **EN5CS07- Creative Writing and TranslationStudies.**

CO 1: To familiarize the students with the basics of translation.

CORE COURSE – 16

Course code and title- **EN5CS08- Mass Communication and Broadcasting**

CO 1: To introduce students to the world of broadcast journalism.

CORE COURSE – 17

Course code and title- **EN5CS09- Public Relations 1**

CO 1: To familiarize students with the basics of public relations and public relation campaign.

SEMESTER 6

CORE COURSE – 17

Course code and title- **EN6CS10- Entrepreneurship Development**

CO 1: To introduce the basics of Entrepreneurship.

CORE COURSE – 18

Course code and title- **EN6CS11- Visual Media: Television and Cinema**

CO 1: To familiarize students with the basics of film and TV production.

CORE COURSE – 19

Course code and title- **EN6CB03- Regional Literatures in Translation**

CO 1: The students will be introduced to a selection of regional literatures translated into English.

CORE COURSE – 20

Course code and title- **EN6CS12- Public Relations II**

CO 1: Introduce the ethics of PR and Industrial PR

CORE COURSE – 21

Course code and title- **EN6CS13- Office Administration and Human Resource Management**

CO 1: To introduce the basics of HRM

**PROGRAMME SPECIFIC AND
COURSE OUTCOMES OF
B.Sc. PROGRAMMES**

PROGRAMME- BSc BOTANY MODEL II

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: Explain different branches of Botany such as systematics, evolution, ecology, developmental biology, physiology, plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics and molecular biology of various life-forms.

PSO 2: Classify and categorize plants based on their taxonomy and interpret the data. Become competent in various analytical and technical skills related to plant sciences.

PSO 3: Identify various life forms of plants, design and execute experiments related to basic studies on ecology, developmental biology, physiology, plant interactions with microbes and insects, morphology, anatomy, genetics, microbiology and biochemistry.

PSO 4: Apply statistics to biological data and operate basic bioinformatics tools /databases. Interpret the molecular, cellular and biochemical basis of life forms and biological system.

PSO 5: Identify and analyze the fundamentals of biotechnology which enable students to connect the emerging and advanced concepts in biotechnology. Apply biotechnology skills in molecular & micro biology, enzymology, genetic engineering and plant sciences. Recognize the importance of Bioethics and IPR in life science/ biotechnology.

PSO 6: Plan and prepare research projects using various tools and techniques in plant sciences and biotechnology.

COURSE OUTCOMES

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- (EN1CC01) Fine-Tune your English

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- (EN1CC02)- Pearls from the Deep

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

1. Malayalam-Course Code and Title- (ML1CCT01)- Kathasahithyam

CO1: To understand the new trends in the literary field of short stories

Or

2. Hindi-Course Code and Title- (HN1CCT01)- Poetry and One act Play

CO 1: Students are familiarized with One act plays.

CO 2: Students are expected to analyze and appreciate different literary works.

CO 3: Describing the progressive nature of ancient and modern poets in Hindi.

CO 4: Social and cultural consciousness.

CORE COURSE 1

Course code and title- (BO1CRT01)- Methodology of Science and an Introduction to Botany

CO 1: Understand the universal nature of science

CO 2: Demonstrate the use of scientific method

CO 3: To lay a strong foundation to the study in Botany

CO 4: Impart an insight into the different types of classifications in the living kingdom.

CO 5: Appreciate the world of organisms and its course of evolution and diversity.

CO 6: Develop basic skills to study Botany in detail.

COMPLEMENTARY COURSES

Bio-Chem- Course code and title-(BC1CMT01)- Elementary Biochemistry

CO1: Student shall be able to understand and discuss the physic-chemical properties, including bonding, molecular interactions, dissociation and role of water in biological systems

CO2: Acquire significant knowledge on the role of pH in biological system and prepare solutions of different concentrations and pH to have a feel of hydrogen ion potential in biochemistry

CO3: Describe the principles, theory, protocols for the preparation of various buffers and their role in biological systems.

CO4: Explain cell membrane structure and composition and enumerate the other sub – cellular structures in the fluid mosaic model.

CO5: Describe various ways of solute transport and their mechanisms across membranes, including passive and active transportation, and the role of osmosis in Donnan membrane equilibrium.

CO6: Students shall learn the major principles of plant physiology focussing on the site of photosynthesis, specifically the structure of chloroplast, the mechanism of photosynthesis and classification of plants based on different photosynthesis mechanisms.

CO7: Appreciate the distinction between primary and secondary metabolites and signify importance of secondary metabolites in protection of the producer plant from predators and insects.

CO8: Determine the appropriate chromatographic techniques and approach for analysis of different samples and have better awareness of chromatographic applications areas, especially in biological chemistry.

CO9: Have hands on skill demonstrations on possible chromatographic techniques and critically evaluate the quality of acquired data.

CO10: Link the above knowledge to everyday activities in the elementary biochemistry workplace. Manage a field trip to feel different photosynthetic plants. Manage hands on training in various possible chromatographic techniques to gain practical knowledge and skills. Obtain and use information from variety of sources as part of self-directed learning. Manage their time and use their organisation skills within the context of self-directed learning on nutrients, blood, life-style diseases and clinical diagnosis of various body conditions by clinical methods.

VOCATIONAL COURSES

1. Biotechnology- Course code and title- (BO1VO4T01)-Introduction to Biotechnology

CO1: Describe the milestones in the field of Biotechnology and identify the difference between traditional and modern Biotechnology

CO2: Report the applications of biotechnology in industries for the production of fermented products.

CO3: Explain the application of biotechnology in agricultural sector for crop improvement by transgenesis, biological pest management and tissue culture

CO4: Identify and report the sustainable environmental applications of biotechnology in bioremediation and production of biofuels

CO5: Explain the application of biotechnology in medical sector for diagnosis, therapeutics and treatment.

2. Biotechnology- Course code and title- (BO1VO4T02)-Microbiology

CO1: Describe the major contributions by famous microbiologists

CO2: Recognize the structural and functional characteristics of viruses especially bacteriophage.

CO3: Interpret and analyse the structural and functional characteristics of bacteria.

CO4: Recognize the common instruments used in microbiology laboratory

CO5: Explain the techniques for microbial control, isolation and identification.

CO6: Demonstrate and interpret the techniques for microbial isolation, growth and control.

CO7: Differentiate and recognize bacteria using staining

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- (EN2CC03) - Issues that Matter

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- (EN2CC04)- Savouring the classics

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

1. Malayalam-Course Code and Title- (ML2CCT02) - Kavitha

CO1: To develop a poetic tent of mind.

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility.

Or

2. Hindi-Course Code and Title- (HN2CCT02)- Prose & Short Stories

CO 1: To familiarize the students with different kinds of Prose.

CO 2: To develop knowledge of literary forms in Hindi story.

CO 3: To familiarize the students with eminent writers in the field of short stories.

CO 4: Inculcate Moral and Human Values within themselves.

CORE COURSE 2

Course code and title-BO2CRT02-Microbiology, Mycology and Plant Pathology

CO 1: Understand the world of microbes, fungi and lichens.

CO 2: Appreciate the adaptive strategies of the microbes, fungi and lichens.

CO 3: To study the economic and pathological importance of microorganisms.

COMPLEMENTARY COURSES

Bio-Chem- Course code and title-(BC2CMT02-Biomolecules

CO1: Appreciate carbohydrate function as energy storing macromolecules, metabolic intermediates and important fuels for the plant and animal body.

CO2: Describe structure- properties and important functions of major monosaccharides, including glucose, ribose, fructose etc.

CO3: Describe structure- properties and important functions of major disaccharides including lactose, amylose etc.

CO4: Describe structure- properties and important functions of major polysaccharides such as starch, cellulose, glycogen and have a feel of glycoconjugates and their functions

CO5: Illustrate different types of lipids and fats and relate their structure- properties (saponification number, acid number and iodine number) to their functions in biological systems.

CO6: Learn in detail about lipids, fats, and different related biomolecules such as phosphatidic acid, lecithin, cephalin, and phosphatidyl serine, cholesterol and ergosterol and the important the role they play in our bodies.

CO7: Understand that amino acids contain carbon, nitrogen, oxygen and hydrogen atoms, some contain an atom of sulphur and that there are about 20 different amino acids, with different sidechains (R groups), which are linked via peptide bonds to make polypeptides and proteins, each protein molecule can be hundreds of amino acids long and the amino acids must be joined in a precise order.

CO8: Appreciate that the side-chains (R groups) of the amino acids can interact with one another to fold the protein into a particular shape which is essential for the protein to function correctly.

CO9: Understand the structure and properties of nucleosides, nucleotides, how they contribute to secondary and tertiary structures of nucleic acids at the molecular level, and the different composition and roles of nucleic acids in the cells.

CO10: Describe the basic structure-properties and biological significance of nucleic acids and compare and contrast the structure of DNA and RNA.

CO11: Link the above knowledge to everyday activities in the study of four classes of biomolecules in biochemistry workplace. Obtain and use information from variety of sources as part of selfdirected learning. Manage their time and use their organisation skills within the context of selfdirected learning on nutrients, blood, life-style diseases and clinical diagnosis of various body conditions by clinical methods.

VOCATIONAL COURSES

1. **Biotechnology-** Course code and title-**BO2VO4T03-Molecular biology**

CO1: Recognize the basic features of DNA, classify the types of mutations and polymorphisms in DNA and compare the methods to analyse polymorphism; explain the concept of gene, organisation of DNA in chromosome and structural features of chromosomes

CO2: Differentiate euchromatin and heterochromatin; identify linkage group and distinguish various types of repetitive DNA sequences in the genome.

CO3: Interpret central dogma of molecular biology and genetic code; articulate the steps involved in gene expression

CO4: Distinguish transcription, translation and reverse transcription; interpret regulation of gene expression in lac operon and Trp operon.

CO5: Explain the characteristic features of cancer cells; correlate the molecular biology of cancer with Oncogenes, proto oncogenes and tumour suppressor genes and relate the role of heredity and cancer

2. **Biotechnology-** Course code and title-**BO2VO4T04- Fundamentals of Enzymology and Radiobiology**

CO1: Discuss the features of water which makes it a suitable solvent in biological system; differentiate molarity, molality and normality

CO2: Correlate pH with ionic strength and measure pH using various techniques; describe the properties and significance of biological buffers and prepare it.

CO3: Explain the properties and structure of enzymes and classify them; differentiate different mechanism of enzyme action and inhibitions

CO4: Derive Michaelis-Menten equation, K_m value and velocity of an enzyme reaction; interpret the significance of enzyme kinetics, reversible reactions and isoenzymes.

CO5: Explain the half life of a radioactive element; classify various tracer techniques; compare the measurement of radioactivity by various techniques and apply the use of tracer in biology.

CO6: Prepare buffers of various pH and molar solutions

CO7: Estimate proteins using colorimetry and evaluate the kinetics of enzyme catalysis.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitivise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities within Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 3

1. Malayalam- Course Code and Title-ML3CCT03- DrushyakalaSahithyam

CO 1: To generate interest in appreciating art by seeing it.

OR

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE 3

Course code and title- **BO3CRT03- Phycology and Bryology**

CO 1: To study the evolutionary importance of Algae as progenitors of land plants.

CO 2: Understand the unique and general features Algae and Bryophytes and familiarize it.

CO 3: To study the external morphology, internal structure and reproduction of different types of Algae and Bryophytes.

CO 4: Realize the application of Phycology in different fields.

COMPLEMENTARY COURSES

Bio-Chemistry- Course code and title-(BC3CMT03) - Enzymology and Metabolism

CO1: Exposure to the fundamental knowledge on enzymes and their importance in vast world of biological reactions and have a feel of the difference between a chemical catalyst and biological catalyst (enzyme).

CO2: Exposure to the nature of protein and non-protein (conjugated) enzymes and understanding the role of enzymes in clinical diagnosis and industries.

CO3: Describe basic metabolic pathways (anabolic and catabolic) of major nutrients in the body.

CO4: Demonstrate a fundamental knowledge and understanding of the role of energy conversions in cellular metabolism (anabolic and catabolic).

CO5: Appreciate the role of proteins and nucleic acids and the genetic code in the synthesis of macromolecules.

CO6: Discuss human metabolic disorders related to altered amino acid metabolism.

CO7: Describe drug-enzyme interactions in drug action.

CO8: Appreciate the structure of Cholesterol and understand the significance of this biological molecules for a healthy living, focussing on the specific HDL/LDL ratio and its correlation to certain body conditions.

CO9: Create a general awareness about body Cholesterol level as a life-style abnormality in modern societies.

CO10: Link the above knowledge to everyday activities in the bioscience workplace. Obtain and use information from variety of sources as part of self-directed learning. Manage their time and use their organisation skills within the context of self-directed learning on enzymology and their specific role in metabolism of various nutrient molecules.

VOCATIONAL COURSES

1. Biotechnology- Course code and title-BO3VO4T05- Biotechniques & instrumentation

CO1: Discuss the parts of compound microscope; differentiate and compare optical microscopy techniques like bright field microscopy, dark field microscopy, Phase contrast microscopy and fluorescent microscopy; can explain electron microscopy techniques- TEM, SEM

CO2: Explain principle of centrifugation, types and parts of centrifuge, differentiate different centrifugation techniques like differential centrifugation and density gradient centrifugation and apply it.

CO3: Define the principle of electrophoretic techniques; differentiate macromolecule separation by AGE, SDS- PAGE, PFGE, Isoelectric focusing and two dimensional gel electrophoresis

CO4: Explain the principle of chromatographic techniques, compare Paper chromatography and TLC.

CO5: Differentiate Ion-Exchange chromatography, Affinity chromatography, Gel filtration chromatography, HPLC and GLC; apply it in purification of biomolecules

CO6: Interpret Electromagnetic spectrum, derive Beer-Lamberts Law; differentiate Colorimetry and Photometry

CO7: Compare Colorimeter and spectrophotometer; explain UV spectroscopy and infrared spectroscopy.

CO8: Estimate proteins, DNA, RNA; plan and demonstrate Paper chromatography, TLC, PAGE and spectroscopy.

2. Biotechnology- Course code and title-BO3VO4T06- Basics of molecular cloning techniques

CO1: Discuss the enzymes used in genetic Engineering like Restriction Endonucleases, Ligases, DNA polymerases, Reverse Transcriptase, Polynucleotide Kinase, Terminal Transferase, Alkaline Phosphatase

CO2: Interpret the features of cloning vectors, draw and differentiate pBR322 and pUC18; λ and M13 based vectors, cosmids and Phagemids; discriminate Eukaryotic vectors- YAC and BAC, Shuttle Vectors and Expression vectors

CO3: explain the preparation of probes by nick translation; compare radioactive and non radioactive labeling of probes; define GFP and applications of probes.

CO4: Explain the principle of Nucleic acid hybridization techniques, discuss and compare Southern Blotting, Northern Blotting, Western Blotting, Dot - Blotting, colony hybridisation, Plaque hybridisation, *In-situ* hybridization

CO5: Define Polymerase Chain Reaction, discuss the methods and application and identify its types

CO6: Discuss and compare DNA sequencing methods like Maxam and Gilbert chemical method, Sanger and Coulson Enzymatic method, Direct DNA sequencing using PCR and Automated DNA sequencing methods.

CO7: Isolate DNA, demonstrate restriction digestion, Southern blotting and PCR

SEMESTER 4

ENGLISH COMMON COURSE PAPER 6

Course Code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 4

1. Malayalam- Course Code and Title- ML4CCT04- MalayalaGadhyarachanakal

CO 1: To appreciate portions of prose

OR

Hindi- Course code and Title- HN4CCT04- Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE 4

Course code and title- **BO4CRT04 Pteridology, Gymnosperms and Paleobotany**

CO 1: Understand the diversity in habits, habitats and organization of various groups of plants.

CO 2: To impart an insight into the modern classifications in lower forms of plants.

CO 3: Understand the evolutionary trends in Pteridophytes and Gymnosperms.

CO 4: Study the anatomical variations in vascular plants.

CO 5: Understand the significance of Paleobotany and its applications.

COMPLEMENTARY COURSES

Course code and title- **BC4CMT04- Nutritional and Clinical Biochemistry**

CO1: Discuss and understand the fundamental biochemistry knowledge related to health, clinical practices, specifically of blood, urine, cerebrospinal fluid (CSF) etc, especially in the understanding of biochemical basis of metabolic disorders.

CO2: Explain the clinical significance of the laboratory tests of blood, urine and CSF in the diagnosis of many common health issues.

CO3: Diagnosis of clinical disorders by estimating biomarkers.

CO4: Determine various substances including substrates, enzymes, hormones, etc and their use in diagnosis and monitoring of disease are applied.

CO5: Evaluate the abnormalities which commonly occur in the clinical field and review the information from each category of tests and develop a protocol for disease diagnosis.

CO6: Create awareness of different lifestyle diseases increasingly found in present day.

CO7: Describe biochemical pathways relevant in nutrient metabolism and make the student capable of using selected biochemical techniques relevant in nutritional biochemistry.

CO8: Understand and the fundamental concepts and significance of nutrients such as amino acids, fatty acids, vitamins and minerals, and calorific control in managing lifestyle diseases.

CO9: Link the above knowledge to everyday activities in the bioscience workplace. Obtain and use information from variety of sources as part of self-directed learning. Manage their time and use their organisation skills within the context of self-directed learning on nutrients, blood, life-style diseases and clinical diagnosis of various body conditions by clinical methods.

VOCATIONAL COURSES

1. **Biotechnology- Course code and title- BO4VO4T07-Genetic engineering**

CO1: Discuss and compare isolation of foreign gene by transformation and transfection methods; explain the screening of transformants using marker genes and reporter genes; differentiate direct and indirect selection of transformants

CO2: Analyse the indirect gene transfer techniques using Ti plasmid, Ri plasmid and plant viral vectors

CO3: Able to discuss the application of transgenic plants in agriculture for production of herbicide resistance, modification of seed protein quality and molecular farming

CO4: Differentiate genomic libraries and cDNA libraries, construct gene library by chromosome walking, chromosome jumping, DNA foot printing and transposon tagging

CO5: Able to define micro arrays, differentiate the types of DNA chips and production methods; discuss the applications of micro arrays; explain nanobiotechnology.

CO6: Able to discuss Human Genome Project, its significance and findings

CO7: Able to analyse the Ethical, Legal, Social, Environmental issues of Recombinant DNA Technology; discuss Biosafety and Biowar, Patenting and IPR issues.

2. **Biotechnology- Course code and title- BO4VO4T08- Plant Tissue Culture**

CO1: Define plant tissue culture and explain the principle of tissue culture and its history; identify the general facilities for plant tissue culture

CB2: Choose various methods for sterilization of explants and instruments used in PTC; identify the basic components in a plant tissue culture medium, prepare MS medium stock and working standard

CB3: Plan and perform inoculation, incubation, subculturing and hardening

CB4: Compare callus and suspension culture; meristem culture, anther culture, pollen culture, ovary culture and embryo culture

CB5: Differentiate Organogenesis and somatic embryogenesis; plan somatic embryogenesis and prepare artificial seeds.

CB6: Discuss protoplast culture and somatic hybridization and single cell culture techniques; define somaclonal variations.

CO7: Differentiate various bioreactors for plant cell culture; explain biotransformation, downstream processing, hairy root culture and application of PTC

SEMESTER 5

CORE COURSES

Core Course 5- Course code and title- BO5CRT05- Anatomy, Reproductive Botany, Micro-technique

CO 1: Imparting an insight into the internal structure and reproduction of the most evolved group of plants, the Angiosperm.

CO 2: Understand the individual cells and also tissues simultaneously.

CO 3: Understand the structural adaptations in plants growing in different environment.

CO 4: Understand the morphology and development of reproductive parts.

CO 5: Get an insight in to the fruit and seed development.

CO 6: Understand the techniques used to preserve and study plant materials.

Core Course 6- Course code and title- BO5CRT06- Research methodology, Biophysics and Biostatistics

CO 1: To equip the students to conduct independent research and prepare research reports.

CO 2: To make the students acquaint with different tools and techniques used in research work.

CO 3: To equip the students with basic computer skills necessary for conducting research.

CO 4: To enable the students to have enough numerical skills necessary to carry out research.

Core Course 7- Course code and title-BO5CRT07- Plant Physiology and Biochemistry

CO 1: Acquire basic knowledge needed for proper understanding of plant functioning.

CO 2: Familiarize with the basic skills and techniques related to plant physiology.

CO 3: Understand the role, structure and importance of the bio molecules associated with plant life.

Core Course 8- Course code and title- **BO5CRT08-Environmental sciences and Human Rights**

CO 1: Acquaint the student with the significance of Environmental Science.

CO 2: Make the students aware about the extent of the total biodiversity and the importance of their conservation.

CO 3: Help the student to design novel mechanisms for the sustainable utilization of natural resources.

CO 4: Enable the students to understand the structure and function of the ecosystems.

CO 5: Enable the students to understand various kinds of pollution in the environment, their impacts on the ecosystem and their control measures.

CO 6: Make the students aware about various environmental laws in India and the role of various movements in the protection of nature and natural resources.

OPEN COURSE

Course code and title- **BO5OPT01- Agriculture Based Micro Enterprises**

CO 1: To become familiar with the business opportunities in plant sciences field.

CO 2: To gain knowledge about sustainable agriculture and organic farming.

CO 3: Appreciate the awareness about various food preservation techniques

CO 4: Inculcate an interest in mushroom cultivation, gardening and nursery management.

SEMESTER 6

CORE COURSES

Core Course 9- Course code and title- **BO6CRT09- Genetics, Plant Breeding and Horticulture**

CO 1: Imparting an insight into the principles of heredity.

CO 2: Understand the patterns of inheritance in different organisms.

CO 3: Understand the inheritance pattern of nuclear and extra nuclear genes.

CO 4: Understand the methods of crop improvement.

CO 5: Understand the importance of horticulture in human welfare.

CO 6: Develop skill in gardening technique among students.

Core Course 10- Course code and title-BO6CRT10- Cell and Molecular Biology

CO 1: Understand the ultra-structure and functioning of cell in the sub-microscopic and molecular level.

CO 2: Get an idea of origin, concept of continuity and complexity of life activities.

CO 3: Familiarization of life processes.

CO 4: Understand the basic and scientific aspect of diversity.

CO 5: Understand the cytological aspects of growth and development.

CO 6: Understand DNA as the basis of heredity and variation.

Core Course 11- Course code and title- BO6CRT11- Angiosperm morphology, Taxonomy and Economic Botany

CO 1: Acquaint with the aims, objectives and significance of taxonomy.

CO 2: Identify the common species of plants growing in Kerala and their systematic position.

CO 3: Develop inductive and deductive reasoning ability.

CO 4: Acquaint with the basic technique in the preparation of herbarium.

CO 5: Familiarizing with the plants having immense economic importance.

Core Course 12- Course code and title- Biotechnology and Informatics

CO 1: Understand the current developments in the field of Biotechnology and Bioinformatics.

CO 2: Able to carry out plant tissue culture.

CO 3: Understand the vast repositories of biological data knowledge.

CO 4: Able to access and analyze the data available in the databases.

ELECTIVE COURSE

Course code and title- BO6PET02- Plant Genetic Resources Management

CO 1: Acquaint the student with the history and evolution of crop plants, and their diversity.

CO 2: Familiarize the student with the available plant genetic wealth and the measures adopted for the conservation of these resources.

CO 3: Help the student to identify the crop plants and their wild relatives.

CO 4: Help the student to explore the potentialities of various underutilized plants to project as the future food prospects.

CO 5: Understand the significance of modern technology to locate the distribution of endangered species

PROGRAMME- BSc CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: Think in a critical manner.

PSO 2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.

PSO 3: Formulate and develop mathematical arguments in a logical manner.

PSO 4: Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.

PSO 5: Understand, formulate and use quantitative models arising in social science, business and other contexts.

COURSE OUTCOMES (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

COMMON COURSE- SECOND LANGUAGE(**ML1CCT01**)- **KATHASAHITHYAM**

CO1: To understand the new trends in the literary field of short stories

or

COMMON COURSE-SECOND LANGUAGEH1CCT01- PROSE & ONE ACT PLAYS

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE 1

Course Code and Title-(**CH1CRT01**)- **General and Analytical Chemistry**

CO 1: Describe about the methodology of science in general and Chemistry in particular.

CO 2: Explain the basic concepts of periodic table and the associated periodic properties.

CO 3: Apply the concepts of periodic table and periodic properties.

CO 4: Discuss the various analytical tools in Chemistry.

CO 5: Describe various Chromatographic techniques.

CO 6: Evaluate analytical data.

COMPLEMENTARY COURSES

1. Mathematics- Course code and title- (MM1CMT01)- Partial Differentiation, Matrices, Trigonometry and numerical methods

CO 1: Recall the definition of functions and understand functions of several variables.

CO 2: Understand Partial differentiation.

CO 3: Understand the idea about rank of a matrix and its application.

CO 4: Compute with the characteristic polynomial, eigen vectors, Eigen values and Eigen spaces.

CO 5: Compute complex problems in trigonometry solving equations using numerical methods.

2. Physics- Course code and title- CODE-Properties of Matter &Thermodynamics

CO 1: To Understand different moduli of elasticity.

CO 2: To study the hydrodynamics in detail.

CO 3: To understand viscosity.

CO 4: To know about surface tension and applications.

CO 5: Could attain basics of thermodynamics.

CO 6: To get idea about various heat engines.

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1:To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

3. Malayalam-Course Code and Title- (ML2CCT02) - Kavitha

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

CORE COURSE 2

Course Code and Title-**CH2CRT02- Theoretical and Inorganic Chemistry**

CO 1: Explain different models of atoms.

CO 2: Calculate Radius, Energy, velocity of an electron.

CO 3: Discuss octet rule and its limitations.

CO 4: Classify different types of bonds.

CO 5: Predict the shape and hybridisation of molecules.

CO 6: Draw molecular orbitals of homo and hetero diatomic molecules.

CO 7: Understand about various intermolecular forces.

CO 8: Discuss the Chemistry of s, p, d and f block elements.

COMPLEMENTARY COURSES

1. Mathematics- Course Code and Title- MM2CMT01- Integral Calculus and differential equations

CO 1: Find the area under a given curve, length of an arc of a curve when the equations are given in parametric and polar form by using integrations.

CO 2: Familiarize double and multiple integrals and its applications.

CO 3: Understand exact differential equations and solving.

CO 4: Solving homogeneous differential equations.

2. Physics- Course Code and Title- Code -Mechanics and Superconductivity

CO 1: To Get an idea about oscillations.

CO 2: To have idea about wave propagation and doppler effect.

CO 3: Familiarize rotational mechanics and moment of inertia of various bodies.

CO 4: To know about superconductivity, classification and applications.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 3

2. Malayalam- Course Code and Title-ML3CCT03- DrushyakalaSahithyam

CO 1: To generate interest in appreciating art by seeing it.

OR

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE 3

Course Code and Title- **CH3CRT03- Organic Chemistry I**

CO 1: Explain the basic concepts of organic chemistry.

CO 2: Identify how stereochemistry affects a chemical reaction.

- CO 3: Describe nucleophiles and electrophiles.
- CO 4: Assess reaction mechanisms to predict the outcome of reactions.
- CO 5: Analyse various concerted reactions.
- CO 6: Predict the category to which the reaction belongs to.
- CO 7: Define the synthesis of alkanes, alkenes etc.
- CO 8: Explain the role of aromaticity.

COMPLEMENTARY COURSES

1. Mathematics- Course Code and Title-MM3CMT01 Vector calculus Analytic Geometry and abstract algebra

- CO 1: Represent vectors analytically and geometrically, and compute dot and cross products for presentations of lines and planes.
- CO 2: Apply derivative concepts to find tangent lines to level curves and to solve optimization problems.
- CO 3: Find the equation to tangent, normal at a point on a conic.
- CO 4: Find the polar equation of a line, circle, tangent and normal.
- CO 5: Familiarize real and imaginary parts of a circular and hyperbolic functions of a complex variable.
- CO 6: Assess properties implied by the definitions of groups.
- CO 7: Use various canonical types of groups (including cyclic groups and groups of permutations).
- CO 8: Analyze and demonstrate examples of subgroups.
- CO 7: Use the concepts of isomorphism and homomorphism for groups.

2. Physics- Course code and title-Code-Modern Physics and Magnetism

- CO 1: To know about atomic nucleus and various coupling mechanisms.
- CO 2: To have an idea about nuclear forces and nuclear properties.
- CO 3: To understand radioactivity, fission & fusion.
- CO 4: To know the concepts of quantum mechanics.
- CO 5: To get an idea about atomic and molecular spectroscopy, fluorescence.
- CO 6: To know about diode applications, transistors.
- CO 7: To know about magnetism classification.

SEMESTER 4

ENGLISH COMMON COURSE PAPER 6

Course Code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 4

2. Malayalam- Course Code and Title- **ML4CCT04- MalayalaGadhyarachanakal**

CO 1: To appreciate portions of prose

OR

Course code and Title- **HN4CCT04-Drama & Long Poem**

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE 4

Course Code and Title- **CH4CRT04-Organic Chemistry II**

CO 1: Reproduce the various synthetic methods leading to alcohols, carbonyl compounds and carboxylic acids.

CO 2: Verify the number of alkoxy groups present in a molecule.

CO 3: Predict the reactivity of alcohols and carbonyl compounds.

CO 4: Devise synthetic procedures based on rearrangements.

CO 5: Examine the reactivity of carboxylic acids.

CO 6: Decide the effect of substituents on the reactivity of carboxylic acids.

CO 7: Summarise the general reactions of sulphonic acids.

CO 8: Recall the synthesis and reactivity of carboxylic acid derivatives.

COMPLEMENTARY COURSES

1. **Mathematics-** course code and title- **MM4CMT01- Fourier series, Laplace transform and complex analysis**

CO 1: Get familiar with periodic function understand power series.

CO 2: Compute the fourier series of a given function.

CO 3: Get familiar with Laplace transform.

CO 4: Solve differential equations by using Laplace transform.

CO 5: Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers.

CO 6: Define and analyze limits and continuity for complex functions as well as consequences of continuity.

CO 7: Conceive the concepts of analytic functions and will be familiar with the elementary complex functions and their properties.

CO 8: Evaluate exponentials and integral powers of complex numbers.

2. **Physics-** Course code and title- **Code-Optics &Solid State Physics**

CO 1: Could understand the principles of interference, diffraction and polarization in a detailed way.

CO 2: Knowing the theory behind various optical phenomena students are able to do experiments.

CO 3: Know the theory and applications of lasers.

CO 4: Familiarize with fibre optic communication.

CO 5: To know about dielectric materials and its properties.

CO 6: To know about crystallography.

CO 7: To understand x ray diffraction in detail.

SEMESTER 5

CORE COURSES

Core course 5- Course code and title- **CH5CRT05- Environmental Studies and Human rights**

- CO 1: Identify various types of natural resources, human impact on these resources, and common resource management practices.
- CO 2: Develop skills and a commitment to act independently and collectively to sustain and enrich the environment.
- CO 3: Understand the multidisciplinary nature, important theories and concepts of environmental science, ecosystems, natural resources and conservation.
- CO 4: Describe environmental hazards and risks and the social and economic ramification.
- CO 5: Familiarize with the major environmental problems its causes and potential solutions.
- CO 6: Discuss the Toxicology and Toxicological Effects of Pollution.
- CO 7: Understand the basic concept of green chemistry.
- CO 8: Describe the basic concept of nuclear chemistry and perform calculations based on it.
- CO 9: Debate issues related to nuclear waste management.
- CO 10: Create awareness on various environmental acts in India.
- CO 11: Identify issues and problems relating to the human rights.
- CO 12: Analyse country's situation or international situation in terms of human rights.

Core course 6- Course code and title- **CH5CRT06- Organic Chemistry III**

- CO 1: Understand the chemistry of nitro-compounds and amines.
- CO 2: Distinguish primary, secondary and tertiary amines in a mixture of amines.
- CO 3: Explain the stereochemistry of amines and preparation and applications of diazonium salts.

- CO 4: Illustrate the preparation and applications of phenyl hydrazine, diazomethane, diazoacetic ester and to explain various name reactions.
- CO 5: Define heterocyclic compounds and their aromaticity.
- CO 6: Explain the synthesis and reactions of heterocyclic compounds.
- CO 7: Identify active methylene compounds and to explain its preparation, isomerism and applications.
- CO 8: Classify carbohydrates and to illustrate its structure and properties.
- CO 9: Show the inter-conversion of aldoses and ketoses.
- CO 10: Categorize carbohydrates into mono, di and polysaccharides.
- CO 11: Explain artificial sweeteners and applications of polysaccharides.
- CO 12: Discuss the classification uses and mode of action of various drugs.
- CO 13: Predict the after effects of drug addiction and drug abuse, propose prevention and treatment.
- CO 14: Verify colour and constitution, explain the classification, preparation and applications of Dyes.
- CO 15: Discuss the classification, polymerization mechanism and Recycling of plastics.

Core course 7- Course code and title- CH5CRT07 Physical Chemistry I

- CO 1: Understand the intermolecular forces in gases and Perform calculations based on gas laws and van der Waals equation.
- CO 2: Learn and perform calculations based on different gas velocities, Boltzmann distribution and collision properties.
- CO 3: Understand the intermolecular forces in liquids and determine the surface tension and viscosity of liquids.
- CO 4: Learn the laws of crystallography, structure of various solids and identify Bravais lattice from unit cell parameters.
- CO 5: Predict the lattice type (cubic) from X-ray diffraction data, perform calculations based on Bragg's equation and other crystallographic data.
- CO 6: Understand semiconductors, the defects in crystals, superconductivity.
- CO 7: Understand the types and structure and applications of liquid crystals.

CO 8: Understand the phenomenon of adsorption.

CO 9: Determine the surface area from Langmuir and BET data.

CO 10: Understand preparation, purification and properties of colloids.

Core course 8- Course code and title- CH5CRT08- Physical Chemistry II

CO 1: Discuss and interpret experiments that reveal the wave properties of matter, as well as how this motivates replacing classical mechanics with a wave equation.

CO 2: Solve the Schrödinger equation for simple systems in one to three dimensions analytically and use these solutions to calculate associated probabilities, expectation values as well as give concise physical interpretations and reasoning underlying the mathematical results.

CO 3: Outline the basic quantum-mechanical approach to deriving molecular orbitals from atomic orbitals and describe traits of bonding and antibonding molecular orbitals.

CO 4: Describe the basics behind interaction between light and matter and account for the most common spectroscopic methods and their possibilities and limitations for studies of molecules in the MW, IR, Raman, NMR, ESR and UV-Vis areas.

CO 5: Calculate different molecular parameters for simple molecules from their MW, IR.

CO 6: Account for different types of electronic transitions and de-excitation process and electronic states.

CO 7: Describe the relationship between absorbance, molar absorptivity, path length, and concentration in Beer's Law and predict how the intensity of light absorbed/transmitted will change with changes in solution type, solution concentration, container width, or light source.

CO 8: Understand how nuclear spins are affected by a magnetic field, and be able to explain what happens when radiofrequency radiation is absorbed.

CO 9: Understand the basics of ESR spectroscopy and explain the ESR spectrum of methyl methyl radical.

Course code and title-**CH5OPT01 - Chemistry in Everyday Life**

CO 1: Introduce the basic ideas and practice of food additives including preservatives, food colours, flavours -natural and synthetic, artificial sweeteners, emulsifying agents, antioxidants, leavening agents flavour enhancers etc and their toxic side effects.

CO2: Make cautious effort to understand the fast foods and junk foods culture, their health effects, food adulteration and familiarise with the important food safety laws and their standards

CO3: Introduce the students to different types of soaps and detergents and essential difference and advantages of detergents over common soaps.

CO4: Understand TFM and the gradings of soaps and the chemistry behind the cleansing action of soap and analyse in real life the important environmental issues associated with soaps and detergents

CO5: Describe and make the students familiar with the general formulation of different types of cosmetics such as dental cosmetics, shampoos, hair dyes, skin products bath oil, shaving cream, talcum powder etc, and observe the health issues associated with the usage focussing on toxicology.

CO6: Describe plastics and polymers in everyday life, their difference, classification, most significantly the environmental hazards and the concept of biodegradable plastics and sustainability in plastic usage coming from recycling/reuse of different plastics.

CO7: Demonstrate different types of papers, environmental impact, consequence on deforestation International recycling codes, and symbols for identification of plastics.

CO8: Introduce the the classification of drugs based on the disease type that is treated with the drug, and basic ideas on drug addiction and abuse and prevention and treatment.

CO9: Understand basic concepts (including history of, resources needed, and the future of) of production agriculture

CO10: Describe the differences between macro and micro nutrients, calories, carbohydrates, in agricultural practices

CO11: Introspectively analyse the effect of overcrowding agricultural fields with fertilizers, consequences of using highly toxic pesticides in agricultural practices to the biosphere and environment at large, and realize the importance of bio- based pest control methods

CO12: Terminology, scales of nanosystems, types, etc and applications of nanoparticles in biology and medicine – biological labels, drug and gene delivery, tissue engineering, tumour destruction, electronics, paints, food packaging etc.

SEMESTER 6

CORE COURSES

Core course 9- Course code and title- **CH6CRT09- Inorganic Chemistry**

CO 1: Identify coordination compounds.

CO 2: Classify the possible number of isomers of any given coordination compounds.

CO 3: Describe the structures and hybridizations of coordination compounds.

CO 4: Explain the nature of bonding in coordination compounds through the various bonding theories.

CO 5: Describe various types of reaction mechanism, kinetics and thermodynamics possible in coordination chemistry.

CO 6: Predict the cis and trans structures using Trans effect.

CO 7: Apply the principles of coordination chemistry in qualitative and quantitative analysis

CO 8: Apply the principle of organometallic chemistry to analyze and identify the stability and reactivity of organometallic compounds.

CO 9: Judge the structural and functional roles of metal ions in metalloproteins.

CO 10: Explain the production methods of boron and their derivatives.

CO 11: Explain types structure and reactivity of interhalogen compounds, pseudo halogens.

CO 12: Identify the properties of the noble gases.

Core course 10- Course code and title- **CH6CRT10- Organic Chemistry IV**

CO 1: Classify various terpenoids and alkaloids.

CO 2: Verify the structures of coniine, nicotine and piperine.

CO 3: Explain the classification and properties of lipids, soaps, detergents.

CO 4: Determine the saponification value, acid value, iodine value and RM value.

- CO 5: Illustrate the structure classification and functions of vitamins and steroids.
- CO 6: Describe the Structure, classification and functions of hormones and Artificial hormones.
- CO 7: Classify amino acids and to explain the synthesis of polypeptides and proteins.
- CO 8: Determine the structure of proteins.
- CO 9: Explain the structure and functions of nucleic acids and biosynthesis of proteins.
- CO 10: Describe Enzyme catalysed reaction mechanism and its characteristics.
- CO 11: Explain Molecular recognition, non covalent interactions and structure organisations of bio-molecules.
- CO 12: Distinguish thermal and photochemical reactions.
- CO 13: Construct the Jablonski diagram for explaining various photo-physical processes.
- CO 14: Predict the products of various photochemical reactions.
- CO 15: Predict the structure of molecules by using Principle and applications of UV/Visible and IR spectroscopy.
- CO 16: Determine the molecular mass and structure of a compound using the principle and applications NMR and mass spectrometry.

Core course 11- Course code and title- CH6CRT11- Physical Chemistry III

- CO 1: Understand the basic concepts of thermodynamic such as temperature, pressure, system, properties, process, state.
- CO 2: State the Zeroth, First, Second and Third Laws of thermodynamics.
- CO 3: Understand all the concepts needed to state the laws of thermodynamics, such as 'thermodynamic equilibrium', 'exact' and 'inexact' differentials and 'reversible' and 'irreversible' processes.
- CO 4: Understand the distinction between real gas and ideal gas in terms of Joules-Thomson coefficient.
- CO 5: Define the enthalpy H, Helmholtz function F and the Gibbs function G and state their roles in determining equilibrium under different constraints.
- CO 6: Understand the feasibility of a chemical reaction in terms of Gibbs free energy and Entropy.

CO 7: Understand the law reversibility and irreversibility of a chemical reaction.

CO 8: Understand the concept of Equilibria in solution.

CO 9: Understand the importance of Phase Diagrams and its applications in the field of materials science and engineering.

CO 10: Understand the concept of reaction rates and explain how reactions occur at the molecular level in terms of collision theory and transition state theory.

CO 11- Describe catalyst its effect on reaction rates and illustrate its mechanism.

Core course 12- Course code and title- CH6CRT11- Physical Chemistry IV

CO 1: Understand Raoult's law, the behaviour of binary liquid mixtures, Separation techniques of liquid-liquid systems, Henry's law and Nernst distribution law.

CO 2: Explain Partial molar quantities – Chemical potential – Gibbs–Duhem equation.

CO 3: Perform calculations involving colligative properties of solutions.

CO 4: Understand Osmotic pressure, Reverse osmosis, Abnormal molecular masses and van Hoff factor.

CO 5: Understand electrolytic conductance, equivalent conductance, Faraday's laws electrolysis, Kohlrausch's law, ionic mobility and perform calculations based on these.

CO 6: Understand the experimental determination of transport number.

CO 7: Understand the experimental determination of transport number.

CO 8: Explain Debye Huckel theory, Debye-Hückel limiting law, Debye- Hückel- Onsager equation.

CO 9: Perform conductometric titrations.

CO 10: Understand basis of Electrochemical cells, concentration cells, Irreversible electrode processes and perform calculations involving thermodynamic properties of Electrochemical cells.

CO 11: Determine pH from emf measurements and perform potentiometric titrations.

CO 12- Understand Laws of photochemistry, Jablonsky diagram, fluorescence, phosphorescence, non-radiative processes, chemiluminescence, bioluminescence and photochemical reactions.

CO 13- Understand Symmetry, symmetry elements, point groups and construct character tables.

PROGRAMME- BSc MATHEMATICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: Think in a critical manner.

PSO 2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.

PSO 3: Formulate and develop mathematical arguments in a logical manner.

PSO 4: Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.

PSO 5: Understand, formulate and use quantitative models arising in social science, business and other contexts.

COURSE OUTCOMES (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1**Malayalam-Course Code and Title- (ML1CCT01)- Kathasahithyam**

CO1: To understand the new trends in the literary field of short stories

or

Hindi- Course code and title- (HN1CCT01)- Prose & One Act Plays

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE 1**Course Code and Title- (MM1CRT01)-Foundation of Mathematics**

CO 1: Prove statements about sets and functions

CO 2: Analyze statements using truth tables

CO 3: Construct simple proofs.

CO 4: Familiarize mathematical symbols and standard methods of proofs.

COMPLEMENTARY COURSES**1. Physics- Course code and title- (PH1CMT01)-Properties of Matter & Error Analysis**

CO 1: To Understand different moduli of elasticity.

CO 2: To Have idea about fourier analysis.

CO 3: To study the hydrodynamics in detail.

CO 4: To understand viscosity.

CO 5: To know about surface tension and applications

CO 6: Error analysis in detail

2. Statistics- Course code and title- ST1CMT01-Descriptive Statistics

CO 1: The students will learn how to collect, organize, classify and analyze data for drawing valid inferences. They will gain understanding on Index numbers and its applications in various fields of human activities.

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- (EN2CC03) - **Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- (EN2CC04)- **Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

4. **Malayalam**-Course Code and Title- (ML2CCT02) - **Kavitha**

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

CORE COURSE 2

Course Code and Title-MM2CRT01: Analytic Geometry, Trigonometry and Differential calculus

CO 1: Find the equation to tangent, normal at a point on a conic.

CO 2: Find the polar equation of a line, circle, tangent and normal.

CO 3: Familiarize real and imaginary parts of a circular and hyperbolic functions of a complex variable.

CO 4: Solve a System of Linear equations using the inverse of a matrix.

CO 6: Familiarize characteristic roots and characteristic vectors.

CO 7: To solve problems by successive differentiation.

COMPLEMENTARY COURSES

3. **Physics-** Course Code and Title-(PH2CMT02)-**Mechanics and Astrophysics**

CO 1: To Get an idea about oscillations

CO 2: To have idea about wave propagation and doppler effect

CO 3: Familiarize rotational mechanics and moment of inertia of various bodies.

CO 4: To have idea about origin of universe, stellar evolution.

CO 5: To know about classification of stars, galaxies.

CO 6: To have idea about constellations

4. **Statistics-** Course code and title- **ST2CMT02-Probability Theory**

CO 1: Students will gain on understanding on various definitions of probability and its applications in different fields.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities within Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 3

3. Malayalam- Course Code and Title- **ML3CCT03- Drushyakala Sahithyam**

CO 1: To generate interest in appreciating art by seeing it.

OR

Course code and title **HN3CCT03- Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE 3

Course Code and Title- **MM3CRT01: Calculus**

CO 1: Find the higher order derivative of the product of two functions.

CO 2: Find the higher order derivative of the product of two functions.

CO 3: Expand a function using Taylor's and Maclaurin's series.

CO 4: Find the area under a given curve, length of an arc of a curve when the equations are given in parametric and polar form by using integrations.

COMPLEMENTARY COURSES

1. **Physics-** Course Code and Title- **(PH03CM03)- Modern Physics and Electronics**

CO 1: To know about atomic nucleus and various coupling mechanisms

CO 2: To have an idea about nuclear forces and nuclear properties.

CO 3: To understand radioactivity, fission & fusion.

CO 4: To know the concepts of quantum mechanics.

CO 5: To get an idea about atomic and molecular spectroscopy, fluorescence.

CO 6: To know about diode applications, transistors.

CO 7: To get an idea about different number systems.

CO 8: To learn Boolean algebra.

CO 9: To have an idea regarding logic gates and other digital circuits.

2. **Statistics-** course code and title- **ST3CMT03-Probability Distributions**

CO 1: Students become proficient with various discrete and continuous probability density functions. They become capable of solving statistical problems using statistical tables.

SEMESTER 4

ENGLISH COMMON COURSE PAPER 6

Course Code and Title- **EN4CC06- Illuminations**

CO1:To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 4

3. **Malayalam-** Course Code and Title-**ML4CCT04- MalayalaGadhyarachanakal**

CO 1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE 4

Course Code and Title-**MM4CRT01: Vector Calculus, Theory of Numbers and Laplace Transform**

CO 1: Represent vectors analytically and geometrically, and compute dot and cross products for presentations of lines and planes

CO 2: Apply derivative concepts to find tangent lines to level curves and to solve optimization problems,

CO 3: Get familiar with the Number system and related concepts

CO 4: Get familiar with Laplace transform

CO 5: Solve differential equations by using Laplace transform

COMPLEMENTARY COURSES

1. **Physics-** Course code and title- **(PH04CM04)-Optics & Electricity**

CO 1: Could understand the principles of interference, diffraction and polarization in a detailed way.

CO 2: Knowing the theory behind various optical phenomena students are able to do experiments.

CO 3: Know the theory and applications of lasers.

CO 4: Familiarize with fibre optic communication.

CO 5: This paper helps the students to pursue their optics experiments.

CO 6: To know about dielectric materials and its properties.

CO 7: To know about varying currents.

CO 8: To learn about RC,LC,LR & LCR circuits.

2. Statistics- Course code and title- ST4CMT04-Statistical Inference

CO 1: The students learn to solve statistical problems related to large sample and small sample tests procedures using method of estimation and testing of hypothesis. They gain proficiency in drawing valid inferences from the sampling methods.

SEMESTER 5

CORE COURSES

Core course 5- Course Code and Title- MM5CRT01: Mathematical Analysis

CO 1: Describe the real line as a complete, ordered field

CO 2: Use the definitions of convergence as they apply to sequences, and functions,

CO 3: The learner understands the structure and properties of the real number system.

CO 4: Study the basic topological properties of the real numbers.

CO 5: Have the knowledge of the sequence of real numbers and convergence.

CO 6: The student will be able to construct rigorous mathematical proofs of basic results in real analysis.

Core course 6- Course Code and Title- MM5CRT02- Differential Equations

CO 1: Obtain an integrating factor which may reduce a given differential equation into an exact one and eventually provide its solution.

CO 2: Identify and obtain the solution of Clairaut's equation.

CO 3: Find the complementary function and particular integrals of linear differential equation.

CO 4: Familiarize the orthogonal trajectory of the system of curves on a given surface

CO 5: Implement solution methods using appropriate technology.

Core course 7- Course Code and Title- MM5CRT03- Abstract Algebra

CO 1: Assess properties implied by the definitions of groups and rings,

CO 2: Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and modular rings).

CO 3: Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups, Analyze and demonstrate examples of ideals and quotient rings.

CO 4: Use the concepts of isomorphism and homomorphism for groups and rings.

CO 5: Produce rigorous proofs of propositions arising in the context of abstract algebra.

Core course 8 - Course Code and Title- MM5CRT04- Human Rights and Mathematics for Environmental Studies

CO 1: Address complex environmental issues, and take necessary steps to keep our environment healthy and sustainable for the future.

CO 2: Have a brief idea of Fibonacci numbers and Golden ratio.

CO 3: Learn the idea of Human Rights and study its importance.

OPEN COURSE

Course Code and Title- **MM5OPT02- Applicable Mathematics**

CO 1: Understanding the basic operations of Mathematics.

CO 2: Applies shortcut methods for solving problems.

CO 3: Apply mathematical concepts and principles to perform computations.

CO 4: Apply mathematics to solve real life problems.

CO 5: Create, use and analyze graphical representations of mathematical relationships.

CO 6: Communicate mathematical knowledge and understanding.

SEMESTER 6

CORE COURSES

Core course 9- Course Code and Title-MM6CRT01- Real Analysis

CO 1: Identifies Continuity and Discontinuity of various functions in different contexts

CO 2: Distinguish Uniform continuity from continuity and related theorems

CO 3: Understand partitions and their refinement

CO 4: Understand Integrability and theorems on integrability

CO 5: Determine the Riemann integrability of a bounded function and establish properties of integrable functions

CO 6: Recognize the difference between point-wise and uniform convergence of sequences and series of functions.

CO 7: Develop a higher level of mathematical maturity combined with the ability to think analytically

Core course 10- Course Code and Title-MM6CR T02- Graph Theory and Metric Spaces

CO 1: Write precise and accurate mathematical definitions of objects in Graph theory

CO 2: Analyze different properties that depend on the connectivity of a graph

CO 3: Understand Euclidean distance and generalize that idea to arbitrary sets.

CO 4: Extend the concepts like convergence and limits of analysis to Metric spaces

Core course 11- Course Code and Title-MM6CRT03- Complex Analysis

CO 1: Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers.

CO 2: Define and analyze limits and continuity for complex functions as well as consequences of continuity.

CO 3: Conceive the concepts of analytic functions and will be familiar with the elementary complex functions and their properties.

CO 4: Evaluate exponentials and integral powers of complex numbers.

CO 5: Find all integral roots and all logarithms of nonzero complex numbers.

CO 6: Apply the concept and consequences of analyticity and the Cauchy Riemann equations and of results on harmonic and entire functions including the fundamental theorem of algebra.

CO 7: Find parameterizations of curves, and compute complex line integrals directly Understand the theory and techniques of complex integration.

CO 8: Applies the theory into application of the power series expansion of analytic functions.

CO 9: Understand the basic methods of complex integration and its application in contour integration.

Core course 12- Course Code and Title-MM6CRT04-Linear Algebra

CO 1: Understand the idea about vector space and metric space.

CO 2: Analyze finite and infinite dimensional vector spaces and subspaces over a field and their properties, including the basis structure of vector spaces.

CO 3: Use the definition and properties of linear transformations and matrices of linear transformations and change of basis, including kernel, range and isomorphism.

CO 4: Compute with the characteristic polynomial, eigenvectors, Eigen values and Eigen spaces, as well as the geometric and the algebraic multiplicities of an Eigen value and apply the basic diagonalization result.

CO 5: Recall the defining properties of a metric space, and determine whether a given function defines a metric.

CHOICE-BASED CORE COURSE

Course Code and Title- MM6CBT01- Operations Research

CO 1: Understand the new term LPP.

CO 2: Applies the theory into different types of problems.

CO 3: Understand Transportation Problem, Assignment problem and queuing models.

CO 4: Solving problems using different methods.

CO 5: Formulate and model a linear programming problem from a word problem and solve them graphically in 2 and 3 dimensions, while employing some convex analysis.

CO 6: Explain the concept of complementary slackness and its role in solving primal/dual problem pairs.

CO 7: Understands duality theorems and dual simplex method Uses dual simplex method.

CO 8: Explains the Transportation Problem and formulate it as an LPP and hence solve.

CO 9: Identifies the Queuing models, their various forms and methods of solutions.

PROGRAMME- BSc PHYSICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: Think in a critical manner.

PSO 2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.

PSO 3: Formulate and develop mathematical arguments in a logical manner.

PSO 4: Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.

PSO 5: Understand, formulate and use quantitative models arising in social science, business and other contexts.

COURSE OUTCOMES (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

3. Malayalam-Course Code and Title- (ML1CCT01)- Kathasahithyam

CO1: To understand the new trends in the literary field of short stories

or

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

Hindi- Course code and title- (HN1CCT01)- Prose & One Act Plays

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE 1

Course Code and Title-(PH1CRT01)- Methodology & perspectives of Physics

CO 1: To understand the early developments in Physics.

CO 2: To get an idea about different number systems, vector and coordinate systems.

CO 3: Get an idea about error analysis.

CO 4: Understanding of various experimental techniques

COMPLEMENTARY COURSES

1. Mathematics- Course code and title- (MM1CMT01)- Partial Differentiation, Matrices, Trigonometry and numerical methods

CO 1: Recall the definition of functions and understand functions of several variables.

CO 2: Understand Partial differentiation.

CO 3: Understand the idea about rank of a matrix and its application.

CO 4: Compute with the characteristic polynomial, eigenvectors, Eigen values and Eigen spaces.

CO 5: Compute complex problems in trigonometry solving equations using numerical methods.

2. Chemistry- Course code and title- (CH1CMT01)- Basic Theoretical & Analytical Chemistry

CO 1: Define the concept of atom

CO 2: Discuss the theories substantiate for the concept

CO 3: Describe the type of bonds in molecules and the concept of hybridisation

CO 4: Discuss about the electronic arrangements in atoms and periodic properties

CO 5: Calculate the concentration of a solution in terms of normality, molarity, molality & parts per million

CO 6: Define the concept of acids & bases with various theories and introduce the term pH

CO 7: Predict the solubility of a compound in solution in terms of solubility product and ionic product

CO 8: Apply the analytical techniques in a chemistry lab

CO 9: Explain the types of chromatography for the separation of compounds

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

5. Malayalam-Course Code and Title- (ML2CCT02) - Kavitha

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

CORE COURSE 2

Course Code and Title-(**PH02CRT02)-Mechanics and Properties of Matter**

CO 1: Get an idea about wave motion and oscillations.

CO 2: Understand different moduli of elasticity.

CO 3: Familiarize rotational mechanics and moment of inertia of various bodies.

CO 4: Have an idea about hydrodynamics, viscosity and surface tension.

COMPLEMENTARY COURSES

1. Mathematics- Course Code and Title- MM2CMT01- Integral Calculus and differential equations

CO 1: Find the area under a given curve, length of an arc of a curve when the equations are given in parametric and polar form by using integrations.

CO 2: Familiarize double and multiple integrals and its applications.

CO 3: Understand exact differential equations and solving.

CO 4: Solving homogeneous differential equations.

2. Chemistry- Course Code and Title- CH2CMT02-Basic Organic Chemistry

CO 1: Explain the basic concepts of organic chemistry.

CO 2: Identify how stereochemistry affects a chemical reaction.

CO 3: Describe nucleophiles and electrophiles.

CO 4: Assess their idea about mechanisms to predict the outcome of reaction.

CO 5: Analyse various polymers.

CO 6: Predict the category to which the reaction belongs.

CO 7: Define the synthesis of alkanes, alkenes etc.

CO 8: Understand the concept of isomerism and classification of molecules accordingly.

CO 9: Classify the polymers.

CO 10: Create awareness among public about the environmental hazards of polymers.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of life Writing and Alternate/alternative/marginal identities.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 3

3. Malayalam- Course Code and Title-ML3CCT03- DrushyakalaSahithyam

CO 1: To generate interest in appreciating art by seeing it.

OR

Course code and title HN3CCT03- **Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE 3

Course code and title- **(PH03CR03)-Optics, Laser and Fiber Optics**

CO 1: Could understand the principles of interference, diffraction and polarization in a detailed way.

CO 2: Knowing the theory behind various optical phenomena students are able to do experiments.

CO 3: Know the theory and applications of lasers.

CO 4: Familiarize with fibre optic communication.

CO 5: This paper helps the students to pursue their projects in optics.

COMPLEMENTARY COURSES

1. Mathematics- Course Code and Title-MM3CMT01 Vector calculus Analytic Geometry and abstract algebra

CO 1: Represent vectors analytically and geometrically, and compute dot and cross products for presentations of lines and planes.

CO 2: Apply derivative concepts to find tangent lines to level curves and to solve optimization problems.

CO 3: Find the equation to tangent, normal at a point on a conic.

CO 4: Find the polar equation of a line, circle, tangent and normal.

CO 5: Familiarize real and imaginary parts of a circular and hyperbolic functions of a complex variable.

CO 6: Assess properties implied by the definitions of groups.

CO 7: Use various canonical types of groups (including cyclic groups and groups of permutations).

CO 8: Analyze and demonstrate examples of subgroups.

CO 7: Use the concepts of isomorphism and homomorphism for groups.

2. Chemistry- Course code and title-CH2CMT04- Advanced Inorganic and Organic Chemistry

CO 1: Understand the basics of nuclear chemistry and heterocyclic compounds.

CO 2: Recognize various types of food additives.

CO 3: Identify the formulations of various drugs used in the treatment of diseases.

CO 4: Choose different fertilizers and pesticides for their specific agricultural purposes.

CO 5: Analyse the detrimental effects of drug addiction and abuse.

CO 6: Plan events for creating awareness among public (especially youth) for the prevention of drug addiction.

CO 7: Solve problems in nuclear chemistry.

CO 8: Explain the chemical side of biological processes such as photosynthesis and respiration.

CO 9: Describe different biologically important molecules and their general functions.

CO 10: Create awareness among the public about the toxicity and environmental hazards of synthetic pesticides and insecticides.

CO 11: Understand the composition of cosmetics.

CO 12: Create awareness among the public about the health effects of fast foods, junk foods and soft drinks.

SEMESTER 4

ENGLISH COMMON COURSE PAPER 6

Course Code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 4

4. Malayalam- Course Code and Title-ML4CCT04- MalayalaGadhyarachanakal

CO 1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE 4

Course code and title- **(PH03CR04)- Optics, photonics and lasers**

CO 1: To know the fundamentals of semiconductor physics.

CO 2: To know Various applications of diodes.

CO 3: To have knowledge about transistor in depth.

CO 4: Will have ideas about transistor amplifiers, feed backing etc.

CO 5: Familiarize with operational amplifier.

CO 6: Familiarize with different oscillators and multivibrator.

CO 7: Knowing the theory the students are able to do experiments in a comfortable way.

COMPLEMENTARY COURSES

1. Mathematics- course code and title- **MM4CMT01- Fourier series, Laplace transform and complex analysis**

CO 1: Get familiar with periodic function understand power series.

CO 2: Compute the fourier series of a given function.

CO 3: Get familiar with Laplace transform.

CO 4: Solve differential equations by using Laplace transform.

CO 5: Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers.

CO 6: Define and analyze limits and continuity for complex functions as well as consequences of continuity.

CO 7: Conceive the concepts of analytic functions and will be familiar with the elementary complex functions and their properties.

CO 8: Evaluate exponentials and integral powers of complex numbers.

2. Chemistry- Course code and title-**CH4CMT06-Advanced Bio-Organic Chemistry**

CO 1: Recall the classification and properties of oils, fats, lipids, carbohydrates, amino acids, peptides, proteins, amino acids, terpenoids and alkaloids.

CO 2: Understand the biological functions of oils, fats, lipids, carbohydrates, amino acids, peptides, proteins, amino acids, terpenoids and alkaloids.

CO 3: Analyse the chemical structure and biological function of terpenoids, alkaloids, proteins, nucleic acids and energy rich molecules.

CO 4: Analyse numerical data to explain biological functions.

CO 5: Formulate the synthesis, regulation, transport of vitamins, steroids and hormones.

CO 6: Identify nucleic acid structure.

CO 7: Analyse the mechanism of regulation of serum cholesterol by statins.

SEMESTER 5

CORE COURSES

Core course 5- Course code and title- (CODE)- Classical and Quantum mechanics

CO 1: To study the merits of Lagrangian and the Hamiltonian methods over Newtonian mechanics.

CO 2: Understand the fundamental concepts of the Lagrangian and the Hamiltonian methods.

CO 3: To study the applications of Lagrangian and the Hamiltonian methods.

CO 4: To aware about the historic development and origin of quantum mechanics.

CO 5: To know more about general formalism in quantum mechanics, Schrodinger equation and its applications.

Core course 6- Course code and title- (CODE)- Digital Electronics

CO 1: To understand the digital world and its developments.

CO 2: Students should be able to develop logic expression, circuit and truth table for a logic problem.

CO 3: To study Boolean algebra, logic gates and logic circuits.

CO 4: To study combinational and sequential logic circuits.

Core course 7- Course code and title-(CODE)- Optics, photonics and lasers

CO 1: Could understand the principles of interference, diffraction and polarization in a detailed way.

CO 2: Knowing the theory behind various optical phenomena students are able to do

Experiments.

CO 3: Know the theory and applications of lasers.

CO 4: Familiarize with fibre optic communication.

CO 5: This paper helps the students to pursue their projects in optics

CORE COURSE 8- COURSE CODE AND TITLE- (CODE)- THERMAL AND STATISTICAL PHYSICS

CO 1: To study about behavior of real gases and intermolecular forces.

CO 2: To get a brief account of the different laws of thermodynamics.

CO 3: To understand the working principles of heat engines.

CO 4: To understand the concept of entropy.

CO 5: To deduce different thermodynamic relations.

CO 6: Know idea about heat transmission mechanisms and various laws regarding transmission.

CO 7: To inquire into different concepts of statistical mechanics and statistical distributions.

OPEN COURSE

COURSE CODE AND TITLE-(CODE)- **AMATEUR ASTRONOMY**

CO 1: To help the students to comprehend the cosmos and its origin.

CO 2: To develop scientific attitude and aptitude.

CO 3: To get an introductory idea about different models of universe.

CO 4: To get knowledge about the sun and the solar system.

CO 5: To develop a brief understanding regarding observational astronomy.

CO 6: To have idea about various telescopes.

CO 7: To have idea about constellations, zodiacs, galaxies etc.

SEMESTER 6

Core course 9- Course code and title- **(CODE)- Computational Physics**

- CO 1: Familiarize with 8085 microprocessor.
- CO 2: To have idea about machine language.
- CO 3: To know about computer hardware.
- CO 4: To get an introductory idea of C++ programming.
- CO 5: To have idea about various numerous methods and solutions.

Core course 10- Course code and title- **(CODE)- Relativity and Spectroscopy**

- CO 1: To interpret different aspects regarding special theory of relativity and its consequences.
- CO 2: To speculate different concepts of atomic spectroscopy.
- CO 3: To analyse the concept of molecular spectroscopy and its applications.
- CO 4: To get an abstract idea about NMR and ESR spectroscopy.
- CO 5: To enhance the knowledge about applications of spectroscopic techniques in contemporary research.

Core course 11- Course code and title- **(CODE)- Nuclear, Particle Physics and Astrophysics**

- CO 1: To explore the nuclear structure, composition and properties.
- CO 2: To know more about nuclear radiation detectors, counters and Particle accelerators.
- CO 3: To get knowledge nuclear reactions or transformations in daily life.
- CO 4: To understand the fundamentals of cosmic rays, particle physics and astrophysics.

Core course 12- Course code and title- **(CODE)- Condensed matter Physics**

- CO 1: To study more about crystal structure.
- CO 2: To get an introductory idea about super conductivity.
- CO 3: To understand the bonding in solids and the effect of these bonding's.
- CO 4: To study the semiconducting, dielectric and magnetic properties of materials.

PROGRAMME- BSc ZOOLOGY

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: Think in a critical manner.

PSO 2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.

PSO 3: Formulate and develop mathematical arguments in a logical manner.

PSO 4: Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.

PSO 5: Understand, formulate and use quantitative models arising in social science, business and other contexts.

COURSE OUTCOMES (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

Malayalam-Course Code and Title- (ML1CCT01)- Kathasahithyam

CO1: To understand the new trends in the literary field of short stories
or

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

Hindi- Course code and title- (HN1CCT01)- Prose & One Act Plays

CO 1: To generate interest in Hindi Literature.

CO 2: The student will demonstrate the ability to interpret and critically analyze Hindi literature.

CO 3: To familiarize the students with the different forms of prose.

CO 4: To enable the students to know the concept of One act play.

CORE COURSE 1

Course Code and Title- (ZY1CRT01)- General Perspectives in Science & Protistan Diversity

CO 1: Students aware about the basic philosophy of science, concepts and scope

CO 2: Understanding different levels of biological diversity through the systematic classification

CO 3: Familiarized with Protistan diversity and especially various parasitic forms of lower invertebrates.

COMPLEMENTARY COURSES

1. Chemistry- Course code and title- (CH1CMT01)- Basic Theoretical & Analytical Chemistry

CO 1: Define the concept of atom

CO 2: Discuss the theories substantiate for the concept

CO 3: Describe the type of bonds in molecules and the concept of hybridisation

CO 4: Discuss about the electronic arrangements in atoms and periodic properties

CO 5: Calculate the concentration of a solution in terms of normality, molarity, molality & parts per million

CO 6: Define the concept of acids & bases with various theories and introduce the term pH

CO 7: Predict the solubility of a compound in solution in terms of solubility product and ionic product

CO 8: Apply the analytical techniques in a chemistry lab

CO 9: Explain the types of chromatography for the separation of compounds.

2. Botany- Course code and title- (BO1CMT01)- Cryptogams, Gymnosperms and Plant Pathology

CO 1: Acquire fundamental knowledge in plant science and to make the student to understand that Botany is an integral part of the human life and developments.

CO 2: Foster and encourage an attitude of curiosity, appreciation and enquiry of various life forms of plants.

CO 3: Understand the identifying characters of the different types included in the syllabus.

CO 4: Understand the diversity of plants with respect to Algae, Fungi, Lichens, Bryophytes, Pteridophytes and Gymnosperms.

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

Malayalam-Course Code and Title- (ML2CCT02) - Kavitha

CO1: To develop a poetic tent of mind

CO2: To appreciate poetry knowing in depth its dimensions of idea and sensibility

OR

Course code and Title- **HN2CCT02- Short Stories & Novel**

CO 1: The student will demonstrate a basic understanding of the formal elements of Fiction.

CO 2: The student will develop a sense of literary aesthetics.

CO 3: Understanding the contents and style of expression in short stories.

CO 4: Will help in improving the vocabulary and reading skills of the student.

CORE COURSE 2

Course Code and Title- **ZY2CRT02- Animal Diversity: Non-Chordata**

CO 1: Greater appreciation on diversity of life on earth.

CO 2: To familiarize taxa level identification of animals.

CO 3: Understand the diversity and evolutionary significance of invertebrate fauna.

COMPLEMENTARY COURSES

1. Chemistry- Course Code and Title- CH2CMT02-Basic Organic Chemistry

CO 1: Explain the basic concepts of organic chemistry.

CO 2: Identify how stereochemistry affects a chemical reaction.

CO 3: Describe nucleophiles and electrophiles.

CO 4: Assess their idea about mechanisms to predict the outcome of reaction.

CO 5: Analyse various polymers.

CO 6: Predict the category to which the reaction belongs.

CO 7: Define the synthesis of alkanes, alkenes etc.

CO 8: Understand the concept of isomerism and classification of molecules accordingly.

CO 9: Classify the polymers.

CO 10: Create awareness among public about the environmental hazards of polymers.

2. Botany- Course Code and Title- BO2CMT02- Plant Physiology

CO 1: Make the students realize the importance of all physiological processes which take place in plants.

CO 2: Understand the mechanism of various physiological processes related to plant life.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 3

Malayalam- Course Code and Title-**ML3CCT03- DrushyakalaSahithyam**

CO 1: To generate interest in appreciating art by seeing it.

OR

Course code and title **HN3CCT03- Poetry Grammar & Translation**

CO 1: The student will develop grammatical proficiency in Hindi.

CO 2: The student will demonstrate proficiency by usage of correct punctuation and grammar structure in Translation process.

CO 3: The student will demonstrate a basic understanding of ancient, medieval and modern Hindi Poetry.

CO 4: To acquaint the students with the rich texture in Poetry.

CORE COURSE 3

Course Code and Title- **ZY3CRT03- Animal Diversity –Chordata**

CO 1: To acquire in depth knowledge on the diversity of chordates and their systematic position.

CO 2: To make them aware of the economic importance of some classes.

CO 3: To understand the evolutionary importance of selected chordate groups.

COMPLEMENTARY COURSES

1. **Chemistry-** Course code and title-**CH2CMT04- Advanced Inorganic and Organic Chemistry**

CO 1: Understand the basics of nuclear chemistry and heterocyclic compounds.

CO 2: Recognize various types of food additives.

CO 3: Identify the formulations of various drugs used in the treatment of diseases.

CO 4: Choose different fertilizers and pesticides for their specific agricultural purposes.

CO 5: Analyse the detrimental effects of drug addiction and abuse.

CO 6: Plan events for creating awareness among public (especially youth) for the prevention of drug addiction.

CO 7: Solve problems in nuclear chemistry.

CO 8: Explain the chemical side of biological processes such as photosynthesis and respiration.

CO 9: Describe different biologically important molecules and their general functions.

CO 10: Create awareness among the public about the toxicity and environmental hazards of synthetic pesticides and insecticides.

CO 11: Understand the composition of cosmetics.

CO 12: Create awareness among the public about the health effects of fast foods, junk foods and soft drinks.

2. **Botany-** Course code and title-**BO3CMT03-Angiosperm Taxonomy and Economic Botany**

CO 1: Acquaint the student with the objectives and components of Taxonomy.

CO 2: Help the student to understand the systems of classification of angiosperms.

CO 3: Help the student to identify the common angiosperm species of Kerala.

CO 4: Familiarize the student with plants of immense economic importance.

SEMESTER 4

ENGLISH COMMON COURSE PAPER 6

Course Code and Title- **EN4CC06- Illuminations**

CO1: To acquaint the learners with different forms of inspiring and motivating literature.

CO2: Maintain a positive attitude to life.

CO3: Evaluate and overcome setbacks based on the insights that these texts provide.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 4

Malayalam- Course Code and Title-**ML4CCT04- MalayalaGadhyarachanakal**

CO 1: To appreciate portions of prose

OR

Course code and Title- HN4CCT04-Drama & Long Poem

CO 1: Develop interest in Drama.

CO 2: The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO 3: To enable the student to appreciate Epic Poetry with a critical eye.

CO 4: To build a creative outlook towards life.

CORE COURSE 4

Course Code and Title- **ZY4CRT04- Research Methodology, Biophysics and Biostatistics**

CO 1: Understand the basic concept of scientific method in research process.

CO 2: Skilled in research communication and scientific documentation.

CO 3: Aware about the laws and ethical values in biological research.

CO 4: Students equipped with the basic techniques of animal rearing, collection and preservation.

CO 5: Students are enabled to apply statistical methods in biological studies.

COMPLEMENTARY COURSES

1. **Chemistry-** Course code and title-**CH4CMT06-Advanced Bio-Organic Chemistry**

CO 1: Recall the classification and properties of oils, fats, lipids, carbohydrates, amino acids, peptides, proteins, amino acids, terpenoids and alkaloids.

CO 2: Understand the biological functions of oils, fats, lipids, carbohydrates, amino acids, peptides, proteins, amino acids, terpenoids and alkaloids.

CO 3: Analyse the chemical structure and biological function of terpenoids, alkaloids, proteins, nucleic acids and energy rich molecules.

CO 4: Analyse numerical data to explain biological functions.

CO 5: Formulate the synthesis, regulation, transport of vitamins, steroids and hormones.

CO 6: Identify nucleic acid structure.

CO 7: Analyse the mechanism of regulation of serum cholesterol by statins.

2. Botany- Course code and title-BO4CMT04- Anatomy and Applied Botany

CO 1: Understand different types of plant tissues.

CO 2: Understand the internal structure of different plant organs with reference to their functions.

CO 3: Understand the process of normal and anomalous secondary thickening in plants.

CO 4: Know the morphological and anatomical adaptations of plants growing in different habitats.

CO 5: Understand how botanical knowledge could be applied for crop improvement.

SEMESTER 5

CORE COURSES

Core course 5- Course code and title-ZY5CRT05- Environmental Biology and Human Rights

CO 1: Understand basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.

CO 2: Students are conscious regarding environmental issues & conservation strategies.

CO 3: To develop the real sense of Human rights – its concepts & manifestations.

Core course 6- Course code and title- ZY5CRT06- Cell Biology and Genetics

CO 1: Understand the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.

CO 2: Aware of different cell organelles and the central role of cell cycle in life.

CO 3: Recognize the role of genes and their inheritance in the life of all organisms.

Core course 7- Course code and title- ZY5CRT07- Evolution, Ethology & Zoogeography

CO 1: To acquire basic understanding about evolutionary concepts and theories.

CO 2: To study the distribution of animals on earth, its pattern and causative factors.

CO 3: To impart basic knowledge on animal behavioural patterns and their role.

Core course 8- Course code and title- ZY5CRT08- Human Physiology, Biochemistry and Endocrinology

CO 1: Defining and explaining the basic principles of biochemistry useful for biological studies.

CO 2: Explaining various aspects of physiological activities of animals with special reference to humans.

CO 3: By the end of the course, students should be familiar with hormonal regulation of physiological systems in vertebrate systems.

OPEN COURSE

Course code and title- ZY5OPT02- Public Health and Nutrition

CO 1: To inculcate a general awareness among the students regarding the real sense of health.

CO 2: Understand the role of balanced diet in maintaining health.

CO 3: Motivate students to practice yoga and meditation in day-to-day life.

SEMESTER 6

CORE COURSES

Core course 9- Course code and title- **ZY6CRT09-Developmental Biology**

CO 1: To achieve a basic understanding of the embryological events in organism's development.

CO 2: The students learn the major aspects of chick, frog and human development.

CO 3: Acquire knowledge on the vast field of experimental embryology.

Core course 10- Course code and title- **ZY6CRT10-Microbiology and Immunology**

CO 1: Students are familiarized with microbial diversity and metabolism.

CO 2: Inculcate a general idea among students about Infections & Diseases.

CO 3: Creation of awareness on the role of immune system in sustaining life.

CO 4: Students are experienced with preparation of solid and liquid media for microbial cultures and various culture methods.

Core course 11- Course code and title- **ZY6CRT11- Biotechnology, Bioinformatics and Molecular Biology**

CO 1: Students are introduced to techniques used in biotechnology.

CO 2: Students are skilled in using various bioinformatics tools and databases.

CO 3: Develop critical thinking skill and research aptitude among students, by introducing the frontier areas of the biological science.

CO 4: Understand the basic molecular processes of gene expression in eukaryotes and prokaryotes.

Core course 12- Course code and title- **ZY6CRT12- Occupational Zoology (Apiculture, Vermiculture, Quail Farming & Aquaculture)**

CO 1: To make the students aware of cottage industries.

CO 2: Students are equipped with self-employment capabilities.

CO 3: Have scientific knowledge of profitable farming practices.

ELECTIVE COURSE

Course code and title- **ZY6CBT04- Nutrition, Health and Lifestyle Management**

CO 1: To provide students with a general concept of health and the parameters that defines health and wellness.

CO 2: To understand principles of health and role of nutrition in its maintenance.

CO 3: Knowledge and understanding regarding life style diseases.

CO 4: An understanding of the value of good life style practices and healthy food habits.

**PROGRAMME SPECIFIC AND
COURSE OUTCOMES OF-
B. Com PROGRAMMES**

PROGRAMME- B.COM(FINANCE AND TAXATION)

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: The programme helps students to gain insights about contemporary Commerce and Management practices; both domestic and international.

PSO 2: The well-designed curriculum provides the students with better understanding of the fundamentals in Business Management, Financial and Cost Accounting.

PSO 3: The programme will equip the students to find a shining career in the world of business and entrepreneurship.

COURSE OUTCOME (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

1. Malayalam-Course Code and Title- (ML1CCT01)- Kathayumkavithayum

CO1: To understand the new trends in the literary field of short stories

Or

2. Hindi-Course Code and Title- (HN1CCT01)- Prose and mass media

CO 1: To give knowledge about Mass Media.

CO 2: Understanding various forms of writing in Media.

CO 3: To familiarize the students with different forms of Prose in Hindi.

CO 4: Understand nationalistic values through the study of Hindi Literature.

CORE COURSE 1

Course Code and Title-**CO1CRT01- Dimensions and Methodology of Business Studies**

CO 1: Enable the students to understand business and its role in society.

CO 2: To have an understanding of Business ethics and Corporate Social Responsibility.

CO 3: To comprehend the business environment and various dimensions

CO 4: The learners will be able to understand Technology integration in business

CO5: It will introduce the importance and fundamentals of business research

CORE COURSE 2

Course code and title- **CO1CRT02 Financial Accounting**

CO 1: The students will acquire knowledge in the preparation of Financial Statements.

CO 2: They will be able to understand the concept of single entry and double entry.

CO3: The scholars will equip the knowledge in royalty and consignment accounts.

CO4: The learners will get an understanding the details of farm accounts

CORE COURSE 3

Course code and title- **CO1CRT03 Corporate Regulations and Administration**

CO 1: Understand the theoretical aspects of company and its different types

CO 2: Understand the promotion and formation formalities of company

CO3: Enable the students to understand the details of share capital and its issuing procedures.

CO 4: Develop knowledge in the procedure formalities of company meetings.

CO 5: Understand the procedure of winding up.

COMPLEMENTARY COURSE

Course code and title- **CO1CMT01 Banking and Insurance**

CO 1: Familiarize the students with the basic concepts and practice of banking.

CO 2: Understand various Innovations and Reforms in Banking sector.

CO 3: Acquire knowledge in the details of customer relationship and

CO 4: Familiarize the concept of insurance and its principle

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

Malayalam-Course Code and Title- (ML2CCT06)- Athmakadha, Lekhanam

CO1: To understand the structure and beauty of Malayalam prose and autobiography.

OR

Hindi-Course Code and Title- (HN2ACC102)- Commercial correspondence and Translation, proses and short stories

CO 1: Understanding the importance of translation.

CO 2: Developing skills of drafting official letters in functional Hindi.

CO 3: Enable the students to do commercial correspondence in Hindi and familiarize them with the technical terminology.

CO 4: To enable the students to acquaint with eminent poets in Hindi.

CORE COURSE 4

Course Code and Title- **CO2CRT04 -Financial Accounting-II**

CO 1: The students will acquire knowledge about the accounting for Hire Purchase.

CO 2: The students will be able to understand the concept of Branch accounts and its preparation.

CO 3: It equips the scholars with the knowledge of scope and accounting procedure of departmental accounting

CO 4: Enable the students to understand partnership account and dissolution of partnership firm.

CO 5: The learners will get a deep understanding about accounting standards and its application.

CORE COURSE 5

Course Code and Title- **CO2CRT05 -Business Regulatory Framework**

CO 1: Make the students understand about business and corporate law

CO 2: Develop knowledge on contract and various types of contracts

CO 3: To help the students to understand the concept of sale of goods

CO 4: Make the students understand about companies and its types

CORE COURSE 6

Course Code and Title -**CO2CRT06- Business Management**

CO 1: To develop knowledge about evolution of management thoughts.

CO 2: Understand the planning and decision-making process.

CO 3: To give an idea about organization structure and different types of organization.

CO 4: To make them familiarize with recruitment process and stages in selection.

CO 5: To provide idea about motivation, importance of communication and Principles of coordination.

COMPLEMENTARY COURSES

Course Code and Title -**CO2CMT02 -Principles of Business Decisions**

CO 1: Understand the basic elements of managerial economics.

CO 2: Understand the law of demand, supply forecasting, consumer durable

CO 3: Familiarize theories of profit, profit maximization and analysis of Break Even Point

CO 4: Know law of diminishing proportion, product function, Economies of scale

CO 5: Understand various Pricing policy in detail.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE 7

Course Code and Title- **CO3CRT07-Corporate Accounts I**

CO 1: Enabling the students to understand the features of Shares and Debentures.

CO 2: Develop an understanding about redemption of Shares and Debenture and its types.

CO 3: To give an exposure to the company final accounts.

CO 4: To provide knowledge on Goodwill.

CO 5: Students can get an idea about internal reconstruction.

CORE COURSE 8

Course Code and Title- **CO3CRT08-Quantitative techniques for Business**

CO 1: To make the students understand the role of statistics and quantitative techniques in business and familiarize them with basic tools applied.

CO 2: To familiarizes the concept of statistics.

CO 3: To provide practical exposure on calculation of measures of average.

CO 4: Enabling the students to understand the concept of interpolation and extrapolation

CORE COURSE 09

Course Code and Title- **CO3CRT09 -Financial Markets and Operations**

CO 1: The course is intended to familiarize the students with financial market operations in India.

CO 2: Provide an in depth understanding about Indian financial system.

CO 3: Develop a clear understanding about primary market and secondary market.

CO 4: Add the knowledge base of the learner regarding mutual and various schemes of mutual funds.

CO 5: Develop sound ideas regarding derivative market and instruments.

CORE COURSE 10

Course Code and Title- **CO3CRT10 -Marketing Management**

CO 1: To develop an idea about marketing and its functions

CO 2: To familiarize students about product and its classifications

CO 3: To make them understand pricing policies

CO 4: Enabling the students to understand the concept of SCM and logistics management.

CO 5: Develop sound ideas regarding recent trends in marketing.

OPTIONAL COURSE

Course Code and Title- CO3OCT01-Finance and Taxation-Goods and Services Tax

CO 1: Give the students a general understanding of the GST law in the country.

CO 2: Understand registration formalities under GST

CO 3: Get an idea about appellate authorities and its powers

CO 4: Provide practical perspective and employability to the students in the commercial tax practices.

SEMESTER 4

CORE COURSE 11

Course Code and Title- **CO4CRT11-Corporate Accounts II**

CO 1: Enable the students to understand about amalgamation, absorption and external reconstruction

CO 2: To make them aware about accounts of banking companies

CO 3: Keep them aware about accounts of insurance companies

CO 4: Enable the students to gain an idea of liquidation of companies

CO 5: To introduce and develop knowledge of holding companies accounts.

CORE COURSE-12

course code and title- **CO4CRT12 Quantitative Techniques for Business- II**

CO 1: To provide practical exposure on calculation of measures of correlation and Regression.

CO 2: Providing an in depth understanding about the construction of index numbers.

CO 3: Basic understanding about time series analysis.

CO 4: To introduce the students about the concept of probability.

CORE COURSE-13

course code and title- **CO4CRT13-Entrepreneurship Development and Project Management**

CO :1 To aiming to develop students about Entrepreneurship development

CO 2: To create an awareness on various Entrepreneurship Development Programme.

CO 3: To enable them to understand project formulation

CO 4: To familiarize the students with EDP schemes.

CO 5: To give an introduction about MSME, EDI and other training institutes in Entrepreneur

OPTIONAL COURSE

Course code and title- **CO4OCT01-Finance and Taxation- Financial Services**

CO 1: Students get knowledge about financial services.

CO 2: Students are acquainted with current financial practices

CO 3: Students are well acquainted with Financial Market operations

SEMESTER 5

CORE COURSE 14

Course code and title- **CO5CRT14-Cost Accounting – 1**

CO 1: Familiarize the concept of cost accounting.

CO 2: Introduce the concept of overhead cost.

CO 3: Helps to gather knowledge on preparation of cost sheet in its practical point of view.

CORE COURSE 15

Course code and title- **CO5CRT15-Environment and Human Rights**

CO 1: Understand key concepts from environment studies, environmental policies and institutions.

CO 2: To understand appreciate concepts and methods from renewable and nonrenewable sources and their application in environmental problem solving.

CO 3: Students can acquire knowledge on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.

CO 4: Students understand critically on Bio-diversity, threats for Bio-diversity and their roles and identities as citizens, consumers and environmental actors in a complex, inter-connected world.

CO 5: Basic understanding about RTI Act and Human rights.

CORE COURSE 16

Course code and title- **CO5CRT16-Financial Management**

CO 1: To provide introduction to Financial Management

CO 2: To create an awareness about capital structure and theories of capital structure

CO 3: To make them understand the cost of capital in wide aspects

CO 4: To provide knowledge about dividend policies and various dividend models.

CO 5: To enable them to understand working capital management

OPEN COURSE

Course code and title- **CO5OCT01-Finance and Taxation - Income Tax- I**

CO 1: To introduce the basic concept of Income Tax

CO 2: In order to familiarize the different know-how and heads of income with its components

CO 3: It helps to build an idea about income from house property as a concept

CO 4: It gives more idea about the income from business or profession

CO 5: Make the students familiarizes with the concept of depreciation and its provisions

OPEN COURSE

Course Code and Title- **(CO50P03)-Fundamentals of Accounting**

CO 1: Students will recognize commonly used financial statements, their components and how information from business transactions flows into these statements.

CO 2: They will acquire knowledge in the preparation of Financial Statements and or financial schedules in accordance with Generally Accepted Accounting Principles.

CO 3: Students will learn relevant financial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

CO4: Students will complete a Project/ Written Assignment that integrates career orientation and or professional development skills.

CO 5: Students will be able to demonstrate knowledge of various advanced accounting issues related to Financial Accounting.

SEMESTER 6

CORE COURSES

CORE COURSE

Course code and title- **CO6CRT17 -Cost Accounting – 2**

CO 1: Provide understanding on Order costing

CO 2: Create an awareness about operating and process costing.

CO 3: To make them understand the cost of capital in wide aspects

CO 4: Provide knowledge about marginal costing.

CO 5: Enable them to understand budget and budgetary control

CORE COURSE

Course code and title-**CO6CRT18 -Advertisement and Sales Management**

CO 1: Make the students aware of the strategy, concept and methods of advertising.

CO 2: Understand advertisement appeal and media

CO 3: Get an understanding about advertising research.

CO 4: Understand the concept of sales promotion and personal selling.

CORE COURSE

Course code and title- **CO6CRT19-Auditing and Assurance**

CO 1: Familiarize the students with the principles and procedure of auditing.

CO 2: Enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing.

CORE COURSE 20

Course code and title- **CO6CRT20-Management Accounting**

CO 1: Acquaint the students with management accounting techniques for the analysis and interpretation of financial statements

CO 2: Study the basic framework of financial reporting.

OPTIONAL – 4

Course code and title- **CO6OCT01- Income Tax- II**

CO 1: Understand the determination of Total Income and tax payable

CO 2: Get an overview regarding returns to be filed by an individual and also assessment procedure

CO 3: Understand the powers and functions of Income Tax Authorities.

PROJECT AND VIVA 1

Course code- **CO6PR01**

CO 1: To build research and analytical skill, thereby equipping the students to prepare comprehensive study report

CO 2: To appreciate the knowledge and understanding of the students in research and analysis

PROGRAMME- B.COM(COMPUTER APPLICATION)

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: The programme help the students to gain insights about contemporary Commerce and Management practices; both domestic and international.

PSO 2: The well-designed curriculum provides the students with better understanding of the fundamentals in Business Management, Financial and Cost Accounting.

PSO 3: The programme will equip the students to find a shining career in the world of business and entrepreneurship.

COURSE OUTCOMES (CO)

SEMESTER-1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

1. Malayalam-Course Code and Title- (ML1CCT01)- Kathayumkavithayum

CO1: To understand the new trends in the literary field of short stories
Or

1. Hindi-Course Code and Title- (HN1CCT01)- Prose and mass media

CO 1: To give knowledge about Mass Media.

CO 2: Understanding various forms of writing in Media.

CO 3: To familiarize the students with different forms of Prose in Hindi.

CO 4: Understand nationalistic values through the study of Hindi Literature.

CORE COURSE 1

Course Code and Title **CO1CRT01- Dimensions and Methodology of Business Studies**

CO 1: Enable the students to understand business and its role in society.

CO 2: To have an understanding of Business ethics and Corporate Social Responsibility.

CO 3: To comprehend the business environment and various dimensions

CO 4: The learners will be able to understand Technology integration in business

CO5: It will introduce the importance and fundamentals of business research

CORE COURSE 2

- Course code and title- **CO1CRT02-Financial Accounting**

CO 1: The students will acquire knowledge in the preparation of Financial Statements.

CO 2: They will be able to understand the concept of single entry and double entry.

CO3: The scholars will equip the knowledge in royalty and consignment accounts.

CO4: The learners will get an understanding the details of farm accounts

CORE COURSE 3

Course code and title- **CO1CRT03 Corporate Regulations and Administration**

CO 1: Understand the theoretical aspects of company and its different types

CO 2: Understand the promotion and formation formalities of company

CO3: Enable the students to understand the details of share capital and its issuing procedures.

CO 4: Develop knowledge in the procedure formalities of company meetings.

CO 5: Understand the procedure of winding up.

COMPLEMENTARY COURSE

Course code and title- **CO1CMT03 Business Communication and MIS**

CO 1: To familiarise the importance of communication in business and methods of communication relevant to various business situations and to build up communication

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER

Malayalam-Course Code and Title- (ML2CCT06)- Athmakadha, Lekhanam

CO1: To understand the structure and beauty of Malayalam prose and autobiography.

OR

Hindi-Course Code and Title- (HN2ACC102)- Commercial correspondence and Translation, proses and short stories

CO 1: Understanding the importance of translation.

CO 2: Developing skills of drafting official letters in functional Hindi.

CO 3: Enable the students to do commercial correspondence in Hindi and familiarize them with the technical terminology.

CO 4: To enable the students to acquaint with eminent poets in Hindi.

CORE COURSE 04

Course Code and Title- CO2CRT04 -Financial Accounting-II

CO 1: The students will acquire knowledge about the accounting for Hire Purchase.

CO 2: The students will be able to understand the concept of Branch accounts and its preparation.

CO 3: It equips the scholars with the knowledge of scope and accounting procedure of departmental accounting

CO 4: Enable the students to understand partnership account and dissolution of partnership firm.

CO 5: The learners will get a deep understanding about accounting standards and its application.

CORE COURSE 05

Course Code and Title **CO2CRT05 -Business Regulatory Framework**

CO 1: Make the students understand about business and corporate law

CO 2: Develop knowledge on contract and various types of contracts

CO 3: To help the students to understand the concept of sale of goods

CO 4: Make the students understand about companies and its types

CORE COURSE 06

Course Code and Title **-CO2CRT06- Business Management**

CO 1: To develop knowledge about evolution of management thoughts.

CO 2: Understand the planning and decision-making process.

CO 3: To give an idea about organization structure and different types of organization.

CO 4: To make them familiarize with recruitment process and stages in selection.

CO 5: To provide idea about motivation, importance of communication and Principles of coordination.

COMPLEMENTARY COURSES

Course Code and Title -**CO2CMT02 -Principles of Business Decisions**

CO 1: Understand the basic elements of managerial economics.

CO 2: Understand the law of demand, supply forecasting, consumer durable

CO 3: Familiarize theories of profit, profit maximization and analysis of Break Even Point

CO 4: Know law of diminishing proportion, product function, Economies of scale

CO 5: Understand various Pricing policy in detail.

Course Code and Title -**CO2CMT04 - Business Environment**

CO 1: The course is intended to provide a fundamental exposure to the students on the components of business environment.

SEMESTER-3

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitivise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE 7

Course Code and Title-**CO3CRT07-Corporate Accounts I**

CO 1: Enabling the students to understand the features of Shares and Debentures.

CO 2: Develop an understanding about redemption of Shares and Debenture and its types.

CO 3: To give an exposure to the company final accounts.

CO 4: To provide knowledge on Goodwill.

CO 5: Students can get an idea about internal reconstruction.

CORE COURSE 8

Course Code and Title-**CO3CRT08-Quantitative techniques for Business**

CO 1: To make the students understand the role of statistics and quantitative techniques in business and familiarize them with basic tools applied.

CO 2: To familiarizes the concept of statistics.

CO 3: To provide practical exposure on calculation of measures of average.

CO 4: Enabling the students to understand the concept of interpolation and extrapolation

CORE COURSE 9

Course Code and Title-**CO3CRT09 -Financial Markets and Operations**

CO 1: The course is intended to familiarize the students with financial market operations in India.

CO 2: Provide an in depth understanding about Indian financial system.

CO 3: Develop a clear understanding about primary market and secondary market.

CO 4: Add the knowledge base of the learner regarding mutual and various schemes of mutual funds.

CO 5: Develop sound ideas regarding derivative market and instruments.

CORE COURSE 10

Course Code and Title-**CO3CRT10 -Marketing Management**

CO 1: To develop an idea about marketing and its functions

CO 2: To familiarize students about product and its classifications

CO 3: To make them understand pricing policies

CO 4: Enabling the students to understand the concept of SCM and logistics management.

CO 5: Develop sound ideas regarding recent trends in marketing.

Course Code and Title-**CO3CMT05 Business Ethics and Corporate Social Responsibility**

CO 1: The course aims to acquaint the students with various concepts of business ethics and practices of corporate social responsibility in India.

Course code and title-**CO3OCT02 -Information Technology for Business (Theory)**

CO 1: The course aims to acquaint the students with various concepts of business ethics and practices of corporate social responsibility in India.

CO 2: To make the students aware of the role of information technology in business and make them capable of developing web pages for business.

SEMESTER-4

CORE COURSE 11

Course Code and Title- **CO4CRT11-Corporate Accounts II**

CO 1: Enable the students to understand about amalgamation, absorption and external reconstruction

CO 2: To make them aware about accounts of banking companies

CO 3: Keep them aware about accounts of insurance companies

CO 4: Enable the students to gain an idea of liquidation of companies

CO 5: To introduce and develop knowledge of holding companies accounts.

CORE COURSE-12

Course code and title- **CO4CRT12 Quantitative Techniques for Business- II**

CO 1: To provide practical exposure on calculation of measures of correlation and Regression.

CO 2: Providing an in depth understanding about the construction of index numbers.

CO 3: Basic understanding about time series analysis.

CO 4: To introduce the students about the concept of probability.

CORE COURSE 13

course code and title- **CO4CRT13-Entrepreneurship Development and Project Management**

CO :1 To aiming to develop students about Entrepreneurship development

CO 2: To create an awareness on various Entrepreneurship Development Programme.

CO 3: To enable them to understand project formulation

CO 4: To familiarize the students with EDP schemes.

CO 5: To give an introduction about MSME, EDI and other training institutes in Entrepreneur

CORE COURSE 14

course code and title-**CO4CMT06 Logistics and Supply Chain Management**

CO 1: To provide the participants with a good knowledge on logistics and supply chain management and how these topics can be related with the organization and their business needs.

Course code and title-**CO4OCT02 Information Technology for Office (Theory)**

CO 1: To make the students capable of managing the office activities with the help of information technology.

Course code and title-**CO34OCP01 Information Technology for Office and Information technology for Business**

CO 1: To make the students capable of managing the officeactivities with the help of information technology.

CO 2: To make the students aware of the role of information technology in business andmake them capable of developing web pages for business

SEMESTER 5

CORE COURSE 14

Course code and title- **CO5CRT14-Cost Accounting – 1**

CO 1: Familiarize the concept of cost accounting.

CO 2: Introduce the concept of overhead cost.

CO 3: Helps to gather knowledge on preparation of cost sheet in its practical point of view.

Core course 15- Course code and title- **CO5CRT15-Environment and Human Rights**

CO 1: Understand key concepts from environment studies, environmental policies and institutions.

CO 2: To understand appreciate concepts and methods from renewable and nonrenewable sources and their application in environmental problem solving.

CO 3: Students can acquire knowledge on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.

CO 4: Students understand critically on Bio-diversity, threats for Bio-diversity and their roles and identities as citizens, consumers and environmental actors in a complex, inter-connected world.

CO 5: Basic understanding about RTI Act and Human rights.

COMPLEMENTARY COURSES

Course code and title-**CO5CMT08 Computer Application-Programming in ‘C’ (Theory)**

CO 1: To impart an overview of C programming

CO 2: To make students aware of coding styles steps in C programs.

CO 3: To provide knowledge about looping statements and file management in C.

Course code and title-**CO5OCT02 Computer Application-Computerized Accounting (Theory)**

CO 1: To equip the students to meet the demands of the industry by mastering them with industry sought after computerized accounting packages.

CO 2: To expose the students to computer applications in the field of accounting.

CO 3: To develop practical skills in the application of Tally Accounting Package.

OPEN COURSE

Course Code and Title- **(CO50P03)-Fundamentals of Accounting**

CO 1: Students will recognize commonly used financial statements, their components and how information from business transactions flows into these statements.

CO 2: They will acquire knowledge in the preparation of Financial Statements and or financial schedules in accordance with Generally Accepted Accounting Principles.

CO 3: Students will learn relevant financial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

CO4: Students will complete a Project/ Written Assignment that integrates career orientation and or professional development skills.

CO 5: Students will be able to demonstrate knowledge of various advanced accounting issues related to Financial Accounting.

SEMESTER 6

CORE COURSES

CO6CMT10-Database Management System(T)

CO 1: To familiarize the students with the concepts of database management and to equip them to handle the database for business firms.

CO56CMP01-Programming in C and Data Base Management System(p)

CO 1: To familiarize the students with the concepts of database management and to equip them to handle the database for business firms.

CO6OCT02 -Software for Business and Research (Theory)

CO : 1 To impart knowledge to use IT in business research analysis.

CO 2: To develop practical skills in the applications of business software.CO 1: Familiarize the students with the principles and procedure of auditing.

CO56OCP01-Computerised Accounting and Software for Business and Research

CO 1: To impart knowledge to use IT in business research analysis.

CO 2: To develop practical skills in the applications of business software.

CO 3: To equip the students to meet the demands of the industry by mastering them with industry sought after computerized accounting packages.

CO 4: To expose the students to computer applications in the field of accounting.

CO 5: To develop practical skills in the application of Tally Accounting Package.

PROGRAMME- B.COM CO-OPERATION (SF)

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: The programme helps the students to gain insights about contemporary Commerce and Management practices; both domestic and international.

PSO 2: The well-designed curriculum provides the students with better understanding of the fundamentals in Business Management, Financial and Cost Accounting.

PSO 3: The programme will equip the students to find a shining career in the world of business and entrepreneurship.

COURSE OUTCOMES (CO)

SEMESTER 1

ENGLISH COMMON COURSE PAPER 1

Course Code and Title- **(EN1CC01) Fine-Tune your English**

CO1: The course is intended to introduce the students to the basics of grammar, usage and effective Communication.

CO2: Confidently use English in both written and spoken forms.

CO3: Use English for formal communication effectively.

ENGLISH COMMON COURSE PAPER 2

Course Code and Title- **(EN1CC02)- Pearls from the Deep**

CO1: To introduce students to the different genres of literature and to the niceties of literary expression.

CO2: Appreciate and enjoy works of literature.

CO3: Appreciate the aesthetic and structural elements of literature.

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 1

Malayalam-Course Code and Title- (ML1CCT01)- Kathayumkavithayum

CO1: To understand the new trends in the literary field of short stories
Or

Hindi-Course Code and Title- (HN1CCT01)- Prose and mass media

CO 1: To give knowledge about Mass Media.

CO 2: Understanding various forms of writing in Media.

CO 3: To familiarize the students with different forms of Prose in Hindi.

CO 4: Understand nationalistic values through the study of Hindi Literature.

CORE COURSE 1

Course Code and Title- **CO1CRT01- Dimensions and Methodology of Business Studies**

CO 1: Enable the students to understand business and its role in society.

CO 2: To have an understanding of Business ethics and Corporate Social Responsibility.

CO 3: To comprehend the business environment and various dimensions

CO 4: The learners will be able to understand Technology integration in business

CO5: It will introduce the importance and fundamentals of business research

CORE COURSE 2

Course code and title- **CO1CRT02 Financial Accounting**

CO 1: The students will acquire knowledge in the preparation of Financial Statements.

CO 2: They will be able to understand the concept of single entry and double entry.

CO3: The scholars will equip the knowledge in royalty and consignment accounts.

CO4: The learners will get an understanding the details of farm accounts

CORE COURSE 3

Course code and title- **CO1CRT03- Corporate Regulations and Administration**

CO 1: Understand the theoretical aspects of company and its different types

CO 2: Understand the promotion and formation formalities of company

CO3: Enable the students to understand the details of share capital and its issuing procedures.

CO 4: Develop knowledge in the procedure formalities of company meetings.

CO 5: Understand the procedure of winding up.

COMPLEMENTARY COURSE

Course code and title- **CO1CMT01 Banking and Insurance**

CO 1: Familiarize the students with the basic concepts and practice of banking.

CO 2: Understand various Innovations and Reforms in Banking sector.

CO 3: Acquire knowledge in the details of customer relationship and

CO 4: Familiarize the concept of insurance and its principle

SEMESTER-2

ENGLISH COMMON COURSE PAPER 3

Course Code and Title- **(EN2CC03) - Issues that Matter**

CO1: To sensitize the learners to contemporary issues of concern.

CO2: Identify the major issues of contemporary significance

CO3: Respond rationally and positively to the issues raised

CO4: Internalize the values imparted through the selections

ENGLISH COMMON COURSE PAPER 4

Course Code and Title- **(EN2CC04)- Savouring the classics**

CO1: To introduce the students to the taste of time-tested world classics.

CO2: Become familiar with the classics from various lands.

CO3: understand the features that go into the making of a classic

ADDITIONAL LANGUAGE COMMON COURSE PAPER- 2

Malayalam-Course Code and Title- (ML2CCT06)- Athmakadha, Lekhanam

CO1: To understand the structure and beauty of Malayalam prose and

autobiography.

OR

Hindi-Course Code and Title- (HN2ACC102)- Commercial correspondence and Translation, proses and short stories

CO 1: Understanding the importance of translation.

CO 2: Developing skills of drafting official letters in functional Hindi.

CO 3: Enable the students to do commercial correspondence in Hindi and familiarize them with the technical terminology.

CO 4: To enable the students to acquaint with eminent poets in Hindi.

CORE COURSE 4

Course Code and Title-**CO2CRT04 -Financial AccountingII**

CO 1: The students will acquire knowledge about the accounting for Hire Purchase.

CO 2: The students will be able to understand the concept of Branch accounts and its preparation.

CO 3: It equips the scholars with the knowledge of scope and accounting procedure of departmental accounting

CO 4: Enable the students to understand partnership account and dissolution of partnership firm.

CO 5: The learners will get a deep understanding about accounting standards and its application.

CORE COURSE 5

Course Code and Title-**CO2CRT05 -Business Regulatory Framework**

CO 1: Make the students understand about business and corporate law

CO 2: Develop knowledge on contract and various types of contracts

CO 3: To help the students to understand the concept of sale of goods

CO 4: Make the students understand about companies and its types

CORE COURSE 6

Course Code and Title -**CO2CRT06- Business Management**

CO 1: To develop knowledge about evolution of management thoughts.

CO 2: Understand the planning and decision making process.

CO 3: To give an idea about organization structure and different types of organization.

CO 4: To make them familiarize with recruitment process and stages in selection.

CO 5: To provide idea about motivation, importance of communication and Principles of coordination.

COMPLEMENTARY COURSE

Course Code and Title - **CO2CMT02 -Principles of Business Decisions**

CO 1: Understand the basic elements of managerial economics.

CO 2: Understand the law of demand, supply forecasting, consumer durable

CO 3: Familiarize theories of profit, profit maximization and analysis of Break Even Point

CO 4: Know law of diminishing proportion, product function, Economies of scale

CO 5: Understand various Pricing policy in detail.

SEMESTER 3

ENGLISH COMMON COURSE PAPER 5

Course Code and Title- **EN3CC05- Literature and/as Identity**

CO1: The course is intended to sensitise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity' at various levels.

CO2: The subtle negotiations of Indigenous and Diasporic identities with-in Literature.

CO3: The fissures, the tensions and the interstices present in South Asian regional identities.

CO4: The emergence of Life Writing and Alternate/alternative/marginal identities.

CORE COURSE 7

Course Code and Title- **CO3CRT07-Corporate Accounts I**

CO 1: Enabling the students to understand the features of Shares and Debentures.

CO 2: Develop an understanding about redemption of Shares and Debenture and its types.

CO 3: To give an exposure to the company final accounts.

CO 4: To provide knowledge on Goodwill.

CO 5: Students can get an idea about internal reconstruction.

CORE COURSE 8

Course Code and Title- **CO3CRT08-Quantitative techniques for Business**

CO 1: To make the students understand the role of statistics and quantitative techniques in business and familiarize them with basic tools applied.

CO 2: To familiarizes the concept of statistics.

CO 3: To provide practical exposure on calculation of measures of average.

CO 4: Enabling the students to understand the concept of interpolation and extrapolation

CORE COURSE 09

Course Code and Title- **CO3CRT09 -Financial Markets and Operations**

CO 1: The course is intended to familiarize the students with financial market operations in India.

CO 2: Provide an in depth understanding about Indian financial system.

CO 3: Develop a clear understanding about primary market and secondary market.

CO 4: Add the knowledge base of the learner regarding mutual and various schemes of mutual funds.

CO 5: Develop sound ideas regarding derivative market and instruments.

CORE COURSE 10

Course Code and Title- **CO3CRT10 -Marketing Management**

CO 1: To develop an idea about marketing and its functions

CO 2: To familiarize students about product and its classifications

CO 3: To make them understand pricing policies

CO 4: Enabling the students to understand the concept of SCM and logistics management.

CO 5: Develop sound ideas regarding recent trends in marketing.

Course Code and Title- **CO3OCT03-Basics of Co- operation**

CO 1: To inculcate the principles of co-operation among the students and to acquaint the students with the management and working of co-operatives

SEMESTER 4

CORE COURSE 11

Course Code and Title- **CO4CRT11-Corporate Accounts II**

CO 1: Enable the students to understand about amalgamation, absorption and external reconstruction

CO 2: To make them aware about accounts of banking companies

CO 3: Keep them aware about accounts of insurance companies

CO 4: Enable the students to gain an idea of liquidation of companies

CO 5: To introduce and develop knowledge of holding companies accounts.

CORE COURSE-12

course code and title- **CO4CRT12 Quantitative Techniques for Business- II**

CO 1: To provide practical exposure on calculation of measures of correlation and Regression.

CO 2: Providing an in depth understanding about the construction of index numbers.

CO 3: Basic understanding about time series analysis.

CO 4: To introduce the students about the concept of probability.

CORE COURSE-13

course code and title- **CO4CRT13-Entrepreneurship Development and Project Management**

CO :1 To aiming to develop students about Entrepreneurship development

CO 2: To create an awareness on various Entrepreneurship Development Programme.

CO 3: To enable them to understand project formulation

CO 4: To familiarize the students with EDP schemes.

CO 5: To give an introduction about MSME, EDI and other training institutes in

Entrepreneur

OPTIONAL

course code and title **CO4OCT03-Co-operation-Management of Co-operative Enterprises**

CO 1: To familiarize the students with the principles and practice of co-operative management and administration.

CO 2: To enable the students to identify the issues in the process of management and administration of co-operative

SEMESTER 5

CORE COURSE 14

Course code and title- **CO5CRT14-Cost Accounting – 1**

CO 1: Familiarize the concept of cost accounting.

CO 2: Introduce the concept of overhead cost.

CO 3: Helps to gather knowledge on preparation of cost sheet in its practical point of view.

CORE COURSE 15

Course code and title- **CO5CRT15-Environment and Human Rights**

CO 1: Understand key concepts from environment studies, environmental policies and institutions.

CO 2: To understand appreciate concepts and methods from renewable and nonrenewable sources and their application in environmental problem solving.

CO 3: Students can acquire knowledge on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.

CO 4: Students understand critically on Bio-diversity, threats for Bio-diversity and their roles and identities as citizens, consumers and environmental actors in a complex, inter-connected world.

CO 5: Basic understanding about RTI Act and Human rights.

CORE COURSE 16

Course code and title- **CO5CRT16-Financial Management**

CO 1: To provide introduction to Financial Management

CO 2: To create an awareness about capital structure and theories of capital structure

CO 3: To make them understand the cost of capital in wide aspects

CO 4: To provide knowledge about dividend policies and various dividend models.

CO 5: To enable them to understand working capital management

OPTIONAL PAPER

Course code and title- **CO5OCT03-Co-operation- Co-operative Legal System**

CO 1: To give an insight into the prevailing co-operative legal system

CO 2: To enable the students to understand the legal framework of co-operation in India and in Kerala

OPEN COURSE

Course code and title-**BM5OPT25 - Modern Banking**

CO 1: To understand Role and structure of Indian Banking System

CO 2: To identify Various Types of banks and their features.

CO 3: To create awareness about banking reforms and their developments in the Indian banking system

CO 4: Basic Understanding about legal aspects of banking transactions and its implication as banker and customer.

CO 5: Students can acquire knowledge of functions and role of Reserve Bank of India.

SEMESTER 6

CORE COURSES

CORE COURSE 17

Course code and title- **CO6CRT17 -Cost Accounting – 2**

- CO 1: Provide understanding on Order costing
- CO 2: Create an awareness about operating and process costing.
- CO 3: To make them understand the cost of capital in wide aspects
- CO 4: Provide knowledge about marginal costing.
- CO 5: Enable them to understand budget and budgetary control

CORE COURSE

Course code and title- **CO6CRT18 -Advertisement and Sales Management**

- CO 1: Make the students aware of the strategy, concept and methods of advertising.
- CO 2: Understand advertisement appeal and media
- CO 3: Get an understanding about advertising research.
- CO 4: Understand the concept of sales promotion and personal selling.

CORE COURSE

Course code and title- **CO6CRT19-Auditing and Assurance**

- CO 1: Familiarize the students with the principles and procedure of auditing.
- CO 2: Enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing.

CORE COURSE 20

Course code and title- **Course code and title- CO6CRT20-Management Accounting**

- CO 1: Acquaint the students with management accounting techniques for the analysis and interpretation of financial statements
- CO 2: Study the basic framework of financial reporting.

OPTIONAL – 4

Course code and title- **CO6OCT03-Accounting for Co-operative Societies**

- CO 1: To familiarize the students with the special features of accounting and auditing of co-operatives.
- CO 2: To enable the students to understand the procedures of co-operative audit

PROJECT AND VIVA 1

Course code and title- **CO6PR01- Project**

CO 1: To build research and analytical skill, thereby equipping the students to prepare comprehensive study report

CO 2: To appreciate the knowledge and understanding of the students in research and analysis

**PROGRAMME SPECIFIC AND
COURSE OUTCOMES OF
POSTGRADUATE
PROGRAMMES**

PROGRAMME SPECIFIC AND COURSE OUTCOMES OF POSTGRADUATE PROGRAMS- MSc

PROGRAMME- MSc MATHEMATICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

- PSO1. To improve the perspective of students on Mathematics as per modern requirement.
- PSO2. Enhance the logical, analytical and problem-solving skills of students.
- PSO3. Orient students towards relating Mathematics to applications.
- PSO4. Help the student build interest and confidence in learning the subject.
- PSO5. Encourage students for pursuing higher studies and developing Research Aptitude.
- PSO6. Acquiring continuous learning skills.
- PSO7. Motivate the students to uphold scientific integrity and objectivity in professional endeavours.
- PSO8. Paves the way to seek and understand the world around them.

COURSE OUTCOMES (CO)

SEMESTER 1

COURSE CODE AND TITLE- **MT01C01 LINEAR-ALGEBRA**

- CO 1: To generalize the concept of vectors to n-dimensional spaces.
- CO 2: To understand matrix as a linear transformation.
- CO 3: Finding the eigenvalues and eigenvectors of linear transformations

COURSE CODE AND TITLE- **MT01C02- BASIC TOPOLOGY**

- CO 1: Introducing topology as a generalization of metric spaces.
- CO 2: To introduce the familiar concept of continuity to arbitrary spaces.
- CO 3: To introduce the peculiarities of compactness and connectedness in different spaces.
- CO 4: To get an idea about the hierarchy of separation axioms.

COURSE CODE AND TITLE- MT01C03- MEASURE THEORY AND INTEGRATION

- CO 1: Introducing measure as generalization of length.
- CO 2: To introduce measure theoretic integration.
- CO 3: To introduce signed measures and its applications.
- CO 4: To introduce product measures.

COURSE CODE AND TITLE- MT01C04-GRAPH THEORY

- CO 1: Logical, systematic framework within which ordinary graphs can be generalized
- CO 2: To introduce graphs as a solution of practical problems
- CO 3: To introduce connectivity, coloring and the concept of planarity

COURSE CODE AND TITLE- MT01C05- COMPLEX ANALYSIS

- CO 1: To introduce complex numbers as points on a sphere.
- CO 2: To study power series of complex functions.
- CO 3: Introduce complex integration to understand analytic functions in a better way.

SEMESTER 2

COURSE CODE AND TITLE- MT02C06 ABSTRACT ALGEBRA

- CO 1: To acquire knowledge about algebraic structures like groups, rings, integral domains and fields.
- CO 2: To learn application of algebra on irreducible polynomials.
- CO 3: Apply Sylow's theorems in the study of simple groups.
- CO 4: Application of Fermat's theorem and Euler's theorem in number theory.
- CO 5: Idea of geometric construction of numbers
- CO 6: Application of algebra in finding the roots of polynomials
- CO 7: To introduce field extensions CO8 Discussion of Galois theory

COURSE CODE AND TITLE- MT02C07-ADVANCED TOPOLOGY

- CO 1: To introduce products in arbitrary space.
- CO 2: To make familiar with embedding and metrisation and different types of compactness.
- CO 3: Introducing nets as a generalization of sequences.

COURSE CODE AND TITLE- MT02C08- ADVANCED COMPLEX ANALYSIS

- CO 1: To study harmonic functions and its applications.

CO 2: To study Gamma functions and entire functions in detail.

CO 3: To introduce the product development and normal families.

CO 4: To introduce elliptic functions

COURSE CODE AND TITLE- MT02C09- PARTIAL DIFFERENTIAL EQUATIONS

CO 1: To introduce Partial differential equations for solving real life situations.

CO 2: To study different methods of solution of PDE

CO 2: To study non-linear equations and families of equipotential surfaces.

COURSE CODE AND TITLE- MT02C10- REAL ANALYSIS

CO 1: Learn the theory of Riemann-Stieltjes integrals, to be acquainted with the ideas of the total variation and to be able to deal with functions of bounded variation.

CO 2: Students should be able to illustrate the effect of uniform convergence on the limit function with respect to boundedness, continuity, differentiability and integrability.

CO 3: The student will gain knowledge of special functions and study various properties of them.

CO 4: After completing the course, the student should be able to recognize, understand and apply concepts and methods in advanced real analysis.

COURSE CODE AND TITLE- MT02C06-ABSTRACT ALGEBRA

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CO 3: The student will gain knowledge of special functions and study various properties of them.

CO 4: After completing the course, the student should be able to recognize, understand and apply concepts and methods in advanced real analysis.

SEMESTER 3

COURSE CODE AND TITLE- MT03C11- MULTIVARIATE CALCULUS AND INTEGRAL TRANSFORMS

CO 1: Impart basic knowledge of differentiation and integration in n-dimensional Euclidean space.

CO 2: To discuss different types of integral transforms.

CO 3: Applications in Mathematics and also bring the confidence to handle real life problems.

COURSE CODE AND TITLE- MT03C12- FUNCTIONAL ANALYSIS

CO 1: On successful completion of this course, the students will be able to appreciate how functional analysis uses and unifies ideas from vector spaces and metric spaces.

CO 2: The learner will be able to identify various types of normed spaces such as Banach Spaces, Inner Product Spaces and Hilbert Spaces and derive various properties of them.

CO 3: The learner will be able to understand and apply fundamental theorems from the theory of linear operators.

CO 4: The students will have the knowledge and skills to demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from functional analysis.

CO 5: The learner will have the ability to pursue further studies in functional analysis and related areas.

COURSE CODE AND TITLE- MT03C13- DIFFERENTIAL GEOMETRY

CO 1: To get an idea of application of real analysis in geometry.

CO 2: To study geodesics and parallel transport.

CO 3: To introduce parametrized surface and study its basic properties

COURSE CODE AND TITLE- MT03C14- NUMBER THEORY AND CRYPTOGRAPHY

CO 1: Familiarize the concept of Finite Fields and Quadratic Residues

CO 2: Gets an idea of public key cryptography

CO 3: To introduce the concept of Primality and Factoring in Number Theory

COURSE CODE AND TITLE- MT03C15-OPTIMIZATION TECHNIQUES

CO 1: To introduce programming to handle real life situations.

CO 2: To introduce Goal programming and potentials in networks.

CO 3: To introduce non-linear programming.

CO 4: Familiarize zero - sum games and strategies.

SEMESTER 4

COURSE CODE AND TITLE- MT04C16 SPECTRAL THEORY

CO 1: The learners will be able to appreciate how functional analysis uses and unifies ideas from normed spaces and complex analysis.

CO 2: Understand and apply fundamental theorems from the theory of normed spaces, including the Uniform Boundedness theorem, the open mapping theorem, the closed graph theorem, and the Banach Fixed Point theorem.

CO 3: Understand the fundamentals of spectral theory and appreciate its power.

CO 4: Have a good grasp of the spectral properties of various operators such as Compact Linear Operators, Selfadjoint linear operators, Positive Operators and Projection Operators.

CO 5: Understand and apply ideas from spectral theory to other mathematical contexts and related areas.

COURSE CODE AND TITLE- MT04E01 ANALYTIC NUMBER THEORY

CO 1: To introduce arithmetic functions and its application.

CO 2: To study prime number theorem and distribution of primes.

CO 3: To study the application of congruence and quadratic residues and primitive roots for solving numerical problems.

COURSE CODE AND TITLE- **MT04E02 COMBINATORICS**

CO 1: To use algebraic concepts to solve basic problems in real life

CO 2: To introduce Ramsey type problems and Ramsey numbers.

CO 3: To get an idea about generating functions and recurrence relations.

COURSE CODE AND TITLE- MT04E05 MATHEMATICAL ECONOMICS

CO 1: Understand the theory of consumer behaviour

CO 2: Understand the role of production functions

CO 3: Study input-output analysis

COURSE CODE AND TITLE- MT04E07 OPERATIONS RESEARCH

CO 1: Study Inventory Models

CO 2: Understand the main topics in queuing systems

CO 3: Understand network sequencing problems and simulation modelling

PROGRAMME- MSc PHYSICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO1. Provide a complete theoretical understanding of the different areas of Physics together with the applied and current fields of research

PSO2. Achieve a mastery, competence and analytical skills in the subject at a higher level.

PSO3. Learn to carry out experiments in basic as well as certain advanced areas of physics

PSO4. View Physics as a training ground for the mind developing logical reasoning that can be applied to diverse fields.

PSO5. Gain research experience within some specific field of physics through project work.

PSO6. Promote awareness amongst students for life-long learning and to inculcate in them professional and ethical attitude, good leadership qualities and commitment to social responsibilities.

COURSE OUTCOMES (CO)

SEMESTER 1

COURSE CODE AND TITLE- PH 010101-MATHEMATICAL METHODS IN PHYSICS-I

CO 1: To understand the students have an idea of vector, matrices and tensors

CO 2: To apply the above concepts for solving problems.

COURSE CODE AND TITLE- PH010102-CLASSICAL MECHANICS

CO 1: Understand the fundamental concepts of the Lagrangian and the Hamiltonian methods and will be able to apply them to various problems.

CO 2: Understand the physics of small oscillations and the concepts of canonical transformations and Poisson brackets

CO 3: Understand the basic ideas of central forces and rigid body dynamics.

CO 4: Understand the Hamilton-Jacobi method and the concept of action –angle variables.

COURSE CODE AND TITLE- PH 010103-ELECTRODYNAMICS

CO 1: To impart proper understanding of electricity, magnetism and electrodynamics.

CO 2: To understand the wave nature of electromagnetic field and its properties

CO 3: To aware about the electromagnetic field radiation out of accelerated charges and the impact of relativity in electromagnetism along with confined propagation of EM waves.

COURSE CODE AND TITLE- PH 010104- ELECTRONICS

CO 1: To understand the mechanism behind the charge flow in various materials and devices like semiconductors, resistors, inductors, capacitors, nanostructure etc...

CO 2: To apply the above concepts for solving problems in daily life.

CO 3: To enable student to describe the nature of practical op-amp and frequency response of an op-amp.

SEMESTER 2

COURSE CODE AND TITLE- PH 010201-MATHEMATICAL METHODS IN PHYSICS-2

CO 1: To study the concepts of Laplace and Fourier transforms.

CO 2: To get an introductory idea of Fourier series and its applications.

CO 3: To impart the basic idea of solutions of partial differential equations

CO 4: To study the different methods of mathematical physics and develop a mathematical skill to solve problems in quantum mechanics, electrodynamics and other fields of theoretical physics.

COURSE CODE AND TITLE- PH 010202-QUANTUM MECHANICS 1

CO 1: To understand the fundamental concepts of Dirac formalism

CO 2: To understand how quantum systems evolve in time.

CO 3: To understand the basics of quantum theory of angular momentum

CO 4: To solve the hydrogen atom problem

COURSE CODE AND TITLE- PH010203-STATISTICAL MECHANICS

CO 1: To understand the fundamental ideas of ensembles.

CO 2: To understand the physical significance of various statistical quantities and its applications and examples.

CO 3: To aware about the basic concepts of phase transition.

COURSE CODE AND TITLE- PH010204-CONDENSED MATTER PHYSICS

CO 1: Acquire broad idea about crystal systems and crystal symmetry.

CO 2: To study the concepts of energy bands, phonons and magnetic properties of solids.

SEMESTER 3

COURSE CODE AND TITLE- **PH3C09-QUANTUM MECHANICS 2**

CO 1: To understand different stationary state approximation methods and be able to apply them to various quantum systems.

CO 2: To understand the basics of time dependantpeturbation theory and its application to semi classical theory of atom-radiation interaction.

CO 3: To understand the theory of identical particles and its application.

CO 4: To understand the idea of Born approximation and the method of partial waves.

CO 5: To get an introductory idea of relativistic quantum mechanics.

COURSE CODE AND TITLE- **PH3C10-COMPUTATIONAL PHYSICS**

CO 1: To impart basic idea about the techniques used in Physics to solve problems with the help of computers.

CO 2: Students might be able to develop their own algorithms of every method described in the syllabus.

CO 3: To learn how to apply numerical methods to a variety of physical problems.

COURSE CODE AND TITLE- **PH3EA1- DIGITAL SIGNAL PROCESSING**

CO 1: To study about DT systems and to learn about FFT algorithms.

CO 2: To study the design techniques for FIR and IIR digital filters.

CO 3: To acquire knowledge of signal processing.

COURSE CODE AND TITLE- **PH3EA2-MICRO ELECTRONICS AND SEMICONDUCTOR DEVICES**

CO 1: To expose to the students to the architecture and instruction set of basic microprocessors.

CO 2: To understand the fundamentals of semiconductor devices and their processing steps in detail.

CO 3: Student will be able to use the knowledge of semiconductor fabrication processes to work in industry in the area of semiconductor devices.

CO 4: Provide the perspectives of IC fabrication and characteristics.

SEMESTER 4

COURSE CODE AND TITLE- **PH4C11- ATOMIC AND MOLECULAR PHYSICS**

CO 1: To understand the atomic structure and spectra of typical one –electron and two-electron systems.

CO 2: To study the theory of microwave and IR spectroscopies as well as electronic spectroscopy of molecules.

CO 3: To study the concepts of Raman spectroscopy and non-linear Raman effects.

CO 4: To get an introductory idea about NMR, ESR and Mossbauer spectroscopy

COURSE CODE AND TITLE- **PH4C12-NUCLEAR AND PARTICLE PHYSICS**

CO 1: To provide the student to build up the fundamentals of nuclear and particle Physics.

CO 2: To get knowledge about basic properties of nucleus and nuclear forces.

CO 3: To study the major models of nucleus and the theory behind nuclear decay processes.

CO 4: To impart an idea about Physics of nuclear reactions, interaction between elementary particles and conservation laws in particle physics.

CO 5: To provide a foundation for nuclear astrophysics and ideas about practical applications of nuclear Physics.

COURSE CODE AND TITLE- **PH4EA3-INSTRUMENTATION AND COMMUNICATION ELECTRONICS.**

CO 1: To understand the basic principle of digital instruments

CO 2: To get introductory idea about communication electronics

CO 3: To acquire knowledge of digital communication

COURSE CODE AND TITLE- **PH4OE1- OPTOELECTRONICS**

CO 1: To acquire knowledge in the field of fiber optics technology.

CO 2: To provide a background in optoelectronics which help students to meet the demand of semiconductor optoelectronic industry.

CO 3: To prepare the students for advance study and research in semiconductor optics and optoelectronic devices

PROGRAMME- MSc CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: To be familiarised with the emerging areas of Chemistry and their applications in various spheres of Chemical sciences and to apprise the students of its relevance in future studies

PSO 2: To be exposed to the different processes used in industries and their applications.

PSO 3: To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.

PSO 4: To be familiarised with sophisticated spectroscopic techniques such as UV-visible, IR, NMR, EPR and Mass spectrometric methods.

PSO 5: To handle scientific instruments, to plan and perform the laboratory experiments

PSO 6: To develop research-oriented skills.

PSO 7: Learn professionalism, including the ability to work in teams and apply basic ethical principles.

PSO 8: To get a clear knowledge of computational techniques, Soft wares, tools for Molecular modelling etc.

PSO 9: To attain thorough knowledge in the theory and applications of separation techniques, especially sophisticated methods like chromatography, Soxhlet techniques etc.

PSO 10: To employ critical thinking and the scientific knowledge to design, carryout, record and analyse the results of chemical reactions.

COURSE OUTCOMES (CO)

SEMESTER 1

COURSE CODE AND TITLE- CH500101 ORGANOMETALLICS AND NUCLEAR CHEMISTRY

CO 1: Discuss the synthesis, structure and bonding in Organometallic compounds

CO 2: Discuss the synthesis, structure and bonding in Organometallic compounds

CO 3: Differentiate different types of reactions of Organometallic compounds

CO 4: Categorize compounds as isolobal and isoelectronic compounds

CO 5: Describe catalysis by Organometallic compounds

CO 6: Classify various bioinorganic compounds

CO 7: Outline techniques and applications of nuclear chemistry

COURSE CODE AND TITLE- **CH500102-STRUCTURAL AND MOLECULAR ORGANIC CHEMISTRY**

CO 1: To understand the basic concepts in organic chemistry

CO 2: To describe and analyse the organic reactions by physical methods

CO 3: To understand and analyse photochemical reactions

CO 4: To describe and analyse the organic reactions by physical methods

COURSE CODE AND TITLE- **CH500103-QUANTUM CHEMISTRY AND GROUP THEORY**

CO 1: Understand and Familiarize with the main aspects of the historical development of quantum mechanics and understand the central concepts and principles in quantum mechanics

CO 2: Solve the Schrödinger equation for simple systems in one to three dimensions

CO 3: Understand the concepts of angular momentum and spin, as well as the rules for quantization and addition of these.

CO 4: Evaluate symmetry elements in a molecule and classify molecules into point groups and evaluate symmetry elements in a crystal and classify crystals into point groups

CO 5: Apply group theoretical rules to derive group multiplication tables, matrix representations, classes, character tables of point groups

COURSE CODE AND TITLE- **CH500104 THERMODYNAMIC, KINETIC THEORY AND STATISTICAL THERMODYNAMICS**

CO 1: Understand the basic concepts of classical and statistical thermodynamics

CO 2: Analyze the macroscopic properties of matter using classical and statistical thermodynamics

CO 3: Relate microscopic and macroscopic properties using classical and statistical thermodynamics

CO 4: Calculate change in thermodynamic properties and absolute values of thermodynamic quantities and equilibrium constants

CO 4: Understand the fundamental concepts of irreversible thermodynamics

SEMESTER 2

COURSE CODE AND TITLE- **CH500201 COORDINATION CHEMISTRY**

- CO 1: Classify various coordination compounds and sigma & pi bonding ligands
- CO 2: Explain different bonding aspects in coordination compounds
- CO 3: Investigate electronic, magnetic and spectral properties of coordination compounds
- CO 4: Propose structure to coordination compounds
- CO 5: Discuss the kinetics and mechanism of reactions of coordination compounds
- CO 6: Describe stereochemistry of coordination compounds
- CO 7: Summarize different properties of lanthanides and actinides

COURSE CODE AND TITLE- **CH500202-ORGANIC REACTION MECHANISM**

- CO 1: To understand organic reaction mechanisms and to analyse reactions
- CO 2: To study about the reactive intermediates and the rearrangements involved
- CO 3: Describe the chemistry of carbonyl compounds
- CO 4: Learn, Analyse and Apply Concerted Reactions

COURSE CODE AND TITLE- **CH500203-CHEMICAL BONDING AND COMPUTATIONAL CHEMISTRY**

- CO 1: Understand different approximation techniques used in molecular quantum mechanics
- CO 2: Identify and explain the main similarities and differences between computational approaches such as HF (Hartree-Fock), semi-empirical, DFT (Density Functional Theory) and force field methods.
- CO 3: Describe and identify the various methods' advantages / disadvantages for simulating/modeling various scientific problems.
- CO 4: Understand Quantum Mechanical and principles of Molecular Orbital theory, Hückel Molecular Orbital Theory, Valence bond theory and hybridization
- CO 5: Understand Group theoretical principles of Molecular Orbital theory, Valence bond theory and hybridization
- CO 6: Apply the concept of linear combination of atomic orbitals to produce Molecular Orbitals, Hückel Molecular Orbitals and hybrid orbitals to understand the molecular structure and geometry.

COURSE CODE AND TITLE- **CH500204- MOLECULAR SPECTROSCOPY**

CO 1: Understand the concepts of spectroscopy

CO 2: Analyze the relationship between rotational, vibrational and electronic spectroscopy

CO 3: Understand and relate the concepts of NMR, EPR and Mossbauer spectroscopy

CO 4: Comprehend the relationship between quantum mechanics, group theory and spectroscopy

SEMESTER 3

COURSE CODE AND TITLE- **CH500301-STRUCTURAL INORGANIC CHEMISTRY**

CO 1: Summarize the knowledge in the advanced areas of solid state chemistry such as structure, reactions and phase transition in solids.

CO 2: Relate the electrical, magnetic and optical properties of inorganic compound to its structures.

CO 3: Analyze the synthesis, structure and bonding demonstrated by Inorganic Chains, Rings, Cage and Cluster compounds.

CO 4: Recognize different types of organometallic polymers

CO 5: Identify different synthesis methods for various solids,

CO 6: Describe magnetic nanoparticles

COURSE CODE AND TITLE- **CH500302 ORGANIC SYNTHESIS**

CO 1: Explain metal and non metal based oxidations of alcohols and alkenes.

CO 2: Explain catalytic hydrogenation and metal based reductions.

CO 3: Illustrate Brook rearrangement, Tebbe olefination and various name reactions viz. Nef reaction, Kulinkovich reaction, Ritter reaction, Sakurai reaction, Tishchenko reaction.

CO 4: Discuss Metal mediated C-C and C-X Coupling reactions and Multicomponent reactions like Ugi reaction, Passerini reaction and Biginelli reaction.

CO 5: Discuss Hydride transfer reagents, oxidation –reduction reactions of aluminium isopropoxide.

CO 6: Illustrate Synthesis of five and six membered rings, interconversions and synthesis of heterocycles.

CO 7: Decide the Protecting agents for various functional groups and to discuss peptide synthesis and SPSS

CO 8: Design the synthesis pathway of target molecules by Retrosynthetic analysis.

COURSE CODE AND TITLE- CH500303-CHEMICAL KINETICS, SURFACE CHEMISTRY AND CRYSTALLOGRAPHY

CO 1: Understand the fundamental concept of the kinetics of a reaction and its mechanism from various theories

CO 2: Explain the thermodynamic parameters which are involved in the kinetics of a chemical reactions

CO 3: Explain the effect of catalyst and its mechanism on the kinetics of a chemical reaction

CO 4: Explain the fundamental concept of photochemistry

CO 5: Define the fundamental concept of surface reactions and various characterization methods

COURSE CODE AND TITLE- CH500304-SPECTROSCOPIC METHODS IN CHEMISTRY

CO 1: Learn the basic principles of interpret uv-visible, chiroptical, vibrational, 1-D and 2-D NMR and Mass spectroscopy for the structure identification of organic compounds

CO 2: Analyze and interpret uv-visible, chiroptical, vibrational, 1-D and 2-D NMR and Mass spectral data of organic compounds

CO 3: Evaluate various structural possibilities and arrive at the most logical structure of organic compounds by analysis and interpretation of uv-visible, chiroptical, vibrational, 1-D and 2-D NMR and Mass spectral data.

CO 4: Identify the structure of organic compounds by analysis and interpretation of uv-visible, chiroptical, vibrational, 1-D and 2-D NMR and Mass spectral data.

SEMESTER 4

COURSE CODE AND TITLE- CH800401-ADVANCED INORGANIC CHEMISTRY

CO 1: Apply group theory to solve the problems in chemistry.

CO 2: To apply the knowledge of spectroscopy and photochemistry to solve the various problems in chemistry.

CO 3: To understand the scientific revolutions of nanotechnology and to familiarize the classification of nanostructures and to know the applications of nanoparticles in technologically imperative fields.

CO 4: To understand the chemistry of materials and metal organic frame works.

CO 5: To describe the chemistry of supramolecules.

COURSE CODE AND TITLE- CH800402-ADVANCED ORGANIC CHEMISTRY

CO 1: Understand supramolecules and their applications

CO 2: Describe green alternatives and stereoselective transformations

CO 3: Learn the basic concepts of nano chemistry and the role of polymers

CO 4: To analyse the chemistry of natural products and medicines

CO 5: Introduction to the methodology of research

COURSE CODE AND TITLE- CH800403-ADVANCED PHYSICAL CHEMISTRY

CO 1: Identify and analyse the type of crystal structure in solids and the behavior of liquid crystals

CO 2: Describe and analyse the distribution of velocities of various gas molecules and factors affecting them

CO 3: Solve problems on electrochemical cell parameters, electrochemical active surface area, current and overpotential under given condition

CO 4: Understand the theories of instrumental methods available in analytical chemistry

CO 5: To acquaint the student with the advanced techniques in voltammetry, polarography and coulometry

PROGRAMME SPECIFIC AND COURSE OUTCOMES OF POSTGRADUATE PROGRAMS- M.COM

PROGRAMME- M.COM

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO 1: The programme offers an opportunity for graduates to acquire theoretical as well as practical knowledge in commerce, especially in finance and taxation.

PSO 2: This programme equips an M. Com graduate to enter into a career either in academics, research, or alternatively, in other professional areas of banking, insurance and finance such as taxation, consultancy and financial services.

PSO 3: This programme also helps the students to attain eligibility for joining doctoral research, applying for examinations like SET, UGC- NET/JRF, KPSC, UPSC and other recruitment board examinations for which postgraduation is the basic qualification and joining professional courses in Teaching.

PSO 4: Students will acquire updated knowledge on research methods, techniques and the process and to develop skills in the application of research methods for business problem solving.

PSO 5: To build a strong inclination towards lifelong learning and acquiring contemporary knowledge in different areas of Commerce and Business Studies.

COURSE OUTCOMES (CO)

SEMESTER 1

COURSE CODE AND TITLE- **CM010101-SPECIALIZED ACCOUNTING**

CO 1: Providing an in depth understanding about theoretical and practical aspects of major accounting Standards.

CO 2: Ascertain the value of goodwill and value of companies based on the value of shares and compare the real value of shares and with the market prices and identify the mispricing.

CO 3: In depth understanding about the determination of purchase consideration in the event of amalgamation and to prepare post amalgamation financial statements.

CO 4: Develop a clear understanding about different types of NBFCs, their provisioning norms and to understand the concept of NAV of mutual funds through its computation.

CO 5: Acquaint with the theoretical aspects of emerging areas in accounting.

COURSE CODE AND TITLE- CM010102-ORGANIZATIONAL BEHAVIOR

CO 1: Basic understanding about the concepts of organisation behaviour.

CO 2: A very good understanding about individual behaviour, personality and motivation.

CO 3: Imparting deep understanding about group behaviour and leadership related to organisational behaviour.

CO 4: Add the knowledge base of the learner regarding change management and deal with stress.

CO 5: Impart knowledge about the role of organisational culture and conflict on organizational behavior.

COURSE CODE AND TITLE- CM010103-MARKETING MANAGEMENT

CO 1: The learner should have a basic understanding about concepts like customer centricity, CRM, value chain and customer delight.

CO 2: The learner should get a clear understanding about the market segmentation process and its applications in marketing strategies.

CO 3: Develop an idea about consumer behavior and its impact.

CO 4: Good understanding about product line, product mix, brand equity, brand identity, brand personality and brand image.

CO 5: Understand and develop sound ideas regarding services, marketing and service quality.

COURSE CODE AND TITLE- CM010104-MANAGEMENT OPTIMIZATION TECHNIQUES

CO 1: Develop theoretical understanding about various business optimisation models.

CO 2: Ability to develop Linear programming models for business problems and solve the same.

CO 3: Application of Linear Programming in the areas of transportation and assignment.

CO 4: Develop decision making skills under uncertainty, risk and replacement of assets.

CO 5: Understand and apply network analysis techniques for project implementation.

COURSE CODE AND TITLE- CM010105-METHODOLOGY FOR SOCIAL SCIENCE RESEARCH

CO 1: Develop a thorough understanding about the basic concepts of social science research.

CO 2: After completing this module, the learners should be able to formulate a research design.

CO 3: After studying the theoretical aspects of sampling design, the learner should be able to draw a sampling design.

CO 4: Detailed knowledge about the instrument development, its validation and different forms of scaling.

CO 5: Understand the technique of research reporting.

SEMESTER 2

COURSE CODE AND TITLE- CM010201-ADVANCED CORPORATE ACCOUNTING

CO 1: The learner should be able to prepare consolidated financial statements of group companies.

CO 2: Preparation of the financial statements of public utility companies and deal with the disposal of surplus.

CO 3: Develop and awareness on the procedure of bankruptcy under the recent Bankruptcy Procedure Code.

CO 4: Familiarizing the learner with the accounting procedures of liquidation of companies and preparation of various statements required as per the Companies Act.

CO 5: Basic understanding about the preparation of accounts of some special lines of businesses like shipping, hospitals and hotels.

COURSE CODE AND TITLE- CM010202-HUMAN RESOURCE MANAGEMENT

CO 1: Acquaintance with basic concepts of HRM and performance appraisal.

CO 2: Understanding about human resource development, stress management and work-life management.

CO 3: High level knowledge about various aspects of training.

CO 4: Understanding about various aspects of industrial relations so as to evaluate the real cases of industrial relations.

CO 5: Understanding about HR outsourcing HR accounting and HR audit.

COURSE CODE AND TITLE- CM010203-INTERNATIONAL BUSINESS AND FINANCE

CO 1: Familiarisation with globalisation, internationalisation of business and the international business environment.

CO 2: Understanding about theories of international trade, trade barriers and trade blocks.

CO 3: Imparting idea about various economic institutions related to international trade.

CO 4: Achieve high level knowledge about various aspects of international monetary system.

CO 5: Develop an understanding about the international investment environment.

COURSE CODE AND TITLE- CM010204- QUANTITATIVE TECHNIQUES

CO 1: This course intends to give understanding about the applications of quantitative techniques.

CO 2: This course intends to give understanding about the applications of quantitative techniques.

CO 3: After learning this course, the student should be in a position to identify appropriate parametric test for testing the hypotheses.

CO 4: The learner should be equipped with the skills to identify the most suitable non parametric test for testing a hypothesis.

CO 5: The learner should be equipped with the skills to apply the principles of SQC

COURSE CODE AND TITLE- CM010205- STRATEGIC MANAGEMENT

CO 1: Strong understanding about the theoretical foundations of strategic management.

CO 2: Clear understanding about various models of environmental and internal analysis.

CO 3: Development of an idea about the strategy formulation process at the corporate level.

CO 4: Familiarization with various tools strategic planning and evaluation.

CO 5: Understanding about the modes of implementation and control of strategies.

SEMESTER 3

COURSE CODE AND TITLE- CM010301- STRATEGIC FINANCIAL MANAGEMENT

CO 1: Learn the theoretical foundations of financial management and financial management decisions.

CO 2: Evaluate the feasibility of different options regarding discount, credit period, storage cost etc related to current assets and current liabilities and estimate working capital requirements.

CO 3: Evaluate long term proposals and evaluate the risk associated with long term investment.

CO 4: Evaluate the decisions regarding leasing of capital assets.

CO 5: Evaluate and Compare the performance of business entities.

COURSE CODE AND TITLE- CM010302-INCOME TAX – LAW AND PRACTICE

CO 1: Acquire knowledge regarding the basic concepts of Income Tax.

CO 2: Able to compute the income from salary and house property.

CO 3: Determine taxable profit of a business or profession.

CO 4: Able to compute capital gain and income from other sources.

CO 5: Able to calculate Gross Total Income of an individual.

CO 6: Learner shall be able to determine eligible deductions and compute Taxable Income and tax liability of an individual.

COURSE CODE AND TITLE- CM010303- SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

CO 1: Able to understand the concepts of investments, different types of investments, views of investment and process of investment and apply the theoretical knowledge in investment information for selecting the securities.

CO 2: Understanding the types of risk in security market and applying various tools for the valuation of bonds as well as economic indicators to predict the market.

CO 3: Understand the tools of technical analysis, analyse the patterns and trends in the market by using various tools and enable to take investment decisions after understanding market efficiency level also.

CO 4: Applying Modern portfolio theories and construct optimum portfolios.

CO 5: Revising constructed portfolios as per risk and return association by using different strategies.

COURSE CODE AND TITLE- CM800301-INDIRECT TAX LAWS (GROUP I)

CO 1: Understand the basic concepts of the Goods and Services Tax

CO 2: Develop a clear idea about the levy and collection of tax and tax credit

CO 3: Develop the knowledge about the provisions regarding registration, preparations of books of accounts and filing of returns under the Act.

CO 4: Understand about the powers of GST authorities regarding inspection, search and seizure

CO 5: Basic understanding about the Customs Law in India.

SEMESTER 4

COURSE CODE AND TITLE- **CM010401-ADVANCED COST AND MANAGEMENT ACCOUNTING**

CO 1: Apply activity-based absorption methods instead of conventional absorption method.

CO 2: Apply the marginal costing principles in decision making situations of businesses.

CO 3: Dealing with practical cases of pricing decisions in different situations

CO 4: Understand the concepts of standard costing and the process of cost control through it.

Co 5: Deal with the practical issues related to transfer pricing

COURSE CODE AND TITLE- **CM010402- INCOME TAX-ASSESSMENT AND PROCEDURE**

Co 1: Compute the total income and tax liability of firms and Association of Persons.

CO 2: Carry out assessment of companies and determine their tax liability.

CO 3: Make the assessment of co-operative societies and trusts.

CO 4: Understanding about the assessment procedures, TDS and advance payment of tax and application in various situations

CO 5: Learn tax planning concepts and apply the same

COURSE CODE AND TITLE- **CM800401-DERIVATIVES AND RISK MANAGEMENT**

CO 1: Knowledge about the derivative market in India, its evolution, types, players, risks involved and basic quantitative foundations.

CO 2: Analyze the implications of Risk in the perception of individuals and Institutions and measurement of risks.

CO 3: Understand and explain the concept of forward market and its function.

CO 4: Analyse the operation and pricing of various types of futures.

CO 5: Understand the concepts and methodology of option trading and apply the models of pricing the option contracts.

CO 6: Develop an idea of exchanges through swaps.

COURSE CODE AND TITLE- **CM800402-PERSONAL INVESTMENT AND BEHAVIORAL FINANCE**

CO 1: Understand the meaning and significance of financial literacy, Financial Discipline & Financial Competency, the role of family and parents in financial socialization.

CO 2: Understand and Evaluate the significance of savings on financial destiny and its relationship with consumerism and to understand the different elements/steps in Personal Financial Planning to attain financial Well Being and Evaluate the different retail investment avenues.

CO 3: Know the meaning of Behavioural finance, its evolution and related theories

CO 4: To understand different Heuristics, biases and other Irrational Investment Behaviours.

CO 5: Understand the relationship between biases and to adopt techniques to lower the impact of biases

COURSE CODE AND TITLE- CM010403-PROJECT REPORT

CO 1: Quality Research Output and Presentation

COURSE CODE AND TITLE- CM010404-COMPREHENSIVE VIVA VOCE

CO 1: The learner should have the capacity to communicate his/her understanding in various subjects studied.

PROGRAMME SPECIFIC AND COURSE OUTCOMES OF POSTGRADUATE PROGRAMS- MA

PROGRAMME- MA ENGLISH

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO1. To provide a deep perspective into select literary works across the globe, original or in translation.

PSO2. To help them have mastery over the nuances of theoretical discourses, language and literature in English.

PSO3. Enabling the students to communicate in correct and impressive language.

PSO4. To encourage and inspire the students into creative writing.

PSO5. Making the students fit for competing successfully in their search for career all over the world.

COURSE OUTCOMES (CO)

SEMSTER 1

COURSE CODE AND TITLE- [EN010101] - UP UNTIL CHAUCER: EARLY LITERATURES IN ENGLISH

CO 1: At the end of this course, the student will be able to make the major themes in Ancient and Medieval English literature as an expression of Anglo-Saxon culture and society as it emerges into a Britain-consciousness

CO 2: The student will be equipped to access and understand the personal experiences of people living in a society very different from our own.

COURSE CODE AND TITLE- [EN010102] -LITERATURES OF THE ENGLISH RENAISSANCE

CO 1: The course is designed to familiarise the students with the literature, thought and culture of the Renaissance period in England, a historical watershed marking the transition from the medieval to the modern.

CO 2: It is also designed as a theoretical/critical reading of the era and the texts in the light of recent theoretical interventions like New Historicism and Cultural Materialism which had a special interest in Renaissance texts.

CO 3: Representative works of the period have been selected with a view to instilling in the students a capacity to appreciate Renaissance writings bearing the stamp of radical changes in the outlook and ways of life.

**COURSE CODE AND TITLE- [EN010103] -LITERATURES OF THE ENGLISH REVOLUTION/
ENLIGHTENMENT**

CO 1: This course familiarizes the learner with the English literary texts which reflect the austere Puritan ideals of the late seventeenth century, the neoclassical vigour of the eighteenth century considerably influenced by the philosophy of the Enlightenment and the perspectival shift manifested in the transitional literature towards the end of this era.

COURSE CODE AND TITLE- [EN010104] -NINETEENTH CENTURY ENGLISH LITERATURES

CO 1: The course aims to familiarize students with the fundamental premises of the Romantic Movement and Victorian literature, their theoretical and ideological frameworks, and the major trends and offshoots across various genres.

CO 2: A rough time span of one and a half century which witnessed an initial flowering of Romanticism, followed by the rapid growth of industrialization, scientific thinking and materialism all of which find expression in the texts chosen for study.

COURSE CODE AND TITLE- [EN010105] – LITERARY CRITICISM

CO 1: To familiarize the students with the key concepts and texts of literary criticism ever since its emergence, and to provide theoretical familiarity with the range, approaches, and mechanics of critique

SEMESTER 2

COURSE CODE AND TITLE- EN010201 – MODERNITY AND MODERNISMS

CO 1: To familiarize the students with the literary trends of the early twentieth century in the context of the sensibility of literary modernism in the wake of the World War.

COURSE CODE AND TITLE- [EN010202] –POSTMODERNISM AND BEYOND

CO 1: This course aims to acquaint the learners with the postmodern works of literature which defy categorisation and prove to be experimental in nature, subverting what is conventionally revered as the norm.

CO 2: The learners are to be familiarised with the eclectic dimensions of postmodern thought as reflected in these literary works in which the boundaries that demarcate the different genres are often blurred. Such literature eludes fitting into the rigid frames of nomenclature

and rejects the concepts of objectivity, absolute truth and the notion of the stratification into the high and the low culture.

CO 3: Further, it is keenly perceptive and critical of the underlying ideologies that nurture oppressive institutions. The emphasis is on acknowledging the heterogeneity of thought and articulation.

COURSE CODE AND TITLE- [EN010203] -AMERICAN LITERATURES

CO 1: This course seeks to introduce the students to the most important branch of English literature belonging to the non- British tradition.

CO 2: The course attempts to provide detailed information to the student regarding the processes and texts chiefly responsible for the evolution of American Literature as a separate branch possessing characteristic features which sets it apart from others.

COURSE CODE AND TITLE- [EN010204] -ENGLISH LANGUAGE HISTORY AND CONTEMPORARY LINGUISTICS

CO 1: To inculcate in the student's awareness about the basic concepts of linguistics, the scientific study of language after initiating them into the history of English language.

COURSE CODE AND TITLE- [EN010205] -THINKING THEORY

CO 1: This course aims at introducing students to certain core aspects of what is currently designated as 'literary theory' and also provide exposure to select current developments in this domain.

SEMESTER 3

COURSE CODE AND TITLE- [EN010301] -READING INDIA

CO 1: The course is intended to provide an insight to the historical, cultural and literary heritage of India by acquainting the students with major movements and figures of Indian literature in English.

CO 2: Questions of language, nation and aesthetics figure prominently among the course outcome of this course.

COURSE CODE AND TITLE- [EN010302]-POSTCOLONIAL FICTION

CO 1: To introduce the students to the discursive nature of colonialism, and the counter-discursive impulses of postcolonial theory, narratives and texts.

COURSE CODE AND TITLE- [EN010303] -BODY, TEXT AND PERFORMANCE

CO 1: The course outcome of the course includes facilitating an understanding of the basic structural, thematic and theoretical patterns which govern the poetic process, especially in its relation to the performative or the theatrical.

COURSE CODE AND TITLE- [EN010304] -LITERATURE AND GENDER

CO 1: The course seeks to highlight the historic, thematic and cultural concerns that literature attempts against the backdrop of gender issues.

CO 2: A theoretical framework is provided whereby gender issues are examined, paying special attention to the fundamental political, religious and social issues that shape gender relations, thereby viewing gender as a fluid rather than a mere fixed hetero-normative Male-Female concept.

COURSE CODE AND TITLE- [EN010305]-ETHICS IN/AS LITERATURE

CO 1: The main objective of this course is to familiarise the student with certain 'ethics' that narrative fiction has adopted across centuries, continents and languages.

CO 2: It is expected that the student will be introduced to the various ethical, formal choices that schools, influences and narrative devices have upheld so as to shape narrative fiction into its present expressive plurality.

SEMESTER 4

COURSE CODE AND TITLE- [EN010401]-CULTURAL STUDIES

CO 1: To introduce students to certain interpretive strategies commonly employed in Cultural Studies.

CO 2: Emphasis is on overt interdisciplinary approaches to exploring how cultural processes and artifacts are produced, shaped, distributed, consumed, and responded to in diverse ways.

COURSE CODE AND TITLE- [EN010402]-POSTCOLONIAL POETRY

CO 1: To introduce the students to the diversity of poetry coming from the erstwhile colonies of the European Colonial Empires.

CO 2: To clear the ground from where the student can see how, beyond the general discursive constellations, there are regional specifics that 'in a hybrid mode' negotiate issues of sovereignty, language, race, gender, identity and place.

PROGRAMME- MA ECONOMICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

- PSO1. Advanced understanding of economic principles, and appreciation of different methodological approaches in economics.
- PSO2. To discuss and evaluate the application of advanced economic principles to the design of economic policy and the analysis of economic issues.
- PSO3. To apply economic analysis to everyday problems in real world situations.
- PSO4. To analyze the international as well as national level economic issues and to assess their impact on the domestic and world economy.
- PSO5. To enable the students to suggest solutions to challenging economic problems.
- PSO6. To equip the students for further study, research and teaching career in Economics.

COURSE OUTCOMES (CO)

SEMESTER 1

COURSE CODE AND TITLE- (ECOPGS1 01) MICROECONOMICS THEORY OF CONSUMER BEHAVIOUR & FIRM

- CO 1: The knowledge of consumer behaviour enables the student in taking rational buying decisions and also help a firm to design suitable marketing strategies
- CO 2: The student gets equipped with the knowledge and skill in effective decision making under uncertain market situations
- CO 3: The student understands the importance of time allocation and household management
- CO 4: The student develops the skill for converting technical information into economic relationship between input and output
- CO 5: Develops skill to determine the homogeneity/ non-homogeneity of production functions and to estimate the output level for the given input level
- CO 6: The student acquires skills in allocating scarce resources among alternative uses
- CO 7: The understanding of economies of scope and learning curves help in analyzing the nature and functioning of modern multiproduct firms

CO 8: The student learns about the reasons for the existence of firm and the boundaries of the firm

CO 9: The student gets equipped with the knowledge of the emergence of different organizational structures of the firm

CO 10: Develops the skill in analyzing business phenomena in terms of transaction cost saving.

COURSE CODE AND TITLE- ECOPGS1 02 MACROECONOMIC THEORY AND POLICY

CO 1: The students will be able to: Demonstrate a good understanding of macroeconomic principles, concepts, and theories.

CO 2: Demonstrate an understanding of the macroeconomic implications of decisions made by diverse economic entities and the ability to form informed opinions about macroeconomic policies pursued by them.

CO 3: Learn to integrate theoretical knowledge to evaluate policy measures and analyse trade-off in the deployment of resources to alternative ends and the implications of those trade-offs for the different strata of the society

COURSE CODE AND TITLE- ECOPGS1:03 INDIAN ECONOMY: ISSUES AND POLICIES – 1

CO 1: It provide the students with a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy

CO 2: It will help the students to contribute to the formulation of its policies

CO 3: It introduces the students to broad contours like the status, issues and policies of the Indian economy at the aggregated (macro) as well as sectoral levels.

CO 4: It helps to understand the experiences in the pre as well as post reform years, keeping the colonial experience at the background.

COURSE CODE AND TITLE- ECOPGS1 04 ECONOMICS OF DEVELOPMENT AND GROWTH- 1

CO 1: Develop conceptual clarity on the various dimensions of development and to identify the strategic factors in the development of the less developed countries.

CO 2: Enable the student to evolve new strategies for achieving sustainable development and inclusive growth

CO 3: Equip the student community with the theoretical and empirical material for enhancing their capability to address the basic problems confronted by the society.

COURSE CODE AND TITLE- ECOPGS1 05 QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS – I

CO 1: The students will be able to analyse the concepts of economics empirically.

CO 2: The students will be able to analyse the economic problems and solve them.

COURSE CODE AND TITLE- EC010105-MATHEMATICAL METHODS FOR ECONOMIC ANALYSIS

CO 1: At the end of the semester, the students will be able to understand several mathematical tools used in modern economics.

SEMESTER 2

COURSE CODE AND TITLE- ECOPGS2 06 MICROECONOMICS MARKETS, INFORMATION AND WELFARE

CO 1: Develops skill in formulating business strategy in the context of market imperfections

CO 2: Develops skill in using game theory models in decision making

CO 3: Learns to use the concept of price elasticity in calculating marginal revenue

CO 4: Acquires knowledge of reaction curve approach and its application in other branches of economics

CO 5: The student develops the understanding of the economic level of information search possible under different situations and the concept of bounded rationality

CO 6: Learns why inefficiencies and social costs arise in imperfect markets in the context of adverse selection, moral hazard and principal agent problem

CO 7: Learns the institutional arrangements in the society to overcome asymmetric information and Develops skill in designing incentive mechanism under information asymmetry

COURSE CODE AND TITLE- ECOPGS2 07 ADVANCED MACROECONOMIC THEORY AND POLICY

CO 1: The students will be able to: Demonstrate a good understanding of macroeconomic principles, concepts, and theories.

CO 2: Demonstrate an understanding of the macroeconomic implications of decisions made by diverse economic entities and the ability to form informed opinions about macroeconomic policies pursued by them.

CO 3: Learn to integrate theoretical knowledge to evaluate policy measures and analyse trade-off in the deployment of resources to alternative ends and the implications of those trade-offs for the different strata of the society

COURSE CODE AND TITLE- ECOPGS2 08 INDIAN ECONOMIES: POLICIES AND ISSUES- II

CO 1: It provide the students with a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy

CO 2: It will help the students to contribute to the formulation of its policies

CO 3: It introduces the students to broad contours like the status, issues and policies of the indian economy at the aggregated (macro) as well as sectoral levels.

CO 4: It helps to understand the experiences in the pre as well as post reform years, keeping the colonial experience at the background.

COURSE CODE AND TITLE- ECOPGS2 09 ECONOMICS OF DEVELOPMENT AND GROWTH- II

CO 1: Develop conceptual clarity on the various dimensions of development and to identify the strategic factors in the development of the less developed countries.

CO 2: Enable the student to evolve new strategies for achieving sustainable development and inclusive growth

CO 3: Equip the student community with the theoretical and empirical material for enhancing their capability to address the basic problems confronted by the society.

COURSE CODE AND TITLE- ECOPGS2 10 QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS – II

CO 1: The students will be able to analyse the concepts of economics empirically.

CO 2: The students will be able to analyse the economic problems and solve them.

COURSE CODE AND TITLE- EC010205-STATISTICAL METHODS FOR ECONOMIC ANALYSIS.

CO 1: By the end of the semester, the students will learn to use statistical tools and techniques in economics for analysis of data with valid logic and inferences.

SEMESTER 3

COURSE CODE AND TITLE- ECOPGS3 11 INTERNATIONAL TRADE THEORY AND POLICY

CO 1: The course provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term –at the global level. Besides preparing the students about the relevance and limitations of these principles, the contents of the paper spread over different modules lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of trade policies followed both at national and international level.

COURSE CODE AND TITLE- ECOPGS3 12- PUBLIC ECONOMICS

CO 1: To provide the students basic knowledge about the social science research and its relevance in tackling real issues of the society

CO 2: Create an enabling environment to identify research issues and to develop scientific approach in the analysis of social problems

CO 3: Familiarize with the methods of collection analysis and interpretation of data

CO 4: Acquire the ability to derive and organize conclusions from empirical works for offering concrete solutions to various socio-economic problems.

COURSE CODE AND TITLE- ECOPGS3 13- RESEARCH METHODS IN ECONOMICS

CO 1: To provide the students basic knowledge about the social science research and its relevance in tackling real issues of the society

CO 2: Create an enabling environment to identify research issues and to develop scientific approach in the analysis of social problems

CO 3: Familiarize with the methods of collection analysis and interpretation of data

CO 4: Acquire the ability to derive and organize conclusions from empirical works for offering concrete solutions to various socio-economic problems.

COURSE CODE AND TITLE- ECOPGS3 14-ECONOMICS OF ENVIRONMENT AND SOCIAL SECTOR

CO 1: To make the students understand the philosophical and historical roots of environment and development

CO 2: To know the theoretical foundations of environmental economics To facilitate the optimum use of natural resources in production and consumption

CO 3: To understand the theory and practice of Sustainable development To become familiar with the impacts of environment on health and promote environmental education

CO 4: To highlight the international treaties and conventions for protecting the environment while promoting development

COURSE CODE AND TITLE- ECOPGELE1-MONETARY THEORY AND POLICY

CO 1: The course enables the students to understand the basic concepts regarding money and the functioning of a pecuniary economy.

CO 2: It capacitates the students to have a thorough understanding of the various theoretical approaches to the determinants and measures of money supply and its role in causing the business cycles.

CO 3: It gives the students an insight in to the different schools of thought regarding the demand for money.

CO 4: The course gives the students awareness of the monetary policy formulations, its targets and objectives and to create an interest in the recent monetary reforms initiated in India. An earnest attempt is made to give an insight to the present global financial crisis

SEMESTER 4

COURSE CODE AND TITLE- **ECOPGS4 15- GLOBAL TRADING AND MONETARY SYSTEM**

CO 1: The course provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term at the global level.

CO 2: Besides preparing the students about the relevance and limitations of these principles, the contents of the paper spread over different modules lay stress on the theory and nature of the subject which in turn, will greatly help them to examine the impact of trade policies followed both at national and international level

COURSE CODE AND TITLE- **ECOPGS4 16-INDIAN PUBLIC FINANCE**

CO 1: To make the students aware of the emerging trends in public expenditure and the criteria for Public Investment

CO 2: To familiarize the students with the various processes involved in the preparation and execution of the Budget and the problems and trends in Public Debt in India.

CO 3: To make the students aware of the Economics of Public Enterprises and the current concepts like Public Private Participation (PPP).

CO 4: To enable the students to have a thorough understanding of the Key Issues centering around Fiscal, Federal relations in India and to impart an advanced level knowledge of the emerging trends in local self Government Institutions in the backdrop of the LPG process

COURSE CODE AND TITLE- **ECOPGELE8-PERSONNEL MANAGEMENT**

CO 1: This paper will provide sufficient knowledge to students regarding various aspects of personnel management like manpower planning, methods of recruitment and selection, wage and salary administration, etc. This will enrich their talents to take up the challenges of a personnel manager.

COURSE CODE AND TITLE- **ECOPGELE9-CAPITAL MARKET**

CO 1: Upon the successful coverage of the course, students will be able to understand the basics of savings and investment, to understand how capital markets work and what functions capital markets fulfill in market economy and to calculate the Risk, Return and Liquidity of various investment instruments.

COURSE CODE AND TITLE- ECOPGELE11-ECONOMICS OF AGRICULTURE

CO 1: The course gives a detailed idea regarding the role and importance of agriculture in economic development , the land reforms in India, a comparison of the Green revolution in India and Mexico, and the importance of farm budgeting.

CO 2: The students will get an idea on the various principles of farm management and its limitations, the different relationships involved in agricultural production and the supply response models.

CO 3: It gives insight into the agricultural marketing in India, role of PDS, and also the role of WTO in Indian Agriculture