



NEWMAN COLLEGE, THODUPUZHA

NAAC Accredited with 'A' Grade (3rd Cycle, CGPA 3.32)
(Affiliated to Mahatma Gandhi University, Kottayam)

LEARNING OUTCOMES

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B.A. Economics Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.A. Economics Model I degree programme, the students will be able to:

- PSO1:** Recognize and identify various economic phenomena and the working of the economy at both national and international levels.
- PSO2:** Improve their economic vocabulary and its applicability in real world situations.
- PSO3:** Apply economic theories and concepts to contemporary social issues, as well as analysis of economic policies.
- PSO4:** Understand the impact of government policies and will be able to assess the consequences of the policies.
- PSO5:** Get an awareness of career choices and the option for higher studies.

Course Outcomes (CO)

At the completion of the course under three-year B.A. Economics Model I degree programme, the students will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyze the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language- Malayalam Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.



- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create authentic knowledge about the development of literature.
- CO4:** Read critically and appreciation of Malayalam Short stories and Novels

Second Language - Hindi Common Course 1-Prose & One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi Literature.
- CO3:** Analyze different forms of prose.
- CO4:** Analyze the kinds of One act plays.

Core Course1- Perspectives and methodology of Economics (EC1CRT01)

- CO1:** Understand the broad contours of Social Sciences specifically economics and its methodologies, tools and analysis procedures.
- CO2:** Knowledge about different schools of economic thought and various aspects of social science research, methodology, concepts, tools and various issues.
- CO3:** Understanding of the basic and fundamental knowledge regarding social science research.
- CO4:** Endowed with a picture of the evolution of different schools of economics and various social science disciplines.

Complementary Course 1-Social Formations in Pre-Modern India (HY1CMT02)

- CO1:** Understand the dynamics of antiquity in Indian subcontinent with emphasis on Harappan civilization, Vedic Age, Mauryan empire and Sangam age
- CO2:** Ability analyse early medievalism and the debate over the nature of Indian feudalism
- CO3:** Ability to evaluate the political economy of Delhi Sultanate and Vijayanagara society
- CO4:** Learn Mughal social formation with emphasis on its agrarian system.

SEMESTER II

English Common Course 3- Issues That Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.



- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students & understanding of the classics from various lands.

Second Language- Malayalam Common Course 2- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society

Second Language- Hindi Common Course 2-Short Stories and Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.

Core Course 2 - Micro Economic Analysis-I (EC2CRT02)

- CO1:** Achieve the quality of economic analysis and problem solving.
- CO2:** Develop knowledge on fundamental concepts and ideas of micro economics.
- CO3:** Students will achieve a framework for learning about consumer behaviour and analyzing consumer decisions.
- CO4:** Students will be 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.

Complementary Course 2 - Transition to the Contemporary World (HY2CMT03)

- CO1:** Understand the turbulences in Europe since French Revolution



- CO2:** Understand the transitions that the world had experienced over the years with particular emphasis on the Age of Imperialism
- CO3:** Knowledge the geo-political developments in twentieth century
- CO4:** Understand the political developments in the contemporary world

SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language- Malayalam Common Course 3 - Second Language –Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it
- CO2:** Gain knowledge of the field of theatre and analyse different trends and their social relevance
- CO3:** Get acquainted with the ancient visual arts of Kerala
- CO4:** Create depth knowledge of film and theatre.
- CO5:** Realizing literary values of visual arts of Kerala.

Second Language- Common Course 3: Poetry Grammar & Translation (HN3CCT03)

- CO1:** Develop grammatical proficiency in the Hindi Language.
Convince the students to use correct punctuation and grammar structure in the
- CO2:** Translation process.
- CO3:** Enable the student to analyse ancient, medieval and modern Hindi Poetry critically.
- CO4:** Acquaint the students with the rich texture of Poetry.



Core Course 3 - Microeconomic Analysis -II (EC3CRT03)

- CO1:** Understand the meaning of market and different types of market and the price determination in both short run and long run
- CO2:** Understand price discrimination and its operation in a monopoly market, degrees and types of price discrimination.
- CO3:** Identify monopolistic competition, its features, characteristics, limitations and price determination.
- CO4:** Understand the different types of market and their functioning.
- CO5:** Understand the different types of theories of development.
- CO6:** Generate a thorough understanding on welfare economics.

Core Course 4 - Economics of Growth and Development (EC3CRT04)

- CO1:** Conceptualize growth and development using various indices.
- CO2:** Rate the various issues and theories of growth and development.
- CO3:** Evaluate the importance of education, health and nutrition for economic development.
- CO4:** Assess how development is related with poverty and population
- CO5:** Explain how gender equality is important to economic development.

Complementary Course 3 - An Introduction to Political Science (PS03CL001)

- CO1:** Basic historical-analytical framework of the discipline.
- CO2:** Critical understanding of constitutional design and institutional framework of government.
- CO3:** Understanding the ideas of democracy and freedom and corresponding social relations and political and institutional practices.
- CO4:** Ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes.

SEMESTER IV

English Common Course- 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.



- CO3:** Evaluate and overcome setbacks based on these texts insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Malayalam Common Course 4 – Malayala Gadhyarachanakal (ML4CCT04)

- CO1:** Appreciate portions of prose
- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Get training in creative writing such as News for dailies' and Essays
- CO4:** Construct knowledge about features of languages in E-media

Second Language- Hindi Common Course 4- Drama & Long Poem (HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** Demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.

Core Course 5 - Macro Economics (EC4CRT05)

- CO1:** Illustrate the different types of macroeconomic models
- CO2:** Discuss the importance of microeconomics in daily life and the difference between microeconomics and macroeconomics.
- CO3:** Assess the concept of national income and various methods of calculating national income.
- CO4:** Rate the classical school of economics and their basic macroeconomic theories.

Core Course 6 - Public Economics (EC4CRT06)

- CO1:** Identify the concepts of public finance, public goods and the difference between public and private finance.
- CO2:** Interpret the various sources of public revenue and theories related to public revenue.
- CO3:** Analyze various types of taxation as a source of revenue to the government.



- CO4:** Illustrate the need public expenditure and public debt with the help of supporting theories.
- CO5:** Evaluate the financial relationship between Centre government and state governments in India.

Complementary Course 4- Indian Constitution: Social Issues in India (PS4CMT05)

- CO1:** Understanding on the constitutional design of state structures and institutions, and their actual working overtime.
- CO2:** Generate the ability to embodiment of conflicts in constitutional provisions, and their political practice.
- CO3:** Encouraged study on state institutions in their mutual interaction, and in interaction with the larger extra constitutional environment.

SEMESTER V

Core Course 7 - Quantitative Techniques (EC5CRT07)

- CO1:** Solve problems on basic mathematical methods like progression, interest, Net Present Value
- CO2:** Use differential calculus to find the maxima and minima in case of economic functions
- CO3:** Discuss various types of functions and solve problems on set theory, matrices and different types of equations
- CO4:** Compute the probability of events and explain the type events, the addition rule and multiplication rule of probability
- CO5:** Illustrate the use of Binomial and Normal distributions to calculate the probability

Core Course 8- Macro Economics II (EC5CRT08)

- CO1:** Enable students to compare and analyse various macro-economic theories related to consumption and investment.



- CO2:** Analyze various macro-economic problems in the economy like inflation, unemployment and various concepts related to money and its influence on various macroeconomic aspects.
- CO3:** Analyze the importance of macroeconomic policies in regulating and stabilizing the economy.
- CO4:** Evaluating different schools of thought and their contribution to economic literature.

Core Course 9- Environmental Economics (EC5CRT09)

- CO1:** Discuss the importance of preserving natural resources and ecosystem.
- CO2:** Identify different types of pollutions and other hazards and assess its negative impact on environment.
- CO3:** Explain various national and international laws that are designed to protect the nature.
- CO4:** Use economic models to analyze various environmental problems.
- CO5:** Restate the role of the UNO and other international agencies to protect human rights and environmental rights.

Core Course 10- Introductory Econometrics (EC5CRT10)

- CO1:** Illustrate the idea of regression analysis and design it to interpret economic data.
- CO2:** Construct and verify the hypotheses used for analysing economic data.
- CO3:** Solve statistical tests to investigate whether the classical assumptions of regression are satisfied.
- CO4:** Design new econometric models and rate various econometric models available in economics literature.

Open Course: Fundamentals of Economics (EC5OPT01)

- CO1:** Make the undergraduate students of other disciplines aware of the basic ideas and concepts in economics.
- CO2:** Students get the basic idea regarding national income, production, distribution etc
- CO3:** Inculcates some reasoning ability in students from other disciplines.
- CO4:** Make enthusiasm in the students from other disciplines on the subject

SEMESTER VI



Core Course 11- Quantitative Methods (EC6CRT11)

- CO1:** Develop statistical skills to collect, analyze and interpret empirical data
- CO2:** Attain knowledge on statistical methods and tools essential to study economics.

Core Course 12- International Economics (EC6CRT12)

- CO1:** Compare and contrast various traditional and modern theories in international economics
- CO2:** Compose the Balance of Payment and Balance of Trade statistics of an economy
- CO3:** Rate the gains from international trade and assess trade policies.
- CO4:** Evaluate the functioning of foreign exchange market and its movements.
- CO5:** Discuss about various international agencies and their relations with the member nations.

Core Course 13 - Money & Financial Markets (EC6CRT13)

- CO1:** Analyse the functioning of banking and non-banking financial institutions in India.
- CO2:** Explain the functions of money in general and the money demand and supply in India in particular.
- CO3:** Illustrate the structure and functioning of Indian money market.
- CO4:** Discuss the structure and assess the functions of Indian capital markets
- CO5:** Evaluate the operations and trends in equity market, derivative market and other kinds of financial markets throughout the world.

Core Course 14- Indian Economy (EC6CRT14)

- CO1:** Explain the structural changes in the Indian economy over the years and changes in the role of government as an active economic agent.
- CO2:** Discuss the demographic features and changes in India over the years as a result of India's population policy
- CO3:** Assess the role of agricultural, industrial and service sectors in development of Indian economy.
- CO4:** Examine the role of Planning Commission in India's economic development and the functions of NITI Ayog as a promoter of economic development.

- CO5:** Illustrate the economic, social and demographic changes in Kerala economy as a result of Kerala's specific model of development.

Choice Based Course 02- Business Economics (EC6CBT02)

- CO1:** Understand the application of economic theory and the tools of decision making
- CO2:** Achieve an understanding on how an organization achieves its aims and objectives efficiently
- CO3:** Understand how analytical tools of micro and macroeconomics are applied for solving many practical business problems.



B.A. English Language and Literature Model I

Programme Specific Outcomes (PSO)

At the completion of the course under the three-year B.A. English Language and Literature Model I degree programme, the student will be able to:

- PSO1:** Master proficiency in English language and literature.
- PSO2:** Develop an effective formal and informal communication skills in English.
- PSO3:** Critically analyse different genres of Literature and apply literary concepts and theories.
- PSO4:** Develop the ability to understand social, ethical and environmental responsibilities for the benefit of society.

Course Outcomes (CO)

At the completion of the course under the three-year B.A. English Language and Literature Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1: Fine-Tune Your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English, to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course 2: Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature
- CO3:** Evaluate the aesthetic and structural elements of literature
- CO4:** Examine the language skills of students through their creative writing.



Second Language-Common Course 1 -Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Stories and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create authentic knowledge about the development of literature.
- CO4:** Critical reading and appreciation of Malayalam Short stories and Novels

Second Language-Common Course 1-Prose & One-Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyse Hindi Literature.
- CO3:** Analyse different forms of prose.
- CO4:** Enable the students to analyse the kinds of One act plays.

Core Course 1: Methodology of Literary Studies (EN1CR01)

- CO1:** Illustrates to the students the major signposts in the historical evolution of literary studies from its inception to the contemporary postcolonial realm.
- CO2:** Explain the emergence of literature and its theoretical underpinnings within the spectra of humanities.
- CO3:** Reflect on the tenets of what is now known as traditional ‘approaches and also that of formalism.
- CO4:** Analyse the shift towards contextual-political critiques of literary studies.
- CO5:** Evaluate the significant thoughts that are within the ambit of Cultural Studies and Feminism.

Complementary Course 1: Political Science 1-An Introduction to Political Science (PS1CMT01)

- CO1:** Define and identify the nature, scope and development of political science.
- CO2:** Reviewing critical concepts in Political Science.
- CO3:** Explain and evaluate major political ideologies.
- CO4:** Review and explain democracy, and its practices
- CO5:** Identify and explain various forms of government



SEMESTER II

English Common Course 3- Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4- Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students understanding of the classics from various lands.

Second Language- Common Course 2: Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in-depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in the taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society

Second Language-Common Course 2: Short Stories and Novels (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop the vocabulary and reading skills of the student.

Core Course 2: Introducing Language and Literature (EN2CR02)



- CO1:** Evaluate and analyse the basics of the English language and literature.
- CO2:** Analysing the evolution and the differential traits of the English language until now.
- CO3:** Evaluating the evolution of literature from antiquity to postmodern times.
- CO4:** Creating the diversity of genres and techniques of representation and narration
- CO5:** Analyzing the links between literature and film as narrative expressions.
- CO6:** Explaining the emergence of British and American Literature through diverse periods

Complementary Course 2- Political Science 2: Indian Constitution: social issues in India (PS2CMT02)

- CO1:** Develop the basic structure, characteristics, and nature of the Indian Constitution.
- CO2:** Evaluate and analyse the Federal structure of the nation and to understand the Governmental process of the country.
- CO3:** Analyse and understand the Judicial, Legislative and Executive setup of the country.
- CO4:** Examine the socio-political backgrounds of the nation and challenges to our political system.

SEMESTER III

English Common Course 5-Literature and/ as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language-Common Course 3: Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it
- CO2:** Gain knowledge of the field of theatre and analyse different trends and their social relevance
- CO3:** Get acquainted with the ancient visual arts of Kerala



- CO4:** Create depth knowledge of film and theatre.
- CO5:** Realizing literary values of visual arts of Kerala.

Second Language- Common Course 3: Poetry Grammar & Translation (HN3CCT03)

- CO1:** Develop grammatical proficiency in the Hindi Language.
- CO2:** Convince the students to use correct punctuation and grammar structure in the Translation process.
- CO3:** Enable the student to analyse ancient, medieval and modern Hindi Poetry critically.
- CO4:** Acquaint the students with the rich texture of Poetry.

Core Course 2: Harmony of Prose (EN3CR03)

- CO1:** Equipped with analysing glorious essays, both Western and Non-Western.
- CO2:** Familiar with the analysis of varied prose styles of expression.
- CO3:** Evaluating eloquent expressions, brevity, and aptness of voicing ideas in a stylish language
- CO4:** Developing the skill of critical analysis.

Core Course 3: Symphony of Verse (EN3CR04)

- CO1:** Acquaint the student with the rich texture of poetry in English.
- CO2:** Evaluate the representation of poetry in various periods of the English tradition.
- CO3:** Analyse the emerging cultural and aesthetic expressions that poetry makes possible.
- CO4:** Examine the emergence of British Literature through diverse periods

Complementary Course 3: Evolution of Literary Movements: The Shapers of Destiny (EN3CM03)

- CO1:** Analyse the way in which history shapes the life and literature of people.
- CO2:** Evaluate the comprehensive overview of the history of Britain and its impact on the rest of the world.
- CO3:** Enable the students to analyse the English literature in light of historical events.
- CO4:** Analyse how a person is moulded by the historical events of his personal and communal life.



SEMESTER IV

English Common Course 6- Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts’ insights.
- CO4:** Evaluate and overcome setbacks based on these texts’ insights.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language 4 -Common Course: Malayala Gadhyarachanakal (ML4CCT04)

- CO1:** Appreciate portions of prose
- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Get training in creative writing such as News for dailies’ and Essays
- CO4:** Construct knowledge about features of languages in E-media

Second Language 4-Common Course: Drama & Long Poem (HN4CCT04)

- CO1:** Develop an interest in Drama.
- CO2:** Demonstrate an understanding of Drama and Theatre and will become aware of the contribution of playwrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.

Core Course 4: Modes of Fiction (EN4CR05)

- CO1:** Analyse various modes of fiction.
- CO2:** Evaluate the categories of British and non-British short fiction.
- CO3:** Analyse the novel as a form of literary expression.
- CO4:** Examine the conflicting ideas or values typically explored in novels and forms of literature.

Core Course 5: Language and Linguistics (EN4CR06)



- CO1:** Analyse the basic concepts of linguistics and linguistic analysis with the students.
- CO2:** Create awareness about the organs and processes involved in producing speech, and the segmental & suprasegmental features of the English language.
- CO3:** Examine morphological processes and phenomena.
- CO4:** Analyse the various processes involved in the generation of meaning.
- CO5:** Examine their ability to observe, describe and explain grammatical processes and phenomena.

Complementary Course 4: Evolution of Literary Movements: The Cross Currents of Change (EN4CM04)

- CO1:** Evaluate the evolution of literature and perceive the interplay of social processes and literature
- CO2:** Analyse the competency in understanding literature against the backdrop of history.
- CO3:** Evaluate their ability to contribute dynamically to historical and literary processes.
- CO4:** Evaluate the comprehensive overview of the history of Britain and its impact on the rest of the world
- CO5:** Enable the students to understand English literature in the light of historical events

SEMESTER V

Open Course: Theatre Studies (EN5CROP03)

- CO1:** Analyse plays from the West and the East, ranging from the tragic and the comic, the folk, and the street, to generate awareness in theatre.
- CO2:** Analyse a selection of well-discussed plays across the world.
- CO3:** Evaluate the classical and modern theatre in the West and the East.
- CO4:** Examine the form and content of various kinds of theatre.
- CO5:** Evaluate colonial and subversive postcolonial aspects in Indian theatre.
- CO6:** Analyse issues of gender, identity, caste, tradition, morality, etc, dealing with modern theatre

Core Course 6: Acts on the Stage (EN5CR07)

- CO1:** Analyse theatre texts that form the canon of English drama.



- CO2:** Evaluate the works and be familiar with the works of the playwrights included in the course.
- CO3:** Examine and evaluate the broad genre-based nuances in drama.
- CO4:** Be creative in appreciating and critiquing drama as an art form.

Core Course 7: Literary Criticism and Theory (EN5CR08)

- CO1:** Analyse the significant signposts in Literary Criticism, Literary Theory, and Indian Aesthetics.
- CO2:** Evaluate the significant developments in literary criticism from ancient times to the twentieth century.
- CO3:** Examine the realm of literary theory and primary theoretical schools.
- CO4:** Analyse the dominant strains of Indian literary criticism.
- CO5:** Analyse short poetical pieces critically.

Core Course 8: Indian Writing in English (EN5CR09)

- CO1:** Analyse the various ways in which literature is written in English.
- CO2:** Evaluate the Indian sub-continent serves as a platform for forming, consolidating, critiquing and re-working the issue of national identity at various levels.
- CO3:** Examine the subtle flavours that distinguish the Indian quotient in English writings from India.
- CO4:** Evaluate the different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.

Core Course 9: Environmental Science and Human Rights (EN5CREN01)

- CO1:** Investigate how and why things happen, and make their own decisions about complex environmental issues.
- CO2:** Develop and enhance critical and creative thinking skills.
- CO3:** Foster a new generation of informed consumers, workers, as well as policy or decision makers.
- CO4:** Examine how their decisions and actions affect the environment and build the



knowledge and skills necessary to address complex environmental issues.

CO5: Enable them to keep our environment healthy and sustainable for the future.

SEMESTER VI

Choice-Based Course: Regional Literatures in Translation (EN6CB04)

CO1: Evaluate the regional pieces of literature translated into English.

CO2: Analyse the much-discussed writers/literary pieces in the vernaculars.

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

CO4: Examine the fostering of a national identity-a national consciousness and a national, culture evolved through translations.

Core Course 10: Postcolonial Literatures (EN6CR10)

CO1: Analyse the varied dimensions of postcolonial subjectivity through theory and literature.

CO2: Evaluate the social, political, and cultural aspects of postcolonial societies.

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

CO4: Analyse the links between language, history, and culture.

Core Course 11: Women Writing (EN6CR11)

CO1: Analyse the theoretical and literary responses by women and the concerns that govern feminist literature.

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

CO3: Evaluate how patriarchal notions pervade 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: American Literature (EN6CR12)

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



- CO2:** Evaluate the evolution of various literary movements in American literature.
- CO3:** Acquaint the students with the major authors in American Literary History.
- CO4:** Develop a more thorough understanding of the totality of the American experience, which spans centuries and widely different populations.

Core Course 13: Modern World Literature (EN6CR13)

- CO1:** Evaluate the students' awareness of the astonishing variety that resides in literature over the world.
- CO2:** Examine the students' engagement with the literature of the modern world in very profound ways with the vicissitudes of life.
- CO3:** Evaluate the students' insight into World literature and how they defy genres/regionalities and canonical assumptions to emerge as a platform where poetics and politics fuse.
- CO4:** Analyse the understanding of Major and Minor, Central and Peripheral literature is a myth.

Project (EN6PR01)

- CO1:** Evaluate the knowledge and understanding of the key literary texts, theories, and methodologies relevant to the chosen topic.
- CO2:** Examine critical and analytical skills by analysing literary texts, evaluating different perspectives, and engaging in critical debates.
- CO3:** Enhance their research skills by identifying relevant sources, critically evaluating information and synthesising information from different sources.
- CO4:** Evaluate the student's ability to structure the project clearly and logically using appropriate language, and citing sources accurately.





B.A. English Literature and Communication Studies Model III **(Double Main) (Self Financing)**

Programme Specific Outcomes (PSO)

At the completion of the three-year BA English Literature and Communication Studies degree programme, the student will be able to:

- PSO1:** Proficiently comprehend diverse literary forms (prose, poetry, drama, fiction) and gain insights into global cultures and sensibilities.
- PSO2:** Acquire in-depth knowledge of literary movements throughout different historical periods.
- PSO3:** Develop strong command of English grammar and proficiency in listening, speaking, reading, and writing (LSRW) skills.
- PSO4:** Demonstrate analytical writing prowess in various formats (essays, reviews, research papers) and explore career opportunities in media, journalism, teaching, public relations, human resources, civil service, and creative writing

Course Outcomes (CO)

At the completion of the course under three-year B. A. English Literature and Communication Studies Model III (Double main) degree programme, the student will be able to:

SEMESTER I

English Common Course 1: Fine-Tune your English (EN1CCT01)

- CO1:** Attain 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.
- CO4:** Actively think about word meanings and its formation.
- CO5:** Build vocabulary and use words in different situations.
- CO6:** Heighten their awareness of correct usage of English grammar in speaking.

Core Course 1: Methodology of Literary Studies (EN1CRT01)

- CO1:** 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:** Analyses the emergence of literature as a specific discipline within the humanities.



- CO3:** Reflects the tenets of what is now known as traditional approaches and also that of formalism.
- CO4:** Evaluates shift towards contextual-political critiques of literary studies
- CO5:** Addresses the questions raised by Cultural Studies and Feminism(s)
- CO6:** Understands issues of subalternity and regionality in the literary domain

Core Course 2: Conversational Skills (EN1CRT03)

- CO1:** Sensitize students to the nuances of spoken forms of English
- CO2:** Practice the daily and professional events in classroom and improve fluency
- CO3:** Develop vocabulary and improve the accuracy in grammar
- CO4:** Write effectively for a variety of contexts and audiences.
- CO5:** Interact skilfully and ethically.
- CO6:** Establish a basic understanding of phonetics and phonology

Core Course 3: English in Informal Situations (EN1CRT05)

- CO1:** Speak English with a high degree of confidence, accuracy and fluency.
- CO2:** Capable of answering questions of a conversational nature.
- CO3:** Develop student's ability to use English in day-to-day life and real life situation.
- CO4:** Build a command of a range of questions to elicit information from other people with awareness of contextual appropriateness.
- CO5:** Take part with confidence in conversations of various real life situations.
- CO6:** Initiate, sustain, and close a conversation.

Complementary Course 1: An Introduction to Sociology (SO1CMT01)

- CO1:** Enable the students to gain an understanding of the society
- CO2:** Articulate a sociological perspective.
- CO3:** Apply sociological theories to understand social phenomena.
- CO4:** Critically evaluate explanations of human behavior and social phenomena.
- CO5:** Apply scientific principles to understand the social world.
- CO6:** Use sociological knowledge to inform policy debates and promote public understanding

SEMESTER II

Common Course 2: Issues that Matter (EN2CCT03)

- CO1:** 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
- CO5:** Re-orient himself/ herself as conscious, cautious, concerned, conscientious and concerned human being and
- CO6:** Re-orient himself/ herself as conscious, cautious, concerned, conscientious and concerned human being

Core Course 4: Introducing Language and Literature (EN2CRT02)

- CO1:** Introduce the student to the basics of English language and literature.
- CO2:** Overviews the evolution and the differential traits of the English language till the present time.
- CO3:** Trace the evolution of literature from antiquity to postmodern times.
- CO4:** Understands links between literature and film as narrative expressions.
- CO5:** Understands links between literature and film as narrative expressions.
- CO6:** Analyse the emergence of British and American Literature through diverse periods

Core Course 5: Introduction to Communication (EN2CRT05)

- CO1:** Introduce the basics of human communication.
- CO2:** Understand and apply communication theory
- CO3:** Think critically about communication processes and messages
- CO4:** Engage in scholarly inquiry and social scientific research
- CO5:** Recognize the effects of diversity, access, and power on communication
- CO6:** Develop and deliver professional presentations

Core Course 6: Business Communication (EN2CRT06)

- CO1:** Introduce students of Communicative stream to Business communication and related aspects
- CO2:** Attempt Effective business writing
- CO3:** Attempt Effective business communications
- CO4:** Evaluate research approaches and information collection
- CO5:** Reflect Skills that maximize team effectiveness
- CO6:** Understand Effective problem solving



Complementary Course 2: Development of Sociological Theory (SO2CMT02)

- CO1:** Familiarize the historical conditions in which sociology emerged.
- CO2:** Learn the sociological theories that account for deviance, conformity and social control.
- CO3:** Evaluate the sociological significance of social identity groups and the processes that create them
- CO4:** Determine the historical and contemporary levels of social conflict and/or cooperation between various social identity groups
- CO5:** Able to demonstrate an understanding of cross-cultural differences and an understanding of the importance of cultural context.

SEMESTER III

Core Course 5: Print Media and Journalism (EN3CRT09)

- CO1:** Introduces the basics of Print Media.
- CO2:** Discuss the history of print media and analyse the evolution and impact of printing
- CO3:** Analyse different types of print media and different forms of writing
- CO4:** Critically appraise practices and trends in print media
- CO5:** Practice different forms of writing for print media
- CO6:** Discuss laws and ethics related to print journalism

Core Course 6: Harmony of Prose (EN3CRT03)

- CO1:** Evaluate of glorious essays, both Western and Non-Western.
- CO2:** Familiarize with varied prose styles of expression.
- CO3:** Aware of eloquent expressions, brevity and aptness of voicing ideas in stylish language
- CO4:** Create literary sensibility for appreciation in students
- CO5:** Expose students to artistic and innovative use of language by writers and to various worldviews
- CO6:** Instill values and develop human concern in students through exposure to literary texts

Core Course 7: Symphony of Verse (EN3CRT04)

- CO1:** Acquaint the student with the rich texture of poetry in English.
- CO2:** Understand the representation of poetry in various periods of the English tradition.
- CO3:** Evaluate emerging cultural and aesthetic expressions that poetry makes possible.



- CO4:** Expose individuals to literary device such as alliteration, metaphors and personification
- CO5:** Recalls the features of persona/voice in poetry.
- CO6:** Analyzes the underlying meanings of the poem by using the elements of poetry.

Core Course 8: Indian Writing in English (EN3CRT05)

- CO1:** Distinguish the Indian quotient in English writings from India.
- CO2:** Addresses different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.
- CO3:** Sensitize students to the various ways in which literature written in English, in the Indian sub-continent serves
- CO4:** Forms, consolidates, critiques and re-works the issue of national identity 'at various levels.
- CO5:** Understand the *locus standi* of diasporic 'Indian' writers

Complementary Course 3: Evolution of Literary Movements: The Shapers of Destiny(EN3CMT03)

- CO1:** Make the learner aware of the way in which history shapes the life and literature of a people
- CO2:** Get the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world
- CO3:** Get the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world
- CO4:** Gain a comprehensive overview of the history of Britain including the major wars, invasions and dynasties from the early settlers till the end of seventeenth century
- CO5:** Possess a thorough knowledge on the major geographical and scientific innovations, momentous movements, universities etc.
- CO6:** Analyses the manner in which a person is moulded by the historical events of his personal and communal life

SEMESTER – IV

Core Course 9: Print Media and Journalism 2 (EN4CRT12)

- CO1:** Familiarize students with reporting and editing
- CO2:** Understand the qualities, duties, and basic components of a news story.
- CO3:** Analyse the different types of news story
- CO4:** Practice the various editing techniques, layout & design of magazines in India.



CO5: Analyse the production of online newspapers and magazine.

CO6 Practice live reporting, investigative reporting etc.

Core Course 10: Modes of Fiction (EN4CRT05)

CO1: Acquaint with various modes of fiction.

CO2: Comprehend the categories of British and non- British short fiction, and also the novel as a form of literary expression

CO3: Acquaints students with some important British and Non British short stories and a Novel.

CO4: Introduce to different kinds of fiction so that they develop critical thinking and imagination through long and short fictions.

CO5: Familiarize with cultural diversity through a detailed study of different representative samples of fiction.

CO6 Analyze and evaluate different types of fiction.

Core Course 11: Language and Linguistics (EN4CRT06)

CO1: Overviews of the basic concepts of linguistics and linguistic analysis to the students.

CO2: Demonstrate the various organs and processes involved in the production of speech, the types and typology of speech sounds, segmental & supra segmental features of the English language, and transcription using IPA.

CO3: Describe and explain morphological processes and phenomena.

CO4: Show the various processes involved in the generation of meaning.

CO5: 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.

Core Course 12: Acts on the Stage (EN4CRT07)

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

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

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

CO4: Appreciates and critiques drama as an art form.

CO5: Analyses the growth of theatre in own culture

CO6 Evaluate the popularity of the renowned playwright Shakespeare and his way of expression.



Complementary Course 4: Evolution of Literary Movements: Cross Currents of Change (EN4CMT04)

- CO1:** Enables students to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature
- CO2:** Understands competently literature against the backdrop of history.
- CO3:** Inspires to contribute dynamically to historical and literary processes.
- CO4:** Analyses the contribution of each literary movements in the history
- CO5:** Evaluates the literary publications and authors in light of literature and history
- CO6:** Identifies the immense potential of literature to influence the mass, like Feminist literature steers the marginalised women to the mainstream Dalit literature, navigating the domain of the downtrodden, bringing them up to the forefront

SEMESTER V

Open Course 1: Pathrapravarthanam (ML5OPT01)

- CO1:** Analyse the language of media.
- CO2:** Explain duties of media.
- CO3:** Develop interest in journalism.
- CO4:** Analyse new trends in journalism.

Core Course 13: Environmental Science and Human Rights (EN5CRT01)

- CO1:** 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.
- CO2:** 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.
- CO3:** 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:** Acquire the basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about the environment.



- CO5:** Make a point of view regarding how and why things happen and about complex environmental issues.
- CO6** Addresses the urgency of identifying himself/herself one with nature.

Core Course 14: Creative Writing and Translation Studies (EN5CRT02)

- CO1:** Introduce a selection of regional literatures translated into English.
- CO2:** Discuss writers/literary pieces in the vernaculars.
- CO3:** Enable students to comprehend the modern trends in regional literatures.
- CO4:** Acquires proficiency in sentence constructions, use of figures of speech etc.
- CO5:** Learns types of formal and informal writing (Letter writing, paraphrasing, critical appreciation, types of essays and report writing)
- CO6** Enable the students with nuances of translation such as aids and tools of translation text analysis, transfer and restructuring etc.

Core Course 15: Mass Communication and Broadcasting (EN5CRT03)

- CO1:** Learns Principles of broadcasting and will identify himself as part of the journalism community
- CO2:** Exhibits practical understanding of the underlying principles of Mass Communication and Journalism Industry
- CO3:** Acquire skill to write a variety of mass media products, including news stories, TV/Radio news scripts and press releases, following accepted journalistic standards.
- CO4:** Achieves thorough knowledge about the history comprising the origin, development and future of mass media, in a global as well as in an Indian perspective
- CO5:** Attains hands-on experience on radio programme production.
- CO6** Create an understanding on the necessity of practicing ethical journalism.

Core Course 16: Public Relations I (EN5CRT04)

- CO1:** Demonstrate the understanding of the fundamentals of public relations.
- CO2:** Possess a thorough understanding on the history of PR in a global as well as in an Indian perspective
- CO3:** Identify the various tools for facilitating PR activity in different situations.
- CO4:** Identify the roles and responsibilities of PR department in an establishment and to plot its organisational structure
- CO5:** Pinpoint the desirable professional qualifications required to become a PR practitioner.
- CO6** Enumerate the various qualities and soft skills deemed desirable for a PR practitioner



SEMESTER VI

Core Course 17: Entrepreneurship Development (EN6CRT02)

- CO1:** Understands the role of an Entrepreneur in Economic development
- CO2:** Differentiate between an Entrepreneur and self-employed person.
- CO3:** Evaluate the characteristics of an entrepreneur.
- CO4:** Analyse State financial corporations and small scale and Export industries.
- CO5:** Evaluate Activities and functions of District Industries Centers
- CO6:** Project feasibility study, Project selection, classification and appraisal.

Core Course 18: Visual Media: Television and Cinema (EN6CRT03)

- CO1:** Understands the characteristics, principles and functions of visual media.
- CO2:** Evaluate history of visual media, both in a Global as well as in an Indian perspective.
- CO3:** Analyze Doordarshan and its contributions.
- CO4:** Substantiate the persuasive power of visual media and how it sways public opinion.
- CO5:** Identify various genres of TV programmes based on the several elements at play in their formats.
- CO6:** Evaluate the structure and operation of a TV studio, control rooms and the paraphernalia for broadcast video production.
- CO7:** Understand fundamentals of motion picture editing such as Cut, Fade, Mix, Dissolve, Wipe and Superimpose.
- CO8:** Acquires theoretical and practical knowledge about the various steps and processes involved in film making.

Choice Based Core Course 1: Regional Literatures in Translation (EN6CBT03)

- CO1:** Evaluate a selection of regional literatures translated into English.
- CO2:** Develop familiarity in the students with the cultural, linguistic and social nuances of regional literature
- CO3:** Equip students with critical and analytical skills to respond to texts in various regional languages in India
- CO4:** Overcome language barrier in the appreciation of good literature
- CO5:** Enable students to transcend cultural barriers in understanding, foregrounding and contesting the “transcultural” India
- CO6:** Inculcate a sense of oneness as Indians while learning to assert one’s own cultural identity and politics



B.A. History Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.A. History Model I degree programme, the students will be able to:

- PSO1:** Cultivate an appreciation and understanding among students for the various historical processes that have gone into the making of societies, cultures and civilizations.
- PSO2:** 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:** 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:** 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 (CO)

At the completion of the course under three-year B.A. History Model I degree programme, the student will be able to:

SEMESTER-I

English Common Course 1- Fine-Tune Your English (EN1CC010)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from The Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.



Second Language- Common Course 1 Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create an authentic knowledge about the development of literature.
- CO4:** Critical reading and appreciation of Malayalam Short stories and Novels

Second Language-Common Course 1-Prose & One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi Literature.
- CO3:** Analyze different forms of prose.
- CO4:** Enable the students to analyze the kinds of One act plays.

Core Course 1- Perspectives and Methodologies in Social Sciences- History (HY1CRT01)

- CO1:** Interpret the nature, scope, relevance and kinds of history.
- CO2:** Apply knowledge to solve contemporary social problems at regional, national and global levels
- CO3:** Analyze the social issues using different principles and concepts of social sciences
- CO4:** Examine the nature of history as an academic discipline and its interdisciplinary approaches
- CO5:** Comprehend the notions of objectivity and subjectivity and the application of theories in history.
- CO6:** Enable to differentiate the notions of objectivity and subjectivity and the application of theories in history.

SEMESTER-II

English Common Course 3 – Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the classics (EN2CC03)



- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students understanding of the classics from various lands.

Second Language Common Course- 2 Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society.

Second Language- Common Course 2- HINDI- Short Stories & Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.

Core Course-2 - Understanding Early India: From Hunting Gatherers to Land Grants (HY2CRT02)

- CO1:** Evaluate the Prehistoric and early historic periods in India
- CO2:** Able to explain the transition from territorial states to emergence of empires and capable to illustrate emergence of caste-based societies in Ancient India.
- CO3:** Able to distinguish the early State formations political institutions in Ancient India- Mauryas-Guptas and emergence of land grant system.
- CO4:** Able to analyze development of various schools of art – Gandhara- Mathura- Nagara- Dravida- Vesara.

Complementary Course I: Transition to the Contemporary World (HY2CMT03)

- CO1:** Enable the students to evaluate the contributions made by the French Revolution and the Unifications of Italy and Germany.
- CO2:** Attain the fundamentals of the theories on Imperialism, Fascism, Nazism and communism.
- CO3:** Evaluate the much-discussed debates over development and sustainable Development.
- CO4:** Examine the background of Anti colonial movements around the world especially in Asia and Africa.



SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, Consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional Identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal Identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language- Common Course– 3 Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it
- CO2:** Gain knowledge of the field of theatre and analysing different trends and its social relevance
- CO3:** Get acquainted with the ancient visual arts of Kerala
- CO4:** Create depth knowledge of film and theatre.

Second Language- Common Course 3 - Hindi- Poetry Grammar & Translation (HN3CCT03)

- CO1:** Develop grammatical proficiency in Hindi Language.
- CO2:** Convince the students to use correct punctuation and grammar structure in Translation process.
- CO3:** Enable the student to critically analyze the ancient, medieval and modern Hindi Poetry.
- CO4:** Acquaint the students with the rich texture in Poetry.

Core Course -3 Polity, Society and Economy in Pre-Colonial India (HY3CRT03)

- CO1:** Summarize and interpret various sources of medieval Indian History
- CO2:** Evaluate Mughal social formation with special reference to economy, polity and religion
- CO3:** Examine how Delhi Sultanate contributed to develop a composite culture in India by Understanding the various institutional structures evolved under this new regime.
- CO4:** Establishes how feudalist forces are ensembles in medieval social formation of India in verifiable magnitude.

Core Course- 4 Cultural Trends in Pre-Colonial Kerala (HY3CRT04)

- CO1:** Get a detailed idea about geography vis-à-vis history in the context of Kerala and able

to identify various kinds of sources helped to study the history of Kerala.

- CO2:** Appraise earliest settlements in Tamil macro region
- CO3:** Examine the social formation in the Age of Perumals and Swaroopams
- CO4:** Describe social control, trade and culture in pre-modern Kerala

Complementary Paper- Political Science 1 An Introduction to Political Science (PS3CMT01)

- CO1:** Define and identify the nature scope and development of political science.
- CO2:** Reviewing key concepts in Political Science.
- CO3:** Explain and evaluate major political ideologies.
- CO4:** Review and explain democracy and its practices
- CO5:** Identify and explain various forms of government

SEMESTER-IV

English Common Course – 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Common Course-4 Malayala Gadhyarachanakal (ML4CCT04)

- CO1:** Appreciate portions of prose
- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Get training in creative writing such as News for dailies' and Essays
- CO4:** Construct knowledge about features of languages in E-media

Second Language- Common Course – 4 Hindi-Drama & Long Poem-(HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** Demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life

Core Course-5- Making of Modern Kerala (HY4CRT05)

- CO1:** Identify the beginning of European colonization in Kerala
- CO2:** Analyse the socio-religious reform movements in Kerala
- CO3:** Scrutinize the early political and cultural movements in Kerala.
- CO4:** Analyse the socio-economic-political and cultural trends in contemporary Kerala.

Core Course -6 -Researching the Past (HY4CRT06)

- CO1:** Analyze different categories of sources that are available for historical reconstructions.
- CO2:** Evaluate various methods and methodologies available for a historian and will get a detailed idea about the different types of researches
- CO3:** Analyze the historical sources by using interpretation methods and familiarize concepts like causation, generalization, objectivity and subjectivity.
- CO4:** Evaluate the reference styles and manual available for historical research.

Complementary Paper-Political Science-2- Indian Constitution: social issues in India (PS4CMT05)

- CO1:** Evaluate the basic structure, characteristics and nature of the Indian Constitution.
- CO2:** Examine and analyse the Federal structure of the nation and can understand the Governmental process of the country.
- CO3:** Examine the Judicial, Legislative and Executive setup of the country.
- CO4:** Evaluate the socio – political backgrounds of the nation and challenges to our political system.

SEMESTER V

Core Course-7- Inheritance and Departures in Historiography (HY5CRT07)

- CO1:** Evaluate the historiographical trends from the traditional phase to the contemporary scene
- CO2:** Demonstrate the students the new trends with a view to improving their understanding of historical writings and perspectives.

Core Course -8 India: Nation in the Making (HY5CRT08)

- CO1:** Evaluate the impacts of British rule in India
- CO2:** Analyze the different phases of Indian National Movement.
- CO3:** Discuss and explain the basic concepts and events associated with the national Indian movement, Gandhian concept, Revolutionary and Communist Movement etc.
- CO4:** Familiar with the makers of modern India and their sacrifices.



Core Course -9- State and Society in Ancient and Medieval World (HY5CRT09)

- CO1:** Enable the students to identify dynamics of Pre-historic societies and the transition to Metal Age.
- CO2:** Examine the characteristic features of the Bronze Age civilizations around the world
- CO3:** Evaluate the rise, growth and decline of various Iron Age civilizations- Greek and Roman civilizations.
- CO4:** Capable to debate medievalism in Europe and Asia.

Core Course -10- Environmental Studies and Human Rights in Historical Outline (HY5CRT10)

- CO1:** Investigate about complex environmental issues and to foster a new generation of informed consumers and policy makers
- CO2:** Build knowledge and skills to keep environment healthy and sustainable
- CO3:** Understand the inter-relationship between man and environment
- CO4:** Evaluate the evolution of Environmental Studies as an academic discipline
- CO5:** Analyze the evolution of human rights

Open Course - Social Implications of Modern Revolutions (HY5OPT02)

- CO1:** Enable the students to evaluate the meaning, definitions and relevance of Revolutions in modern era.
- CO2:** Evaluate the socio-economic, political and cultural background of Renaissance, Reformation, intellectual and scientific revolution and its impact on mankind.
- CO3:** Evaluate the Industrial Revolution and the process of Capitalist development.
- CO4:** Analyze the fundamental features of New Economic Policy and its repercussions.

SEMESTER VI

Core Course -11 - Making of Contemporary India (HY6CRT11)

- CO1:** Evaluate and understand the partition of India, migration and issues of refugees in historical perspective.
- CO2:** Demonstrate the various social and strategic issues faced by India after independence.
- CO3:** Capable to criticize various developments in Indian economy.
- CO4:** Demonstrate the broad spectrum of Post independent Indian scenario particularly the NEP, Panchayati Raj, caste, religion and Indian political scenario.



Core Course- 12 - Understanding Modern World (HY6CRT12)

- CO1:** Competent to judge colonialism and imperialism in historical setting
- CO2:** Analyze the developments in Inter-war years around the world
- CO3:** Evaluate various theories on nationalism.
- CO4:** Examine the two World Wars and various developments in their context – League of Nations- UNO.
- CO5:** Critically evaluate the influence of Cold War among the nation states.

Core Course -13- Capitalism and Colonialism (HY6CRT13)

- CO1:** Analyze the emergence and development of capitalism in Europe and the related scramble for colonies and imperialist domination around the world
- CO2:** Demonstrate the processes and debates involved in the transition from feudalism to capitalism
- CO3:** Evaluate the expansion of capitalism in the light of industrial revolution
- CO4:** Critically analyze the nature of economic development in post-colonial times

Core Course -14- Gender in Indian Perspectives (HY6CRT14)

- CO1:** Evaluate the socio-historical constructions of sexual differences in Indian society by emphasizing the plural backgrounds
- CO2:** Demonstrate the students to challenge the conventional social norms about male-female dichotomy
- CO3:** Develop the concepts relating to Indian modernity and Gender
- CO4:** Analyze the contemporary issues relating to gender

Choice Based Core Course- Archaeology in India (HY6CBT01)

- CO1:** Enable the students evaluate the development of archaeology as an independent discipline.
- CO2:** Students can comprehend the principles and methods of archaeology
- CO3:** Enable the students to perceive the history of archaeology in India
- CO4:** Students may evaluate the important archaeological sites in India



B.A. Malayalam Language and Literature Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.A. Malayalam Language and Literature Model I degree programme, the student will be able to:

- PSO1:** Evaluate and analyse the classical literature of Malayalam Language and construct a sublime philosophy of life.
- PSO2:** Improve writing skills and acquire ability for translation.
- PSO3:** Lay foundation for language research.
- PSO4:** Develop creativity and literary talents.

Course Outcomes (CO)

At the completion of the course under three-year B.A. Malayalam Language and Literature Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

Common Course-2 Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language – Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.

- CO3:** Create an authentic knowledge about the development of literature.
- CO4:** Read critically and appreciation of Malayalam Short stories and Novels

Core Course 1– Naveenakavitha (ML1CRT01)

- CO1:** Analyse poetry in depth, learn its dimensions of idea and sensibility in detail.
- CO2:** Evaluate new trends in poetry
- CO3:** Analyse Modern poets and their poetic style and vision about the society, culture and nation
- CO4:** Appraise contemporary Malayalam writers and their themes and vision of the society

Complementary Course 1 – Malayala Padanathinte Reethishasthram (ML1CMT01)

- CO1:** Develop an awareness of literature
- CO2:** Understand the new trends in contemporary Malayalam literature
- CO3:** Analyses contemporary Malayalam
- CO4:** Analyses the origin and development of Malayalam

Complementary course 2–Nadakavum Cinemayum (ML1CMT02)

- CO1:** Develop more orientation towards arts
- CO2:** Secure an understanding of the technique of script-writing
- CO3:** Lead the students to the history of theatre.
- CO4:** Get the ability to criticize film and theatre.

SEMESTER II

English Common Course 3 – Issues that Matter (EN2CC03)

- CO1:** Help the learners to evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.



English Common Course 4 - Savouring the classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students' understanding of the classics from various lands.

Second Language- Common Course 2-Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society

Core Course 2– Malayala Kavitha Ezhuthachan Muthal Kavithrayam Vare (ML2CRT02)

- CO1:** Analyse the special features of the poems of each period
- CO2:** Evaluate the dimensions of meaning and idea in the poem
- CO3:** Explain how romanticism came to Malayalam
- CO4:** Analyse the Historical and cultural changes of Kerala Society and explain how contemporary poets present these realities in their poems.

Complementary course 3– Aadhunika Lokakavitha (ML2CMT03)

- CO1:** Appreciate world poetry and to understand how it is distinct from Malayalam literature.
- CO2:** Construct knowledge about the present-day world poetry and the main thrusts behind the writing such as dalithism, feminism and environmentalism.
- CO3:** Realize aesthetics of colonialism.
- CO4:** Categorize literature from the time of Ancient to modern great poets

Complementary course 4– FokloreVijnanam (ML2CMT04)

- CO1:** Construct knowledge about Folklore tradition and indigenous art

- CO2:** Maintain respect and orientation towards indigenous culture
- CO3:** Evaluate various Foklore theories.
- CO4:** Analyse the traditions and the practices of various folks.

SEMESTER III

Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language - Common Course 3– Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it
- CO2:** Gain knowledge of the field of theatre and analysing different trends and its social relevance
- CO3:** Get acquainted with the ancient visual arts of Kerala
- CO4:** Create depth knowledge of film and theatre.
- CO5:** Realizing literary values of visual arts of Kerala.

Core Course 3–Kerala samskaram: Poorvaghattam (ML3CRT03)

- CO1:** Evaluate the historical aspects of Kerala
- CO2:** Become aware about their own history of land in connection with British rule and its various effects
- CO3:** The role of landlordism, Monarchy and the dominations from the west.
- CO4:** Understand historical events as cultural relations.

Complementary course 5 – OruEzhuthukaran/ Ezhuthukari -Madhavikkutty (ML3CMT05)

- CO1:** Explain the various aspects of feminism
- CO2:** Criticize the writer, Madhavikkutty in depth
- CO3:** Evaluate Romanticism through Madhavikkutty- A Feminine Writer
- CO4:** Critical reading and appreciation of Malayalam Literature

Complementary course 6-Sanskrit – Poetry, Rhetoric’s and Basics of Grammar (SC3CMT01)

- CO1:** Get Knowledge about elementary texts in Sanskrit
- CO2:** Discuss the basic concepts of Sanskrit grammar.
- CO3:** Evaluate the culture of the past
- CO4:** Critical reading and appreciation of Sanskrit Literature

SEMESTER IV

English Common Course – 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts' insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature,

Second Language- Common Course 4– Malayala Gadhyarachanakal (ML4CCT04)

- CO1:** Appreciate portions of prose
- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Ability in Creative writing such as News for dailies’ and Essays
- CO4:** Get knowledge about features of languages in E-media

Core course 4 – Kerala Samskaram - Utharaghattam (ML4CRT04)

- CO1:** Evaluate the contributions and struggles of great persons who found a place in history.

- CO2:** Gain knowledge about formation of unified Kerala on linguistic basis, land reforms, gulf boom, leftist movements and environment issues.
- CO3:** Evaluate the rise of middle-class imperialism.
- CO4:** Critically analyse missionary moments and so on.

Complementary course 7-Aadhunika Malayala Bhasha (ML4CMT06)

- CO1:** Create an awareness of the spheres of science, literature and history
- CO2:** Analyse famous prose writers and their style of writing
- CO3:** Evaluate the evolution of Malayalam prose
- CO4:** Develop critical thinking
- CO5:** Evaluate the evolution of Malayalam as a modern language.

Complementary course 8 -Sanskrit- Prose, Vrutha, Alankara, Theories of Poetics and Grammar(SC3MT02)

- CO1:** This is not to say that the rituals of the primitive times were to be understood as culture – distinguished behaviour.
- CO2:** Create knowledge about Sanskrit poems and rules in the construction of traditional sanskrit kavya and its writing
- CO3:** Identify Alankara and Vrutha of Sanskrit.
- CO4:** Explain sanskrit grammar

SEMESTER V

Core Course 5 – Paristhithi soudharyadarsanavum Manushyavakasha Padanavum (ML5CRT05)

- CO1:** Construct an awareness of human rights
- CO2:** Generate a genuine interest in protecting nature
- CO3:** Recognize that literature is not limited to the mainstream
- CO4:** Introduce basic environmental knowledge and ecosystem.

Core course 6– Sahithyameemamsa (ML5CRT06)

- CO1:** Analyse western philosophy of literature.
- CO2:** Analyse Eastern philosophy of literature.
- CO3:** Construct knowledge about modern Theories about creativity and comprehension
- CO4:** Evaluate the historical context in which literary theories were formed

Core course 7– Cherukatha, Novel (ML5CRT07)

- CO1:** Analyse the topic, style if narration and specialties of novel
- CO2:** Create knowledge in the story field of literate.
- CO3:** Construct knowledge in students about post modernism with its various dimensions and its influences in Malayalam short stories and Novels with social realities
- CO4:** Critically analyse Malayalam Novel and short story writers and their themes and vision of the Society.

Core course 8– Bhashasasthram (ML5CRT08)

- CO1:** Analyses scientific dimensions of language
- CO2:** Develop basic concepts of linguistics
- CO3:** Criticise the changes taking place in language at different periods or ages
- CO4:** Convince the difference between grammar and linguistics
- CO5:** Recognize the importance of further research in linguistics

OPEN COURSE– Pathrapravarthanam (ML5OPT01)

- CO1:** Analyse the language of media.
- CO2:** Explain duties of media.
- CO3:** Develop interest in journalism.
- CO4:** Analyse new trends in journalism.

SEMESTER VI

Core course 9– Keraeeyadrishyakala (ML6CRT09)

- CO1:** Construct knowledge about the art forms that are likely to go extinct and to study them in detail

- CO2:** Orientation towards the traditional art forms
- CO3:** Illustrate social importance and Aesthetic sense of visual arts.
- CO4:** Realize literary values of visual arts of Kerala.
- CO5:** Develop a taste for Enjoying and preserving Art forms.

Core course 10– Pracheenasahithyam (ML6CRT10)

- CO1:** Create knowledge about ancient forms of literature.
- CO2:** Construct knowledge about the great significance of ancient literature in the development and evolution of Malayalam language.
- CO3:** Analyse literary spheres which are likely to become extinct e.g.- Poems of message, champu etc.
- CO4:** Develop knowledge about the poetic history of Malayalam

Core course 11– Gadhyasahithya Niroopanam (ML6CRT11)

- CO1:** Analyse literature in a critical way and to help in literary creation
- CO2:** Evaluate literature in a logical and objective way
- CO3:** Evaluating new trends in the literature
- CO4:** Gain the ability to write reviews for literature

Core course 12– Vyakaranam, Bhashacharithram (ML6CRT12)

- CO1:** Understand the pronunciation and the scientific dimension of the language and to use language in an effective manner.
- CO2:** Analyse the origin and development of Malayalam.
- CO3:** Gain the ability to assess and explain the application potential of the language
- CO4:** Understanding new methods of grammar.

CHOICE BASED COURSE 1 – Malayalathile Sthreerachanakal (ML6CBT01)

- CO1:** Gain Knowledge about how ladies impact the field of literature and make a mark of their own
- CO2:** Appreciate the idea of Feminism.

Learning Outcomes

- CO4:** Recognizing that literature is not limited to the main stream.
- CO5:** A deeper understanding of post-modern schools of thought.



B.Sc. Botany Model II Plant Biotechnology

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Sc. Botany Model II Plant Biotechnology degree programme, the student will be able to:

- PSO1:** Explain different branches of Botany such as systematics, evolution, ecology, developmental biology, physiology, plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics, biochemistry, and molecular biology of various life forms. Become competent in various analytical and technical skills related to plant sciences.
- PSO2:** Identify and analyze the fundamentals of biotechnology which enable students to connect the emerging and advanced concepts in biotechnology. Apply biotechnology skills in molecular & microbiology, enzymology, genetic engineering, and plant sciences. Recognize the importance of Bioethics and IPR in life science/biotechnology.
- PSO3:** Apply statistics to biological data and operate basic bioinformatics tools /databases. Interpret the molecular, cellular, and biochemical basis of life forms and biological systems.
- PSO4:** Plan and prepare research projects using various tools and techniques in plant sciences and biotechnology.

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Botany Model II Plant Biotechnology degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.



Second Language - Malayalam Common Course 1- Malayalam Katha Novel (ML1CCT07)

- CO1:** Develop awareness in Short Story
- CO2:** Develop awareness in Novel
- CO3:** Analyze the new trends in the literary field of short stories and Novels.
- CO4:** Construct an authentic knowledge about the development of literature.
- CO5:** Critical reading and appreciation of Malayalam Short stories and Novels

Second Language - Hindi Common Course 1- Poetry & One Act Play (HN1CCT04)

- CO1:** Develop interest in one act plays.
- CO2:** Analyze and appreciate different literary works in Hindi.
- CO3:** Enable the students to analyze the progressive nature of ancient and modern poets in Hindi.
- CO4:** Develop Social and cultural consciousness through Hindi Literature.

Core Course 1- Methodology of Science and an Introduction to Botany (BO1CRT01)

- CO1:** Understand the universal nature of science
- CO2:** Demonstrate the use of scientific method
- CO3:** To lay a strong foundation to the study in Botany
- CO4:** Impart an insight into the different types of classifications in the living kingdom.
- CO5:** Appreciate the world of organisms and its course of evolution and diversity.
- CO6:** Develop basic skills to study Botany in detail.

Core Practical I (Sem 1) Methodology of Science and an Introduction to Botany

- CO1:** Design an experiment to verify a given hypothesis.
- CO2:** Find out different elements of the methodology of science with a classical experiment in science.
- CO3:** Appreciate the diversity of plant kingdom.
- CO4:** Prepare temporary, stained hand sections (TS, TLS, RLS) of plant specimens appropriate for light microscopic studies.
- CO5:** Report the scientific outcome in a systematic manner.



Complementary Course 1: Elementary Biochemistry (BC1CMT01)

- CO1:** Understand the basic principle of different types of chemical interactions in biological systems
- CO2:** Analyze on the basics of membrane biochemistry
- CO3:** Understand the importance of plant biochemistry
- CO4:** Acquire the basic knowledge to practice biochemical separation techniques

Vocational Courses 1: Introduction to Biotechnology (BO1VO4T01)

- 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.

Vocational Courses 2: Microbiology (BO1VO4T02)

- 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.

Vocational course Practical I (Sem 1): Microbiology (P)

- CO1:** Prepare agar slants and broths; Culture bacteria in artificial medium.
- CO2:** Plan and execute Grams staining, Viable count, Test for catalase and amylase

- CO3:** Demonstrate Streak plate technique for purification of bacteria, Hanging drop experiment and Negative staining, principle, working and application of Laminar air flow, Autoclave, Colony counter, Hot air oven, Incubator, Haemocytometer.
- CO4:** Report the scientific outcome in a systematic manner

SEMESTER II

English common Course 3 – Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided

Second Language Malayalam Common course3- Kavithayum Nadakavum- (ML2CCT08)

- CO1:** Appreciate poetry knowing in depth its dimensions of idea and sensibility
- CO2:** Realised the Changes in taste of Poetry
- CO3:** Evaluate contemporary Malayalam writers and their themes and vision of the society
- CO4:** Construct in-depth knowledge of theatre
- CO5:** Lead the students to the history of theatre.

Second Language Hindi Common course 3- Prose &Short Stories (HN2CCT02)

- CO1:** Develop interest in Hindi Prose.
- CO2:** Enable students to critically analyze literary forms in Hindi story.
- CO3:** Familiarize the students with eminent writers in the field of Short Stories and to develop story reading skills.
- CO4:** Inculcate Moral and Human Values within themselves.

Core course 2 - Microbiology, Mycology and Plant Pathology (BO2CRT02)

- CO1:** Understand the world of microbes, fungi and lichens.
- CO2:** Appreciate the adaptive strategies of the microbes, fungi and lichens.
- CO3:** Explain the economic and pathological importance of microorganisms.



Core Practical I (Sem II) -Microbiology, Mycology and Plant Pathology

- CO1:** Micro preparation of the given fungal specimens.
- CO2:** Investigation of fungal succession on cow dung.
- CO3:** Knowledge in Staining and microscopic observation of endomycorrhizal fungus.
- CO4:** Identify the given pathological specimens with respect to symptoms.
- CO5:** Appraise herbarium preparation.
- CO6:** Learn the technique of preparing Bordeaux mixture, Tobacco and Neem decoction.

Complementary Course 1-Biomolecules - (BC2CMT02)

- CO1:** Enable the students to understand describe and illustrate structure- properties and important functions of major monosaccharide.
- CO2:** Enable the students to understand describe and illustrate structure- properties and important functions of lipids
- CO3:** Enable the students to understand describe and illustrate structure- properties and important functions of aminoacids and proteins
- CO4:** Enable the students to understand describe and illustrate structure- properties and important functions of nucleic acids.

Complementary Course Practical I: Biomolecules (BC2CMP01)

- CO1:** Characterize carbohydrates present in an unknown solution on the basis of various chemical assays.
- CO2:** Characterize non protein nitrogenous substances present in an unknown solution on the basis of various chemical assays
- CO3:** Separate and identify the amino acids in a mixture by thin layer chromatography

Vocational Course 1 – Molecular biology (BO2VO4T03)

- 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 tumor suppressor genes and relate the role of heredity and cancer

Vocational Course 2- Fundamentals of Enzymology and Radiobiology (BO2VO4T04)

- 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.

Vocational course Practical I (Sem 2): Fundamentals of Enzymology and Radiobiology(P)

- CO1:** Prepare of buffers of various pH and estimate pH using pH paper and pH meter
- CO2:** Estimate proteins in an unknown sample by biuret/ Lowry's method
- CO3:** Demonstrate enzyme kinetics and effect of substrate and temperature on enzyme kinetics
- CO4:** Report the scientific outcome in a systematic manner.



SEMESTER III

English common Course 5 – Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Core course 3 - Phycology and Bryology- BO3CRT03

- CO1:** Explain the evolutionary importance of Algae as progenitors of land plants.
- CO2:** Understand the unique and general features Algae and Bryophytes and familiarize it.
- CO3:** Understand the external morphology, internal structure and reproduction of different types of Algae and Bryophytes.
- CO4:** Realize the application of Phycology in different fields.

Core Practical I (Sem III) Phycology and Bryology

- CO1:** Identification of algal diversity
- CO2:** Write a report based on a field survey
- CO3:** Knowledge in identification and staining and microscopic observation of given bryophytes

Complementary Course 1 Bio-Chemistry - Enzymology and Metabolism-(BC3CMT03)

- CO1:** Get familiarized with the basics of enzyme catalysis
- CO2:** Understand, explain analyze and draw conclusions about the major pathways of carbohydrate metabolism
- CO3:** Understand, explain analyze and draw conclusions about the major pathways of protein metabolism



- CO4:** Understand, explain analyze and draw conclusions about the major pathways of Lipid metabolism

Vocational Courses 1: Biotechniques & instrumentation- BO3VO4T05

- 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.

Vocational course Practical II (Sem 3): Biotechniques & instrumentation (P)

- CO1:** Estimate and quantify the proteins in the given sample
- CO2:** Isolate and identify DNA/ RNA in the given sample
- CO3:** Demonstrate and discuss Paper chromatography, TLC, PAGE and spectroscopy.
- CO4:** Report the scientific outcome in a systematic manner



Vocational Courses 2: Basics of molecular cloning techniques- (BO3VO4T06)

- 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 hybridization, Plaque hybridization, 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.

Vocational course Practical III (Sem 3): Basics of molecular cloning techniques (P)

- CO1:** Isolate and identify DNA/ RNA in the given sample
- CO2:** Demonstrate restriction digestion, Southern blotting and PCR
- CO3:** Demonstrate transformation of competent cells, Southern blotting, PCR, Vector mediated gene transfer using pBR322, pUC18, YAC.
- CO4:** Report the scientific outcome in a systematic manner

SEMESTER IV

English Common Course- 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.



- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts’ insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Core Course 4: Pteridology, Gymnosperms and Paleobotany (BO4CRT04)

- CO1:** Understand the diversity in habits, habitats and organization of various groups of plants.
- CO2:** Impart an insight into the modern classifications in lower forms of plants.
- CO3:** Understand the evolutionary trends in Pteridophytes and Gymnosperms.
- CO4:** Study the anatomical variations in vascular plants.
- CO5:** Understand the significance of Paleobotany and its applications.

Core Practical I (Sem IV) Pteridology, Gymnosperms and Paleobotany

- CO1:** Knowledge in identification and staining and microscopic observation of given pteridophytes and gymnosperms.
- CO2:** Make a scientific report with illustrated diagrams.

Complementary Course I- Nutritional and Clinical Biochemistry (BC4CMT04)

- CO1:** Acquire the capacity to discuss and understand the fundamental biochemistry knowledge related to health, and clinical practices
- CO2:** Acquire the capacity to discuss and understand the fundamental biochemistry knowledge related clinical practices, specifically of blood, urine, cerebrospinal fluid (CSF) etc.
- CO3:** Acquire the capacity to discuss and understand the fundamental biochemistry knowledge related to health, and biochemical basis of metabolic disorders
- CO4:** Understand the significance of nutrition such as amino acids, fatty acids, vitamins and minerals.



Complimentary Course Practical: Nutritional and Clinical Biochemistry (BC4CMP02)

- CO1:** Learn the technique of isolating enzymes from its sources
- CO2:** Construct a standard curve to study the specific activity of acid phosphatase and beta amylase enzyme
- CO3:** Analyse the effect of substrate concentration on the activity of enzyme.
- CO4:** Analyse of constituents of biological fluids such as urine, blood and their estimation using standard methods.

Vocational Course 1- Genetic engineering (BO4VO4T07)

- 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:** 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:** Define micro arrays, differentiate the types of DNA chips and production methods; discuss the applications of micro arrays; explain nanobiotechnology.
- CO6:** Discuss Human Genome Project, its significance and findings
- CO7:** Analyse the Ethical, Legal, Social, Environmental issues of Recombinant DNA Technology; discuss Biosafety and Biowar, Patenting and IPR issues.

Vocational course Practical III (Sem 4): Genetic engineering (P)

- CO1:** Isolate and identify the plant cell DNA Estimate and quantify.
- CO2:** Execute Agarose gel electrophoresis - fractionation and staining of DNA.
- CO3:** Demonstrate and discuss Southern blotting, methods of direct Gene transfer -

Microinjection, Biolistic Transfer, Liposome mediated gene transfer, Electroporation, Chemical mediated gene transfer, Agrobacterium mediated gene transfer - Agroinfection, Production of genetically engineered plants.

CO4: Report the scientific outcome in a systematic manner.

Vocational Course 2- Plant Tissue Culture BO4VO4T08

- CO1:** Define plant tissue culture and explain the principle of tissue culture and its history; identify the general facilities for plant tissue culture
- CO2:** 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
- CO3:** Plan and perform inoculation, incubation, subculturing and hardening
- CO4:** Compare callus and suspension culture; meristem culture, anther culture, pollen culture, ovary culture and embryo culture
- CO5:** Differentiate Organogenesis and somatic embryogenesis; plan somatic embryogenesis and prepare artificial seeds.
- CO6:** 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.

Vocational course Practical III (Sem 4): Plant Tissue Culture (P)

- CO1:** Prepare the stock solutions of MS medium.
- CO2:** Execute Surface sterilization and inoculation of explants (node, anther, leaf, cambium)
- CO3:** Prepare synthetic seeds
- CO4:** Demonstrate the set up an experiment for paper raft nurse technique,

SEMESTER V

Core Course 5- Anatomy, Reproductive Botany, Micro-technique BO5CRT05

- CO1:** Imparting an insight into the internal structure and reproduction of the most evolved group of plants, the Angiosperm.

- CO2:** Understand the individual cells and also tissues simultaneously.
- CO3:** Understand the structural adaptations in plants growing in different environment.
- CO4:** Understand the morphology and development of reproductive parts.
- CO5:** Get an insight in to the fruit and seed development.
- CO6:** Understand the techniques used to preserve and study plant materials.

Core Practical I (SemV) Anatomy, Reproductive Botany, Micro-technique

- CO1:** Knowledge in identification and staining and microscopic observation of different tissues and non-living inclusions in a cell.
- CO2:** Knowledge in identification and staining and microscopic observation of the primary, secondary, and anomalous structure of stem and root.
- CO3:** Identification of different kinds of stomatal types.
- CO4:** Make a scientific report with illustrated diagrams.

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

- CO1:** Equip the students to conduct independent research and prepare research reports.
- CO2:** Make the students acquaint with different tools and techniques used in research work.
- CO3:** Equip the students with basic computer skills necessary for conducting research.
- CO4:** Enable the students to have enough numerical skills necessary to carry out research.

Core Practical (SemV)- Research Methodology, Biophysics and Biostatistics

- CO1:** Write a research report properly
- CO2:** Preparation of tables/charts/graphs a worksheets using EXCEL.
- CO3:** Prepare a worksheet using a set of data collected and find out the SUM.
- CO4:** Prepare a PowerPoint presentation based on the report in Experiment
- CO5:** Knowledge in using pH meter, colorimeter, and TLC (Thin Layer Chromatography)
- CO6:** Solve the problems related to mean, median, mode, standard deviation and Chi-square test.

Core Course 7- Plant Physiology and Biochemistry (BO5CRT07)

- CO1:** Acquire basic knowledge needed for proper understanding of plant functioning.
- CO2:** Familiarize with the basic skills and techniques related to plant physiology.
- CO3:** Understand the role, structure and importance of the bio molecules associated with

plant life.

Core Practical I (SemV) - PLANT PHYSIOLOGY AND BIOCHEMISTRY

- CO1:** Knowledge in various physiological experiments such as plasmolysis, chromatography and colorimeter.
- CO2:** Analyse critically various physiological phenomena in plants.
- CO3:** Identification of carbohydrate and proteins using qualitative tests.
- CO4:** Estimation of proteins using Lowry's test.

Core Course 8- Environmental sciences and Human Rights. – (BO5CRT08)

- CO1:** Acquaint the student with the significance of Environmental Science.
- CO2:** Make the students aware about the extent of the total biodiversity and the importance of their conservation.
- CO3:** Help the student to design novel mechanisms for the sustainable utilization of natural resources.
- CO4:** Enable the students to understand the structure and function of the ecosystems.
- CO5:** Enable the students to understand various kinds of pollution in the environment, their impacts on the ecosystem and their control measures.
- CO6:** Make the students aware about various environmental laws in India and the role of various movements in the protection of nature and natural resources.

Core Practicals (Sem V) – Environmental Sciences and Human Rights

- CO1:** Estimation of CO₂, Cl, and alkalinity of water samples (Titrimetry)
- CO2:** Determination of pH of soil and water.
- CO3:** Assessment of diversity, abundance, and frequency of plant species by quadrat method (Grasslands, forests).
- CO4:** Compare the ecological adaptations in xerophytes, hydrophytes, epiphytes, halophytes and mangroves

Open Course Agriculture Based Micro Enterprises (BO5OPT01)

- CO1:** Become familiar with the business opportunities in plant sciences field.



- CO2:** Gain knowledge about sustainable agriculture and organic farming.
- CO3:** Appreciate the awareness about various food preservation techniques
- CO4:** Inculcate an interest in mushroom cultivation, gardening and nursery management.

SEMESTER VI

Core Course 9- Genetics, Plant Breeding and Horticulture (BO6CRT09)

- CO1:** Imparting an insight into the principles of heredity.
- CO2:** Understand the patterns of inheritance in different organisms.
- CO3:** Understand the inheritance pattern of nuclear and extra nuclear genes.
- CO4:** Understand the methods of crop improvement.
- CO5:** Understand the importance of horticulture in human welfare.
- CO6:** Develop skill in gardening technique among students.

Core Practical (SemVI)- Genetics, Plant Breeding and Horticulture

- CO1:** Demonstration of Emasculation and bagging.
- CO2:** Knowledge in doing approach grafting, budding (T, patch), air layering.
- CO3:** Identification of different garden tools and garden components.

Core Course 10- Cell and Molecular Biology (BO6CRT10)

- CO1:** Understand the ultra-structure and functioning of cell in the sub-microscopic and molecular level.
- CO2:** Get an idea of origin, concept of continuity and complexity of life activities.
- CO3:** Familiarization of life processes.
- CO4:** Understand the basic and scientific aspect of diversity.
- CO5:** Understand the cytological aspects of growth and development.
- CO6:** Understand DNA as the basis of heredity and variation.

Core Practical (SemVI)- Cell and Molecular Biology

- CO1:** Identification of various stages of mitosis and meiosis

- CO2:** Identification of the chromosomal anomalies, patterns, and karyotype such as Down's syndrome, Turner's syndrome and Klinefelter's syndrome.
- CO3:** Understand the elementary problems based on DNA structure, replication, transcription and translation and genetic code.

Core Course 11 Angiosperm morphology, Taxonomy and Economic Botany (BO6CRT11)

- CO1:** Acquaint with the aims, objectives and significance of taxonomy.
- CO2:** Identify the common species of plants growing in Kerala and their systematic position.
- CO3:** Develop inductive and deductive reasoning ability.
- CO4:** Acquaint with the basic technique in the preparation of herbarium.
- CO5:** Familiarizing with the plants having immense economic importance.

Core Practical (Sem VI)- Angiosperm morphology, Taxonomy and Economic Botany

- CO1:** Identification of inflorescences and fruits of various families
- CO2:** Preparation and identification of floral formula and floral diagram from the floral description.
- CO3:** Distinguish the families with their vegetative and floral characters.
- CO4:** Preparation of herbarium
- CO5:** Submission of a report based on the field they have visited.
- CO6:** Familiarize the economic botany and ethno botany.

Core Course 12 Biotechnology and Informatics

- CO1:** Understand the current developments in the field of Biotechnology and Bioinformatics.
- CO2:** Able to carry out plant tissue culture.
- CO3:** Understand the vast repositories of biological data knowledge.
- CO4:** Able to access and analyze the data available in the databases.

Core Practical (Sem VI)- Biotechnology and Bio-Informatics

- CO1:** Hands-on experience in Sterilization, Inoculation, and Immobilization.

Learning Outcomes

- CO2:** Isolation of DNA from plant tissue and its demonstration on Agarose gel electrophoresis of the isolated DNA
- CO3:** Familiarise the instruments included in the syllabus such as Autoclave, laminar air flow chamber, UV- trans-illuminator, PCR machine, Electrophoresis apparatus, centrifuge etc.



B.Sc. Chemistry Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Sc. Chemistry Model I degree programme, the student will be able to:

- PSO1:** Comprehend the fundamental concepts of Chemistry.
- PSO2:** Develop aptitude in learning emerging and advanced areas of Chemistry.
- PSO3:** Acquire skills in the proper handling of apparatus and chemicals, and develop analytical skills in Chemistry.
- PSO4:** Master skills in critical thinking and scientific reasoning.
- PSO5:** Analyze the impact of Chemistry on society and the environment.

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Chemistry Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyze the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language- Malayalam Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create authentic knowledge about the development of literature.



CO4: Read critically and appreciation of Malayalam Short stories and Novels.

Second Language - Hindi Common Course 1-Prose & One Act Plays (HN1CCT01)

CO1: Develop interest in Hindi Literature.

CO2: Develop the ability to interpret and critically analyze Hindi Literature.

CO3: Analyze different forms of prose.

CO4: Analyze the kinds of One act plays.

Core Course 1- General and Analytical Chemistry (CH1CRT01)

CO1: Describe the methodology and perspectives of Science and the importance of Science in the development of culture.

CO2: Do self-directed experimentation work and research in chemistry under the guidance and supervision of a mentor.

CO3: Explain various atomic properties of elements and learn the arrangement of elements in the periodic table

CO4: Analyse experimental parts of the theory and evaluate the analytical data.

Complementary Course I: Physics I- Properties of Matter & Error Analysis (PH1CMT01)

CO 1: Illustrate different modulus of elasticity and evaluate and compare rigidity modulus of the given material using dynamic and static methods.

CO2: Interpret behavior of the material under different environments.

CO 3: Explain the behavior of a fluid based on the concepts of hydrodynamics

CO 4: Explain surface tension and its applications.

CO 5: Define and calculate relative measurement error and absolute measurement error.

Complementary Course II: Mathematics 1- Partial Differentiation, Matrices, Trigonometry and Numerical methods (MM1CMT01)

CO1: Understand partial differentiation and demonstrate it using examples

CO2: Convert any given matrix to normal form by finding out its rank and using row reduced Echelon matrix form.

CO3: Calculate Eigen values and Eigen vectors from characteristic equations.

CO4: Implement trigonometric relations in real life problems.

CO5: Apply C+iS method to sum different series.



- CO6:** Examine Bisection method and method of false position to find the square root of numbers.
- CO7:** Examine iteration method and Newton Raphson method to find the square root numbers.

SEMESTER II

English Common Course 3- Issues That Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance.
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students' understanding of the classics from various lands.

Second Language- Malayalam Common Course 2- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility.
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society.

Second Language- Hindi Common Course 2-Short Stories and Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.



Core Course 2- Theoretical and Inorganic Chemistry (CH2CRT02)

- CO1:** Describe the various theories of chemical bonding with examples.
- CO2:** Explain various atomic models and the structure of atom.
- CO3:** Compare the properties of s,p,d and f block elements.
- CO4:** Predict the magnetic behaviour of various molecules based on Molecular orbital theory.

Complementary Course I: Mathematics 2- Integral Calculus and Differential equations (MM2CMT02)

- CO1:** Explain and evaluate different ways to find the volume of a solid and lengths of arcs using single integrals.
- CO2:** Test volumes of higher dimensional surfaces using double and triple integrals.
- CO3:** Interpret ordinary differential equations and determine various methods to solve it.
- CO4:** Contrast partial differential equations and examine Lagrange's method to solve it.

Core Practical : Volumetric Analysis (CHCRP01)

- CO1:** Analyse quantitatively various compounds using Acidimetry and Alkalimetry.
- CO2:** Analyse quantitatively various compounds using Complexometry.
- CO3:** Analyse quantitatively various compounds using Permanganometry dichrometry.
- CO4:** Analyse quantitatively various compounds using Iodimetry and iodometry.

SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.



Second Language- Malayalam Common Course 3 - Second Language – Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it.
- CO2:** Gain knowledge of the field of theatre and analysing different trends and its social relevance.
- CO3:** Get acquainted with the ancient visual arts of Kerala.
- CO4:** Create depth knowledge of film and theatre.
- CO5:** Realizing literary values of visual arts of Kerala.

Second Language- Hindi Common Course 3 - Poetry Grammar & Translation (HN3CCT03)

- CO1:** Develop grammatical proficiency in Hindi Language.
- CO2:** Convince the students to use correct punctuation and grammar structure in Translation process.
- CO3:** Enable the student to critically analyze the ancient, medieval and modern Hindi Poetry.
- CO4:** Acquaint the students with the rich texture in Poetry.

Core Course 3- Organic Chemistry-I (CH3CRT03)

- CO1:** Predict the structure and stability of various reaction intermediates in organic reactions and compare various electronic displacements.
- CO2:** Differentiate the optical and geometric isomers of various organic compounds.
- CO3:** Predict the aromaticity of an organic compound.
- CO4:** Discuss the preparation, reactions, and properties of alkanes, halo alkanes, aromatic hydrocarbons and aryl halides.

Complementary Course I: Physics III- Modern Physics and Electronics (PH03CM03)

- CO1:** Evaluate different atom models and explain the nuclear structure, composition, properties, and define nuclear physics and its various perspectives.
- CO2:** Explain the historic development and origin of quantum mechanics, Define the general formalism in quantum mechanics.
- CO3:** Define the atomic and molecular spectroscopy, Explain NMR spectroscopy.
- CO4:** Evaluate the theory behind various electronic components like diode, zener diode, rectifiers, transistors.



CO5: Illustrate various gates and their combinations using Boolean algebra and various number systems.

Complementary Course II: Mathematics 3- Vector Calculus, Analytic Geometry and Abstract Algebra (MM3CMT03)

CO1: Building an idea of curves in space and associated concepts surface area and surface integral.

CO2: Find the directional derivatives and to find gradient vectors.

CO3: Interpret the importance of the line integral and identify where it can be applied and how it is evaluated.

CO4: Interpret the concept of work, potential function, circulation, flux etc mathematically with the help of Green's theorem, Stoke's theorem and also be able to calculate

CO5: Distinguish between Cartesian coordinate and polar coordinate system.

CO6: Find the conic and its polar equation based on its different parameters.

CO7: Determine whether a given set is a group under a given operation and figure out its basic properties.

CO8: Identify whether a given function is a homomorphism.

SEMESTER IV

English Common Course- 6 Illuminations (EN4CC06)

CO1: Analyse different forms of inspiring and motivating literature.

CO2: Create a positive attitude to life.

CO3: Evaluate and overcome setbacks based on these texts' insights.

CO4: Analyse and evaluate the translations, their contemporary necessities and their accuracy.

CO5: Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Malayalam Common Course 4 – Malayala Gadhyarachanakal (ML4CCT04)

CO1: Appreciate portions of prose



- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Get training in creative writing such as News for dailies' and Essays
- CO4:** Construct knowledge about features of languages in E-media

Second Language- Hindi Common Course 4- Drama & Long Poem (HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** Demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.

Core Course 4- Organic Chemistry-II (CH4CRT04)

- CO1:** Describe the preparation, reactions, and properties of alcohols, phenols, ethers and epoxides
- CO2:** Describe the preparation, reactions, and properties of carbonyl compounds, carboxylic acids, aromatic sulfonic acids and their derivatives.
- CO3:** Explain the reaction mechanisms of various name reactions.
- CO4:** Relate various name reactions in organic chemistry.

Complementary Course I: Physics IV- Optics & Electricity (PH04CM04)

- CO1:** Illustrate the principles of interference, diffraction and polarization.
- CO2:** Define lasers and its applications.
- CO3:** Develop fibre optic communication.
- CO4:** Explain dielectric materials and its properties.
- CO5:** Define varying currents.
- CO6:** Develop RC, LC, LR & LCR circuits.

Complementary Course II: Mathematics 4: Fourier series, Laplace transform and Complex analysis (MM4CMT04)

- CO1:** Interpret the application of Fourier series in real life applications.



- CO2:** Understand Laplace transforms and demonstrate their applications in solving differential equations.
- CO3:** Retrieve complex numbers, complex plane, exponential, trigonometric and hyperbolic functions.
- CO4:** Estimate Cauchy's Integral theorem and derivatives of analytic functions.

Core Practical II: Qualitative Organic Analysis (CH4CRP02)

- CO1:** Analyse systematically different functional groups.
- CO2:** Determine Melting point of various compounds.
- CO3:** Determine Boiling point of various compounds.
- CO4:** Prepare derivatives of various of organic compounds.

SEMESTER V

Core Course 5: Environmental studies and Human Rights (CH5CRT05)

- CO1:** Describe the status of current environmental issues.
- CO2:** Explain the basic rights of an individual living in a society.
- CO3:** Outline the preventive measures for pollutants.
- CO4:** Justify the ambient soil conditions for the growth of crops.
- CO5:** Conserve energy and explore new renewable energy sources.
- CO6:** Control pollution in air, water and soil.

Core Course 6: Organic Chemistry-III (CH5CRT06)

- CO1:** Discuss the preparation and reactions of nitrogen compounds.
- CO2:** Describe the preparation and properties of heterocyclic compound.
- CO3:** Describe the classification and chemical properties of polymers and carbohydrates.
- CO4:** Explain synthesis, classification and applications of dyes.

Core Course 7: Physical Chemistry-I (CH5CRT07)

- CO1:** Outline the structure, properties and defects in different types of solids.



- CO2:** Explain the theory of real gases.
- CO3:** Outline different adsorption isotherms and electrical properties of molecules.
- CO4:** Illustrate the theories, models and properties of liquid state.

Core Course 8: Physical Chemistry-II (CH5CRT08)

- CO1:** Examine the chemical aspects of quantum mechanics.
- CO2:** Solve Schrodinger equation.
- CO3:** Explain the interaction of various components of EM radiation with matter.
- CO4:** Calculate the rotational and vibrational energy levels and internuclear distance.
- CO5:** Explain the interaction of UV/Vis radiation with molecules.
- CO5:** Predict the NMR/ESR spectra of simple molecules/and radicals.

OPEN COURSE- Chemistry in everyday life (CH5OPT01)

- CO1:** Explain the effects of food additives.
- CO2:** Understand the effects of cosmetics on the body.
- CO3:** Understand principle of water purification.
- CO4:** Learn the fundamentals of nanomaterials.

SEMESTER VI

Core Course 9: Inorganic Chemistry (CH6CRT09)

- CO1:** Distinguish the crystal field splitting pattern in coordination compounds.
- CO2:** Describe the structure and bonding in selected organometallic compounds.
- CO3:** Assign structure to metal carbonyls based on the electron counting scheme.
- CO4:** Explain various applications of bio-inorganic compound .

Core practical III: Qualitative Inorganic Analysis (CH6CRP03)

- CO1:** Analyse systematically the cations present in a mixture.
- CO2:** Analyse systematically the anions present in mixture.



- CO3:** Explain the principle involved in inorganic analysis.
- CO4:** Compare the solubility product values of various ions.

Core Course 10: Organic Chemistry-IV (CH6CRT10)

- CO1:** Describe structure and functions of different natural products like carbohydrates and amino acids.
- CO2:** Describe structure and functions of different natural products like proteins, vitamins, lipids, steroids and nucleic acids.
- CO3:** Compare the biological functions of different natural products.
- CO4:** Explain the basic concepts of supramolecular chemistry.

Core practical IV: Organic Preparation and Laboratory Techniques (CH6CRP04)

- CO1:** Separate two compounds by TLC.
- CO2:** Separate two compounds by distillation and solvent extraction.
- CO3:** Purify compounds by crystallisation.
- CO4:** Prepare different derivatives of different organic compounds.

Core Course 11: Physical Chemistry-III (CH6CRT11)

- CO1:** Analyse the laws of thermodynamics.
- CO2:** Demonstrate the application of chemical equilibrium.
- CO3:** Explain various concepts in phase equilibria.
- CO4:** Discuss the kinetics of reaction.

Core practical V: Physical Chemistry Practical (CH6CRP05)

- CO1:** Determine transition temperature of salt hydrates.
- CO2:** Find out the CST of phenol water system.
- CO3:** Determine equivalence point by conductometric and potentiometric titrations.
- CO4:** Determine MW of compounds by Rast's method.
- CO5:** Determine viscometrically the percentage composition of mixture.



Core Course 12: Physical Chemistry-IV (CH6CRT12)

- CO1:** Define binary liquid mixture, azeotrope, CST and Colligative properties.
- CO2:** Explain the applications of conductance measurements.
- CO3:** Find out the symmetry elements and point group of small molecules.
- CO4:** Summarize the basics of photochemistry.

Core practical VI: Gravimetric Analysis (CH6CRP06)

- CO1:** Estimate compounds gravimetrically.
- CO2:** Explain the principle of gravimetric analysis.
- CO3:** Analyse and explain the procedure in preparing, collecting, treating, and weighing a precipitate.
- CO4:** Explain procedures for the gravimetric estimation of various compounds.

Choice Based Course- Soil and Agricultural Chemistry (CH6CBT03)

- CO1:** Justify the ambient soil conditions for the growth of crops.
- CO2:** illustrate various plant nutrients and fertilizers.
- CO3:** Differentiate between pesticides, fungicides and herbicides.
- CO4:** Explain the different type of soils present in Kerala.



B.Sc. Mathematics Model I

Programme Specific Outcomes (PSO)

At the completion of the course under three-year B.Sc. Mathematics Model I degree programme, the student will be able to:

- PSO1:** Apply skills and knowledge that translates information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
- PSO2:** Formulate and develop mathematical arguments in a logical manner.
- PSO3:** Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
- PSO4:** Develop a mathematical and statistical modeling ability, problem solving skills, creative talent and power of communication necessary for employability.

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Mathematics Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course 2- Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language- Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create authentic knowledge about the development of literature.
- CO4:** Critical reading and appreciation of Malayalam Short stories and Novels

Second Language-Common Course 1-Prose & One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi Literature.
- CO3:** Analyse different forms of prose.
- CO4:** Analyze the kinds of One act plays.

Core Course 1- Foundation of Mathematics (MM1CRT01)

- CO1:** Prove statements about sets and functions
- CO2:** Analyze statements using truth tables
- CO3:** Construct simple mathematical proofs.
- CO4:** Recognize mathematical symbols and appreciate various proof techniques.

Complementary Course I: Physics I- Properties of Matter & Error Analysis (PH1CMT01)

- CO1:** Illustrate different modulus of elasticity and evaluate and compare rigidity modulus of the given material using dynamic and static methods.

- CO2:** Interpret behavior of the material under different environments
- CO3:** Explain the behavior of a fluid based on the concepts of hydrodynamics.
- CO4:** Explain surface tension and its applications
- CO5:** Define and calculate relative measurement error and absolute measurement error.

Complementary Course II: Statistics I- Descriptive Statistics (ST1CMT01)

- CO1:** Calculate data for drawing valid inferences.
- CO2:** Predict measures of central tendency and dispersion along with their applications in various fields.
- CO3:** Tag skewness and kurtosis reflecting the nature of data and how they can be represented.
- CO4:** Interpret index numbers and explain how they can be used as measures of the representations reflecting the economy.

SEMESTER II

English Common Course 3- Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4- Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students' understanding of the classics from various lands.



Second Language- Common Course 2- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society

Second Language- Common Course 2- Short stories and Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop the vocabulary and reading skills of the student.

Core Course 2- Analytic Geometry, Trigonometry and Differential Calculus (MM2CRT01)

- CO1:** Validate the equation to tangent, normal at a point on a conic.
- CO2:** Score the polar equation of a line, circle, tangent and normal.
- CO3:** Quote real and imaginary parts of a circular and hyperbolic functions of a complex variable.
- CO4:** Measure the system of linear equations using the inverse of a matrix.
- CO5:** Duplicate characteristic roots and characteristic vectors.
- CO6:** Score problems by successive differentiation.

Complementary Course I: Physics II- Mechanics and Astrophysics (PH2CMT02)

- CO1:** Familiarize the motion under gravity

- CO2:** Analyze the factors related with wave motion and oscillations
- CO3:** Describe wave propagation and doppler effect
- CO4:** Familiarize rotational mechanics and moment of inertia of various bodies.
- CO5:** Explain the formation of a star, Familiarize the different terms used in Astrophysics, Describe HR diagram

Complementary Course II: Statistics II- Probability Theory (ST2CMT02)

- CO1:** Compare various definitions of probability and its applications in different fields.
- CO2:** Tag probability distributions of univariate random variables.
- CO3:** Interpret probability distribution of bivariate random variables.
- CO4:** Predict correlation and regression.

Practical I: Physics

- CO1:** Handle different instruments with proper knowledge of its working and conditions of the experiments and then perform the procedure as the laboratory standards and analyze the applications
- CO2:** Study the dynamics of different types of pendula and bending behaviour of beams and then evaluate the expressions for the acceleration due to gravity and young's modulus respectively
- CO3:** Verify the working of a diode and rectifier circuits and analyze its characteristics
- CO4:** Analyse the refractive index, as per the standard procedure and determine the wavelength of Laser using grating
- CO5:** Calibrate low range and high range voltmeter using Potentiometer

SEMESTER III

English Common Course 5- Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.

- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language- Common Course 3- Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it.
- CO2:** Gain knowledge of the field of theatre and analysing different trends and its social relevance.
- CO3:** Get acquainted with the ancient visual arts of Kerala.
- CO4:** Create depth knowledge of film and theater.
- CO5:** Realize literary values of visual arts of Kerala.

Second Language- Common Course 3- Poetry, Grammar and Translation (HN3CCT03)

- CO1:** Develop grammatical proficiency in Hindi Language.
- CO2:** Convince the students to use correct punctuation and grammar structure in the translation process.
- CO3:** Enable the student to critically analyse ancient, medieval and modern Hindi Poetry.
- CO4:** Acquaint the students with the rich texture in Poetry.



Core Course 3 - Calculus (MM3CRT01)

- CO1:** Summarize Maclaurin's theorem and Taylor's theorem.
- CO2:** Estimate properties of curves such as length, radius of curvature, evolutes, involutes and so on.
- CO3:** Devise partial derivatives of functions of several variables
- CO4:** Define the Extreme points and saddle points of a function
- CO5:** Argue different ways to find the volume of a solid generated by revolving a region about a given axis by using single integrals.
- CO6:** Measure the arc length by using single integrals.
- CO7:** Test volumes of higher dimensional surfaces using double and triple integrals.
- CO8:** Implement areas of surfaces of revolution.

Complementary Course I: Physics III- Modern Physics and Electronics (PH03CM03)

- CO1:** Evaluate different atom models and explain the nuclear structure, composition, properties, and define nuclear physics and its various perspectives
- CO2:** Explain the historic development and origin of quantum mechanics, Define the general formalism in quantum mechanics
- CO3:** Define the atomic and molecular spectroscopy, Explain NMR spectroscopy
- CO4:** Evaluate the theory behind various electronic components like diode, zenor diode, rectifiers, transistors.
- CO5:** Illustrate various gates and their combinations using boolean algebra and various number systems

Complementary Course II: Statistics III- Probability Distributions (ST3CMT03)

- CO1:** Define various discrete and continuous probability density functions.
- CO2:** Organise statistical problems using statistical tables.

- CO3:** Interpret the law of large numbers and central limit theorem with their applications in various fields.
- CO4:** Test sampling distributions including normal, Chi-square, t and F distributions.

SEMESTER IV

English Common Course 6- Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts' insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Common Course 4- Malayala Gadhyarachanakal (ML4CCT04)

- CO1:** Appreciate portions of prose.
- CO2:** Construct knowledge about autobiography in Malayalam literature.
- CO3:** Get training in creative writing such as News for dailies' and Essays.
- CO4:** Construct knowledge about features of languages in E-media.

Second Language- Common Course 4- Drama and Long Poem (HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** Demonstrate understanding of Drama and Theatre and will become aware of the contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.



Core Course 4- Vector Calculus, Theory of Numbers and Laplace Transform (MM4CRT01)

- CO1:** Represent vectors analytically and geometrically, and compute dot and cross products for presentations of lines and planes.
- CO2:** Apply derivative concepts to find tangent lines to level curves and to solve optimization problems.
- CO3:** Develop understanding of the number system and related concepts.
- CO4:** Define Laplace transforms.
- CO5:** Solve differential equations using Laplace transforms.

Complementary Course I: Physics IV- Optics & Electricity (PH04CM04)

- CO1:** Illustrate the principles of interference, diffraction and polarization.
- CO2:** Define lasers and its applications.
- CO3:** Develop fibre optic communication.
- CO4:** Explain dielectric materials and its properties.
- CO5:** Define varying currents.
- CO6:** Develop RC, LC, LR & LCR circuits.

Complementary Course II- Statistics IV-Statistical Inference (ST4CMT04)

- CO1:** Predict point estimation and their properties.
- CO2:** Interpret various methods of estimation and their peculiarities.
- CO3:** Score statistical problems related to large sample tests procedures using method of estimation and testing of hypothesis.
- CO4:** Execute valid inferences from the sampling methods.

Practical II- Physics

- CO1:** Analyze the malfunctioning of various components with the help of a multimeter and to calibrate the equipment.

- CO2:** Acquire an experimental skill and knowledge base in various photonics related devices and components like Spectrometer, LED, LASER etc.
- CO3:** Acquire essential laboratory skills in assembling standard electrical circuits for experimentation, and carrying out measurements with customary optical and electrical instruments and analyzing acquired data.
- CO4:** Develop understanding of application of above-mentioned devices and components.

SEMESTER V

Core Course 5- Mathematical Analysis (MM5CRT01)

- CO1:** Build the real line as a complete, ordered field
- CO2:** Judge the definitions of convergence as they apply to sequences, and functions,
- CO3:** Predict the structure and properties of the real number system.
- CO4:** Link the basic topological properties of the real numbers.
- CO5:** Tag the sequence of real numbers and convergence.
- CO6:** Compare rigorous mathematical proofs of basic results in real analysis.

Core Course 6- Differential Equations (MM5CRT02)

- CO1:** Annotate what is a differential equation.
- CO2:** Structure second order linear equations and assess its solutions by various methods.
- CO3:** Estimate power series solutions and some special functions.
- CO4:** Memorize partial differential equations and articulate various methods to solve them.

Core Course 7- Abstract Algebra (MM5CRT03)

- CO1:** Define groups and its properties
- CO2:** Comment about permutations

CO3: Illustrate homomorphisms and factor groups and rings

CO4: Interpret rings and fields

Core Course 8- Human Rights and Mathematics for Environmental Studies (MM5CRT04)

CO1: Classify different Natural Resources

CO2: Summarize causes, effects and control measures of Environmental Pollution

CO3: Plan sustainable lifestyles.

CO4: Describe Fibonacci Numbers and Lucas Numbers and Explain Fibonacci Numbers in Nature

CO5: Cite Golden Ratio in Nature and other areas and explain different construction methods.

CO6: Explain Fundamental Rights and summarize different human rights related organizations

Open course- Applicable Mathematics (MM5OPT02)

CO1: Execute shortcut methods for solving mathematical problems.

CO2: Implement various mathematical concepts to solve real life problems.

CO3: Actualize and explain mathematical relationships using graphical representations.

CO4: Improve competitive examination skills.

SEMESTER VI

Core Course 9- Real Analysis (MM6CRT01)

CO1: Link continuity and discontinuity of various functions in different contexts

CO2: Compare uniform continuity from continuity and related theorems

CO3: Group partitions and their refinement



- CO4:** Compare integrability and theorems on integrability.
- CO5:** Score the Riemann integrability of a bounded function and establish properties of integrable functions.
- CO6:** Predict the difference between pointwise and uniform convergence of sequences and series of functions.
- CO7:** Examine higher level of mathematical maturity combined with the ability to think analytically

Core Course 10- Graph Theory and Metric Spaces (MM6CRT02)

- CO1:** Interpret precise and accurate mathematical definitions of objects in Graph theory.
- CO2:** Validate the ideas of Eulerian and Hamiltonian graphs.
- CO3:** Interpret real life problems using graph theoretical tools.
- CO4:** Predict the basic concepts such as open set, closed set, limit points etc.
- CO5:** Interpret convergence of a sequence, completeness of a metric space.

Core Course 11- Complex Analysis (MM6CRT03)

- CO1:** Quote complex numbers and its properties.
- CO2:** Tag various analytic functions and theorems on limits.
- CO3:** Measure derivatives of functions and Liouville's theorem.
- CO4:** Validate convergence of sequences and series

Core Course 12- Linear Algebra (MM6CRT04)

- CO1:** Summarize the idea about vector space and metric space.
- CO2:** Categorize finite and infinite dimensional vector spaces and subspaces over a field and their properties, including the basis structure of vector spaces.



- CO3:** Examine the definition and properties of linear transformations and matrices of linear transformations and change of basis, including kernel, range and isomorphism.
- CO4:** Calculate 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.
- CO5:** Identify the defining properties of a metric space, and determine whether a given function defines a metric

Choice Based Core Course- Operations Research (MM6CBT01)

- CO1:** Contrast the new term LPP.
- CO2:** Build a linear programming problem from a word problem and solve them graphically in 2 and 3 dimensions, while employing some convex analysis.
- CO3:** Express duality theorems and dual simplex method Uses dual simplex method.
- CO4:** Illustrate the concept of complementary slackness and its role in solving primal/dual problem pairs.
- CO5:** Exemplify Transportation Problem and Assignment problem
- CO6:** Moderate problems using different methods.
- CO7:** Structure the queuing models, their various forms and methods of solutions.
- CO8:** Interpret the theory of games with and without saddle points.



B.Sc. Physics Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Sc. Physics Model I degree programme, the student will be able to:

- PSO1:** Understand the various fields of physics, apply and verify the theoretical concepts and facts by critical thinking.
- PSO2:** Develop practical, analytical, logical and mathematical skills by performing experiments related to the fundamental theories/ principles and interpreting results.
- PSO3:** Enhance the student's academic abilities, personal qualities and transferable skills to develop as responsible citizens and engage in research and nation building.
- PSO4:** Gain mathematical skills and fundamental knowledge in chemistry to enhance the understanding in Physics and encourage independent learning.

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Physics Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyze the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.



- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language- Malayalam Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.
- CO3:** Create authentic knowledge about the development of literature.
- CO4:** Read critically and appreciation of Malayalam Short stories and Novels

Second Language - Hindi Common Course 1-Prose & One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi Literature.
- CO3:** Analyze different forms of prose.
- CO4:** Analyze the kinds of One act plays.

Core Course 1- Methodology & perspectives of Physics (PH1CRT01)

- CO1:** Acquire an overview on the inspiring history in the development of physics.
- CO2:** Solve problems related to different number systems, vector and coordinate systems.
- CO3:** Distinguish different types of errors and calculate errors in different measurements.
- CO4:** Attain knowledge on the importance of care to be taken while doing experiment and distinguish different types of errors that can be involved in the experiment.
- CO5:** Analysis of data using simple statistical techniques.

Complementary Course 1: Mathematics 1- Partial Differentiation, Matrices, Trigonometry and Numerical methods (MM1CMT01)

- CO1:** Understand partial differentiation and demonstrate it using examples
- CO2:** Convert any given matrix to normal form by finding out its rank and using row reduced Echelon matrix form.
- CO3:** Calculate Eigen values and Eigen vectors from characteristic equations.
- CO4:** Implement trigonometric relations in real life problems.



- CO5:** Apply C+iS method to sum different series.
- CO6:** Examine Bisection method and method of false position to find the square root of numbers.
- CO7:** Examine iteration method and Newton Raphson method to find the square root of numbers.

Complementary Course II: Chemistry I- Basic Theoretical and Analytical Chemistry (CH1CMT01)

- CO1:** Describe atomic structure and bonding
- CO2:** Explain Fundamental concepts in Chemistry
- CO3:** Explain principles of analytical methods
- CO4:** Compare the different Chromatographic techniques used in analytical chemistry.

SEMESTER II

English Common Course 3- Issues That Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students' understanding of the classics from various lands.

Second Language- Malayalam Common Course 2- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry

CO3: Construct awareness in Poetry

CO4: Evaluate contemporary Malayalam writers and their themes and vision of the society.

Second Language- Hindi Common Course 2-Short Stories and Novel (HN2CCT02)

CO1: Develop a basic knowledge of the formal elements of Fiction.

CO2: Develop a sense of literary aesthetics.

CO3: Differentiate the contents and style of expression in short stories.

CO4: Develop vocabulary and reading skills of the student

Core Course 2- Mechanics and Properties of Matter (PH2CRT02)

CO1: Analyze the factors related with wave motion, oscillations, simple harmonic motion and deduce energy associated with each.

CO2: Analyze the theory of various oscillations and resonance.

CO3: Familiarize rotational mechanics and moment of inertia of various bodies.

CO4: Derive expressions for moment of inertia of regular bodies using parallel/perpendicular axes theorem.

CO5: Generate basic ideas about hydrodynamics, viscosity and surface tension.

Complementary Course I: Mathematics 2- Integral Calculus and Differential equations (MM2CMT02)

CO1: Explain and evaluate different ways to find the volume of a solid and lengths of arcs using single integrals.

CO2: Test volumes of higher dimensional surfaces using double and triple integrals.

CO3: Interpret ordinary differential equations and determine various methods to solve it.

CO4: Contrast partial differential equations and examine Lagrange's method to solve it.

Complementary Course II: Chemistry 2- Basic Organic Chemistry (CH2CMT02)

CO1: Predict the structure and stability of various reaction intermediates.

CO2: Explain various electronic displacements and type of organic reactions

CO3: Draw the optical and geometric isomers of various organic compounds

CO4: Explain the synthesis and properties of natural and synthetic polymers



Core Practical 01 - Mechanics and Properties of Matter (PH2CRP01)

- CO1:** Compare the dynamics of different types of pendulum.
- CO2:** Study of bending behavior of beams and analyze the expression for young modulus.
- CO3:** Gain practical knowledge by applying the experimental methods to correlate with the Physics theory
- CO4:** Apply the analytical techniques and graphical analysis to the experimental data
- CO5:** Apply the mathematical concepts/equations to obtain quantitative results
- CO6:** Perform the procedure as per standard values and analyze the applications.

SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society

Second Language- Malayalam Common Course 3 - Second Language – Drushyakala Sahithyam (ML3CCT03)

- CO1:** Generate interest in appreciating art by seeing it
- CO2:** Gain knowledge of the field of theatre and analysing different trends and its social relevance
- CO3:** Get acquainted with the ancient visual arts of Kerala
- CO4:** Create depth knowledge of film and theatre.
- CO5:** Realizing literary values of visual arts of Kerala.



**Second Language- Hindi Common Course 3 - Poetry Grammar & Translation
(HN3CCT03)**

- CO1:** Develop grammatical proficiency in Hindi Language
- CO2:** Convince the students to use correct punctuation and grammar structure in Translation process.
- CO3:** Enable the student to critically analyze the ancient, medieval and modern Hindi Poetry.
- CO4:** Acquaint the students with the rich texture in Poetry.

Core Course 3- Optics, Laser and Fiber Optics (PH3CRT03)

- CO1:** Determine various aspects of fiber optic communication.
- CO2:** Explain the theory and manifold applications of lasers
- CO3:** Basics of interferometry and diffraction is discussed to enable students to analyze and quantify various optical phenomenon.
- CO4:** Develop the idea of polarization and derive different laws in polarization and Birefringence

Complementary Course I: Mathematics 3- Vector Calculus, Analytic Geometry and Abstract Algebra (MM3CMT03)

- CO1:** Building an idea of curves in space and associated concepts
- CO2:** Find the directional derivatives and to find gradient vectors.
- CO3:** Interpret the importance of the line integral and identify where it can be applied and how it is evaluated.
- CO4:** Interpret the concept of work, potential function, circulation, flux etc mathematically with the help of Green's theorem, Stoke's theorem and also be able to calculate surface area and surface integral.
- CO5:** Distinguish between Cartesian coordinate and polar coordinate system.
- CO6:** Find the conic and its polar equation based on its different parameters.
- CO7:** Determine whether a given set is a group under a given operation and figure out its basic properties.



CO8: Identify whether a given function is a homomorphism.

Complementary Course II: Chemistry 3 - Physical Chemistry- I (CH3CMT03)

CO1: Enable students to understand the basic concepts and properties of solids

CO2: Enable students to understand the basic facts about the chemistry of liquids

CO3: Enable students to understand the basic facts about the chemistry of gaseous state

CO4: Enable students to understand the basic facts about surface chemistry, colloids and phase equilibrium

SEMESTER IV

English Common Course- 6 Illuminations (EN4CC06)

CO1: Analyse different forms of inspiring and motivating literature.

CO2: Create a positive attitude to life.

CO3: Evaluate and overcome setbacks based on these texts' insights.

CO4: Analyse and evaluate the translations, their contemporary necessities and their accuracy.

CO5: Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Malayalam Common Course 4 – Malayala Gadhyarachanakal (ML4CCT04)

CO1: Appreciate portions of prose

CO2: Construct knowledge about autobiography in Malayalam Literature

CO3: Get training in creative writing such as News for dailies' and Essays

CO4: Construct knowledge about features of languages in E-media

Second Language- Hindi Common Course 4- Drama & Long Poem (HN4CCT04)

CO1: Develop interest in Drama.

CO2: Demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.

CO3: Enable the student to appreciate Epic Poetry with a critical eye.

CO4: Build a creative outlook towards life.



Core Course 4- Semiconductor Physics (PH4CRT04)

- CO1:** Develop the fundamentals of semiconductor physics
- CO2:** Define various applications of diodes
- CO3:** Develop knowledge about transistor in depth
- CO4:** Evaluate operational amplifier, different oscillators and multivibrator
- CO5:** Do experiments and design circuits in a comfortable manner

Complementary Course I: Mathematics 4: Fourier series, Laplace transform and Complex analysis (MM4CMT04)

- CO1:** Interpret the application of Fourier series in real life applications.
- CO2:** Understand Laplace transforms and demonstrate their applications in solving differential equations.
- CO3:** Retrieve complex numbers, complex plane, exponential, trigonometric and hyperbolic functions.
- CO4:** Estimate Cauchy's Integral theorem and derivatives of analytic functions.

Complementary Course II: Physical Chemistry- II (CH4CMT05)

- CO1:** Understand the basic concepts in spectroscopy and to apply them to solve problems
- CO2:** Understand the basic facts about the nano chemistry, synthesis of nano materials and their optoelectronic properties and applications
- CO3:** Understand the basic facts about the photochemistry, kinetics and catalysis and apply them to develop critical thinking.
- CO4:** Understand the basic facts about electrochemistry and to apply the principles to solve numerical problems

Core Practical 02: Optics and semiconductor Physics (PH4CRP02)

- CO1:** Develop practical knowledge by applying the experimental methods to correlate with the Physics theory
- CO2:** Discover the analytical techniques and graphical analysis to the experimental data
- CO3:** Apply the mathematical concepts/equations to obtain quantitative results
- CO4:** Perform the procedure as per standard value.



Complementary Chemistry Practical 2 (CH4CMP02)

- CO1:** Apply the theories to experiments and validate their understanding in solution chemistry
- CO2:** Apply the theories to experiments and validate their understanding about electrochemistry.
- CO3:** Apply the theories to experiments and validate their understanding in kinetics
- CO4:** Apply the theories to experiments and validate their understanding in molecular mass determination of solute

SEMESTER V

Core Course 5 - Electricity and Electrodynamics (PH5CRT05)

- CO1:** Lay a sound theoretical foundation in electricity and electrodynamics.
- CO2:** Realize how the development of modern technological world rely on the field-electricity and electrodynamics.
- CO3:** Comprehend various phenomena and applications around them related to electric and magnetic field.
- CO4:** Understand the power of Maxwell's Equations and their various solutions to ponder into various topics that include Energy and Momentum of Electromagnetic Fields, Radiation Sources and Antennas, Electrodynamics in Macroscopic Media, Wave Guides and Cavities.
- CO5:** Acquire practical knowledge to handle electronic gadgets and explain its working principle.

Core Course 6 - Classical and Quantum mechanics (PH5CRT06)

- CO1:** Compare the merits of Lagrangian and the Hamiltonian methods over Newtonian mechanics
- CO2:** Apply the fundamental concepts of the Lagrangian and the Hamiltonian methods.
- CO3:** Create Lagrangian and Hamiltonian for different Physical systems and solve different physical systems using Lagrangian and Hamiltonian methods
- CO4:** Aware about the historic development and origin of quantum mechanics
- CO5:** Learn more about general formalism in quantum mechanics,
- CO6:** Apply Schrodinger equation in various contexts



Core Course 7 - Digital Electronics and programming (PH5CRT07)

- CO1:** Define the basic logic operations of NOT, AND, OR, NAND, NOR, and XOR gates and develop logic expression, circuit and truth table for a logic problem.
- CO2:** Illustrate Simple circuits and Boolean expressions using the Boolean laws and Karnaugh maps.
- CO3:** Define various flip flops, registers, counters and basic combinational and sequential logic circuits.
- CO4:** Develop an introductory idea of C++ programming.
- CO5:** Write programmes using C++ programming.

Core Course 8 - Environmental Physics and Human Rights (PH5CRT08)

- CO1:** Analyze the usage of water and harvesting methods.
- CO2:** Discover the remote sensing tools and applications and Develop awareness among students about complex environmental issues.
- CO3:** Assess various pollution management systems.
- CO4:** Assess various renewable and non-renewable energy resources and Explain the working principle of various solar energy harvesting technologies.
- CO5:** Develops overall idea of Human rights, positive attitudes and values among students

SEMESTER VI

Core Course 9 - Thermal and statistical physics (PH6CRT09)

- CO1:** Identify the behavior of real gasses and explain intermolecular forces.
- CO2:** Develop and describe different laws of thermodynamics.
- CO3:** Explain the working principles of heat engines.
- CO4:** Deduce different thermodynamic relations.
- CO5:** Explain different concepts of Statistical Mechanics and Statistical Distributions

Core Course 10 - Relativity and Spectroscopy (PH6CRT10)

- CO1:** Interpret different aspects regarding special theory of relativity and its consequences.



- CO2:** Speculate different concepts of atomic spectroscopy.
- CO3:** Analyze the concept of molecular spectroscopy and its applications.
- CO4:** Explain NMR and ESR spectroscopy.
- CO5:** Enhance the knowledge about applications of spectroscopic techniques in contemporary research.

Core Course 11 - Nuclear, Particle Physics and Astrophysics (PH6CRT11)

- CO1:** Explain the nuclear structure, composition, properties and different models related to it.
- CO2:** Explain the working principles of nuclear radiation detectors, counters and particle accelerators.
- CO3:** Familiarize nuclear reactions.
- CO4:** Explain fundamentals of cosmic rays and particle physics.
- CO5:** Explain stellar evolution and basics of astronomy.

Core Course 12 - Solid State Physics (PH6CRT12)

- CO1:** Illustrate basic ideas of crystal structure and symmetry.
- CO2:** Get an introductory idea about superconductivity.
- CO3:** Understand the bonding in solids and the effect of these bonding on crystal structure.
- CO4:** Able to explain the semiconducting, dielectric and magnetic properties of materials.
- CO5:** Explain free electron theory and elementary band theory.

Choice Based Course 1- Astronomy and Astrophysics (PH6CBT05)

- CO1:** Describe the solar system.
- CO2:** Explain the celestial sphere, compare different coordinate system, constellations.
- CO3:** Familiarize various telescopes used in astronomy.
- CO4:** Explain the impact of Earth's orbital motion on seasonal changes and time calculation.
- CO5:** Classify various celestial objects based on the radiations they emit.

Core Practical 03 - Electricity, Magnetism and LASER (PH6CRP03)

- CO1:** Acquire essential laboratory skills in assembling basic electronic circuits.



- CO2:** Apply and verify the theoretical concepts and facts in optics, electricity and electronics by laboratory experiments.
- CO3:** Attain the basic concepts of physics thoroughly.
- CO4:** Learn to formulate physical phenomenon mathematically.
- CO5:** Make inferences from observations.

Core Practical 04 - Digital Electronics (PH6CRP04)

- CO1:** Analyse various electronic circuits.
- CO2:** Provide a platform to test out the theoretical knowledge gained in class rooms.
- CO3:** Learn to tabulate the data systematically.
- CO4:** Develop personal learning and thinking capacity.
- CO5:** Attain the basic concepts of physics thoroughly.

Core Practical 05 - Thermal Physics, Spectroscopy and C++ Programming (PH6CRP05)

- CO1:** Learn to formulate physical phenomena mathematically.
- CO2:** Ability to handle various instruments in the laboratory.
- CO3:** Develop observational, analytical and evaluating skills.
- CO4:** Grow the aptitude towards research.
- CO5:** Learn to tabulate the data systematically.

Core Practical 06 - Acoustics, Photonics and Advanced Semiconductor Physics (PH6CRP06)

- CO1:** Acquire an experimental skill and knowledge base in various photonics related devices and components like Spectrometer, Solar cell, Photodiode, LED, LDR etc.
- CO2:** Earn competency to use mathematical methods to solve physics problems.
- CO3:** Ability to handle various instruments in the laboratory.
- CO4:** Development of personal learning and thinking capacity.



B.Sc. Psychology Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Sc. Psychology Model I degree programme, the student will be able to:

- PSO1:** Acquire a strong foundation in various branches of Psychology through interpretation and application of basic theories, principles and concepts of Psychology.
- PSO2:** Gain fundamental knowledge in human physiology and statistics to enhance understanding of psychology and contribute to research and solving real life problems in society
- PSO3:** Acquire practical experience in psychometry and develop analytical, logical and critical thinking skills essential in their professional role.

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Psychology Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine-Tune Your English (EN1CC010)

- CO1:** Understand the basics of grammar, usage, and effective communication.
- CO2:** Confidently apply English in both written and spoken forms
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from The Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.



Second Language- Common Course 1- Hindi- Prose & One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi literature. **CO3:**
- CO3:** Analyze different forms of prose.
- CO4:** Enable the students to analyze the kinds of One act plays.

Second Language- Common Course 1- Malayalam- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in short story and novel.
- CO2:** Evaluate new trends in the literary field of short stories and novels.
- CO3:** Create an authentic knowledge about the development of literature.
- CO4:** Critical reading and appreciation of Malayalam short stories and novels.

Core Course 1- Foundations and Methods of Psychology (PY1CRT01)

- CO1:** Analyse the basics of various perspectives in psychology.
- CO2:** Evaluate psychology as a scientific field.
- CO3:** Critique on the factors underlying sensation, attention and perception.
- CO4:** Explain the nature and changes in consciousness.
- CO5:** Illustrate the determinants and theories underlying personality.

Complementary Course I- Zoology 1- Body Systems and Behaviour (PY1CMT02)

- CO1:** Define physiological psychology and to describe digestive and respiratory system.
- CO2:** Learn the explanation of auditory and visual system. Illustration of eye and ear.
- CO3:** Develop knowledge in the functioning of cardiovascular system. To illustrate structure of circulatory system.
- CO4:** Define and analyze physiological basis of emotionality. Describe role of hypothalamus and limbic system in emotions

Complementary Course II- Statistics 1- Basic Statistics (ST2CMT21)

- CO1:** Illustrate needs and importance of statistics in psychology.
- CO2:** Display different statistical data.
- CO3:** Execute different sampling methods.
- CO4:** Analyze different measures of central tendency.

SEMESTER II

English Common Course 3– Issues that Matter (EN2CC03)

- CO1:** Help the learners to evaluate the contemporary issues of concern.



- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the classics (EN2CC03)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students understanding of the classics from various lands.

Second Language- Common Course 2- Hindi- Short Stories & Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.

Second Language- Common Course 2- Malayalam- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility.
- CO2:** Categorize the Changes in taste of poetry.
- CO3:** Construct awareness in poetry.
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society.

Core Course 2- Basic Cognitive Processes (PY2CRT04)

- CO1:** Critique on the theories and factors underlying memory, forgetting and remembering.
- CO2:** Illustrate theories and factors determining cognition, reasoning, problem solving, creativity and language.
- CO3:** Explain the nature and theories of motivation and emotion.
- CO4:** Analyse theories of intelligence and explain different methods of intelligence testing.
- CO5:** Evaluate different theories and principles of learning.



Complementary Course III- Zoology 2-Biological Basis of Behavior (PY2CMT05)

- CO1:** Describe the concepts of Mendel's principles, gene and gene mutation. Explain kinds of gene mutation and gene mutation disorders.
- CO2:** Define sexual behavior and hormones associated with it. To describe and understand the role of amygdale and hypothalamus in behavior.
- CO3:** Develop knowledge in physiology of stress and diseases related to it.
- CO4:** Define and learn physiology of sleep and arousal.

Complementary Course IV- Statistics 2- Statistical Tools (ST2CMT22)

- CO1:** Calculate different measures of dispersion.
- CO2:** Explain raw moment and central moment.
- CO3:** Determine skewness and kurtosis of a data.
- CO4:** Predict correlation and regression.

SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

- CO1:** Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.
- CO2:** Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.
- CO3:** Examine the tensions and the crevices present in South Asian regional identities.
- CO4:** Evaluate the emergence of Life Writing and Alternate/alternative/marginal identities.
- CO5:** Develop an inclusive mindset towards accepting the varied sections of society.

Second Language- Common Course 3- Hindi- Poetry Grammar & Translation(HN3CCT03)

- CO1:** Develop grammatical proficiency in Hindi language.
- CO2:** Convince the students to use correct punctuation and grammar structure in translation process.
- CO3:** Enable the student to critically analyze the ancient, medieval and modern hindi poetry.



CO4: Acquaint the students with the rich texture in Poetry.

Second Language- Common Course 3- Malayalam- Drushyakala Sahithyam (ML3CCT03)

CO1: Generate interest in appreciating art by seeing it.

CO2: Gain knowledge of the field of theatre and analysing different trends and its social relevance.

CO3: Get acquainted with the ancient visual arts of Kerala.

CO4: Create depth knowledge of film and theatre.

CO5: Realizing literary values of visual arts of Kerala.

Core Course 3- Living in the Social World (PY3CRT07)

CO1: Explain definition, focus and research methods used in social psychology.

CO2: Evaluate different heuristics, sources of error and factors affecting social cognition.

CO3: Analyse different factors and theories underlying social perception, attribution and impression formation.

CO4: Critique on the formation and change to attitude and social dissonance and explain resistance to persuasion.

CO5: Illustrate nature, origin and action of stereotyping, prejudice and discrimination.

CO6: Evaluate determinants of inter personal attraction and types of love.

Complementary Course V- Zoology 3- Neurophysiology of Behavior (PY3CMT08)

CO1: Learn cells of the nervous system, structure of the neurons, types of neurons and compare and contrast membrane potential, resting potential, depolarization, hyper polarization and describe sodium potassium pump.

CO2: Construct an idea about neurotransmitters- role of neurotransmitters in transmission of impulses.

CO3: Evaluate the anatomy of the central nervous system and to distinguish- forebrain, midbrain and hindbrain.

CO4: Generalize the anatomy of peripheral nervous system. Differentiate cranial and spinal nerves. Explain sympathetic and parasympathetic system.

CO5: Describe neocortex – structure and functional asymmetry.



**Complementary Course VI- Statistics 3- Probability and Probability Distributions
(ST3CMT23)**

- CO1:** Explain basic concepts of probability.
- CO2:** Solve problems related to probability.
- CO3:** Determine random variable and mathematical expectation of random variable.
- CO4:** Illustrate two important probability distributions namely Normal and Binomial.

SEMESTER IV

English Common Course – 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts' insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Common Course 4- Hindi- Drama & Long Poem (HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** The student will demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.

**Second Language- Common Course 4- Malayalam- Malayala Gadhyarachanakal
(ML4CCT04)**

- CO1:** Appreciate portions of prose.
- CO2:** Construct knowledge about autobiography in Malayalam literature.
- CO3:** Get training in creative writing such as News for dailies and essays.
- CO4:** Construct knowledge about features of languages in E-media.



Core Course 4- Social Interactions and Human Behaviour (PY4CRT10)

- C01:** Evaluate principles and factors affecting conformity, compliance and obedience.
- C02:** Assess motives, determinants and theories underlying pro social behaviour
- C03:** Illustrate theoretical basis, causes and prevention strategies of aggression.
- C04:** Explain the different types, key components and psychological processes behind forming groups.
- C05:** Comment on the role of social influence, social cognition, prejudice and stereotype in the legal system.
- C06:** Critique on psychological testing, its different types and ethical issues in psychological testing and measuring human behaviour.

Complementary Course VII- Zoology 4- Biophysiology of Behavior (PY4CMT11)

- C01:** Learn the immune system- anatomy of immune response, immunosuppression, hypersensitivity reaction and auto immunity.
- C02:** Compose psychoneuroimmunology- connection between emotions, nervous system and immune functions.
- C03:** Hypothesize placebo effect, immune deficiency and effects of meditation and biofeedback.
- C04:** Describe endocrine glands and hormones, hormonal influence of learning and memory in behavior.
- C05:** Persuade mechanisms of learning and memory and differentiate – amnesia, dementia and Alzheimer’s disease.
- C06:** Explain and judge brain metabolism. Barrier to the brain. Major neurotransmitters in the brain. Opioid peptides and receptors in the brain. Brain chemistry and use of psychiatric drugs.

Complementary Course VIII- Statistics 4- Statistics Statistical Inference (ST4CMT24)

- C01:** Explain basic concepts testing of hypothesis.
- C02:** Examine large sample data.
- C03:** Test small sample data.



SEMESTER V

Core Course 5- Abnormal Behaviour (PY5CRT13)

- CO1:** Analyse the history and meaning of abnormal behaviour and its classification systems.
- CO2:** Estimate the causal factors and major viewpoints of abnormal behaviour.
- CO3:** Explain about anxiety disorders, its types, causal factors, treatment and outcome.
- CO4:** Investigate cases and identify obsessive compulsive and related disorders with its causal factors, treatment and outcome.
- CO5:** Create an outline of various mood disorders which include bipolar and depressive disorders and its causal factors, treatment and outcomes.
- CO6:** Determine various aspects of schizophrenia and delusional disorder, its causal factors, treatment and its outcomes.

Core Course 6- Foundations of Organizational Behaviour (PY5CRT14)

- CO1:** Evaluate the importance of organizational behaviour and individual differences in the organization.
- CO2:** Analyse the history of organisational behaviour through different movements.
- CO3:** Detail the classical, modern Bureaucratic theory of organization and its modifications.
- CO4:** Examine various theories of work motivation.
- CO5:** Establish a good understanding of the process of communication, barriers and various ways to overcome them.
- CO6:** Compare various theories and approaches to leadership.

Core Course 7- Environmental Psychology and Human Rights (PY5CRT15)

- CO1:** Establish a clear-cut understanding of environment, its resources, various ecosystems, the need for public awareness and the various problems which exploit and deplete resources and to help the students in realizing the role of humans in conserving nature and the issues related to it.
- CO2:** Construct a sense of value in protection of biodiversity which are being under threat, to manage pollution, to reframe the disaster management measures put forth by the officials and also to assess various environment related social issues with the aid of Acts.



- CO3:** Synthesize diverse information relevant to human-environment relationships in the context of environmental psychology and how to adapt to the changing attitudes and practices in relation with environment.
- CO4:** Analyse of environment related behaviours and to practice environmentally responsible behaviours.
- CO5:** Examine basic human rights and appreciate the inherent value of being human, to assume responsibility to stand up for own and other's rights, develop empathy towards people from all social strata.

Open Course- Life Skills Development (PY5OP02)

- CO1:** Explain the concept of life skills and analyse different types of communication skills.
- CO2:** Analyze various skills required for presentations, interviews, and group discussions.
- CO3:** Evaluate various skills required for beginning and maintaining a relationship.
- CO4:** Identify various critical thinking, decision-making, problem solving skills and ways to develop it.

Practical 2- Experimental Psychology (PY5 P03)

- CO1:** Develop scientific and experimental attitudes in the student.
- CO2:** Facilitate comprehension of the theoretical concepts through experiments.
- CO3:** Develop the skills of observation and scientific reporting in psychology.
- CO4:** Evaluate basic training in planning and conducting a psychological experiment.
- CO5:** Assess level of learning and transfer of learning with various experiments.
- CO6:** Experiment motor abilities and reaction time of the participant.
- CO7:** Measure the immediate memory span of the participant.

Project 1- Experiential learning Project (PY5PR01)

- CO1:** Compose case study/ reports based on the internship or volunteer work done by the students at mental health centers, old age homes, industries, special education, rehabilitation, de-addiction centers, pain and palliative care units.
- CO2:** Devise cases, clinical report or present a systematic observation done on child behavior / social behaviour as a qualitative research work.
- CO3:** Reflect on learning outcomes obtained through study tour and comment using a detailed report.



SEMESTER VI

Core Course 8- Psychology of Maladaptive Behaviour (PY6CRT16)

- CO1:** Encourage the students to know the causal pattern and the different therapeutic techniques in the management of personality disorders.
- CO2:** Encourage the students to know the causal pattern and the different therapeutic techniques in the management of somatic symptom, stress related and dissociative disorders.
- CO3:** Create awareness of psychosocial, socio- cultural causal factors and treatment and outcome of substance- related disorders.
- CO4:** Acquaint the students with the symptoms of various childhood disorders.
- CO5:** Acquaint the students with the symptoms of various neurocognitive disorders.
- CO6:** Assess and test using psychosocial assessment methods and various psychological tests

Core Course 9- Managing Behaviour in Organization (PY6CRT17)

- CO1:** Analyze the process of decision-making and different techniques to improve decision making procedure.
- CO2:** Explain the concept of conflict, negotiation, its types and process
- CO3:** Identify the different steps in forming a culture.
- CO4:** Asses the concept of change, forces of change, and approaches to manage change.
- CO5:** Evaluate different types of stress, its effect and coping strategies.
- CO6:** Explain the concept of social responsibility and identify the nature of managerial ethics.

Core Course 10- Child Development (PY6CRT18)

- CO1:** Build knowledge in the process and nature of child development and also various methods to study developmental processes.
- CO2:** Adapt and relate the observation to current theories of child development various theories related to child development.
- CO3:** Create and inspire interest in observing and the process of child development
- CO4:** Assess the physical and sensory development of a child.
- CO5:** Create awareness in the language and emotional development among children



CO6: Analyse the temperament and moral development during period of infancy to adolescence.

Open Course- Theory and Practice of Counselling (PY6 CBT01)

CO1: Direct the scope, goals and ethical issues related to counselling and other fields related to counselling.

CO2: Build knowledge in the process and nature of counselling.

CO3: Explain the human nature, various approaches and techniques of Counselling

CO4: Impart an idea regarding cognitive behavioural approaches and techniques.

CO5: Evaluate Indian approach of yoga and meditation and also other relaxation techniques in counselling.

CO6: Implement focus towards special areas in counselling.

Practical 3- Psychological Assessment (PY6 P04)

CO1: Develop the ability to understand self and others.

CO2: Familiarize with psychological instruments and tools.

CO3: Asses the intelligence of the participants.

CO4: Describe the personality of the self and others.

CO5: Identify the different aptitudes, interests, and values of the self and others.

Project 2- Research Project (PY6PR02)

CO1: Enable students to get first-hand experience in doing research.

CO2: Develop a balance of collaborative and individual work, determine an area of interest and jump-start their careers as researchers.

CO3: Discover the passion for research and continue on to postgraduate studies.

CO4: Asses the process of conducting research.

CO5: Enable to write report of project in APA format.



B.Sc. Zoology Model I

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Sc. Zoology Model I degree programme, the student will be able to:

- PSO1:** Familiarize the laboratory procedures of taxonomy, biochemistry, ecology, bioinformatics, microbiology and molecular biology
- PSO2:** Application level understanding of apiculture, vermiculture, aquaculture, and quail farming
- PSO3:** Understanding Nature and scope of various branches of life Science and basic concepts of physiology, genetics, ecology, evolution, immunology, developmental biology and ethology

Course Outcomes (CO)

At the completion of the course under three-year B.Sc. Zoology Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1- Fine Tune Your English (EN1CC01)

- CO1:** Familiarize the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyze the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

English Common Course-2 Pearls from the Deep (EN1CC02)

- CO1:** Evaluate and analyse the literary genres and the niceties of literary expression.
- CO2:** Appreciate and evaluate the works of literature.
- CO3:** Evaluate the aesthetic and structural elements of literature.
- CO4:** Examine the language skills of students through their creative writing.

Second Language- Malayalam Common Course 1- Kathasahithyam (ML1CCT01)

- CO1:** Develop awareness in Short Story and Novel.
- CO2:** Evaluate new trends in the literary field of short stories and Novels.



- CO3:** Create authentic knowledge about the development of literature.
- CO4:** Read critically and appreciation of Malayalam Short stories and Novels

Second Language - Hindi Common Course 1-Prose &One Act Plays (HN1CCT01)

- CO1:** Develop interest in Hindi Literature.
- CO2:** Develop the ability to interpret and critically analyze Hindi Literature.
- CO3:** Analyze different forms of prose.
- CO4:** Analyze the kinds of one act plays.

Core Course 1- General Perspectives in Science &Protistan Diversity (ZY1CRT01)

- CO1:** Understand the philosophy of science, concepts and scope of biology and to facilitate scientific temper and scientific method
- CO2:** Illustrate basic taxonomic tools and identification keys.
- CO3:** Distinguish different levels of biological diversity through the systematic classification
- CO4:** Familiarize with Protistan diversity and especially various parasitic forms of protest

Complementary Course 1: Botany Cryptogams, Gymnosperms and Plant Pathology

- CO1:** Acquire fundamental knowledge in plant science.
- CO2:** Build an attitude of curiosity about various life forms of plants.
- CO3:** Understand the diversity of plants with respect to thallophytes and vascular cryptogams.
- CO4:** Create awareness about various plant diseases and their impacts on crop plants.
- CO5:** Distinguish and relate different algae, its reproduction and comment on its importance.

Complementary course Practical I - Cryptogams, Gymnosperms and Plant Pathology

- CO1:** Knowledge in identification, staining and microscopic observation of given Pteridophytes and gymnosperms.
- CO2:** Understand different plant diseases.

Complementary Course II- Basic Theoretical &Analytical Chemistry (CH1CMT01)

- CO1:** Describe atomic structure and bonding
- CO2:** Explain fundamental concepts in chemistry
- CO3:** Explain principles of analytical methods



CO4: Compare the different chromatographic methods used in analytical chemistry

SEMESTER II

English Common Course 3- Issues That Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance
- CO3:** Create awareness in learners to respond rationally and positively to the issues rose in Society.
- CO4:** Internalise the values imparted through the selections in the works provided.

English Common Course 4 - Savouring the Classics (EN2CC04)

- CO1:** Examine students' taste in time-tested world classics.
- CO2:** Develop students' interest in the classics from various lands.
- CO3:** Evaluate students' understanding of the features that go into the making of a classic.
- CO4:** Evaluate students understanding of the classics from various lands.

Second Language- Malayalam Common Course 2- Kavitha (ML2CCT02)

- CO1:** Appreciate poetry in depth and understand its various dimensions of idea and sensibility
- CO2:** Categorize the Changes in taste of Poetry
- CO3:** Construct awareness in Poetry
- CO4:** Evaluate contemporary Malayalam writers and their themes and vision of the society.

Second Language- Hindi Common Course 2-Short Stories and Novel (HN2CCT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.
- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.

Core Course 2- Animal Diversity: Non-Chordata (ZY2CRT02)

- CO1:** Develop a basic knowledge of the formal elements of Fiction.



- CO2:** Develop a sense of literary aesthetics.
- CO3:** Differentiate the contents and style of expression in short stories.
- CO4:** Develop vocabulary and reading skills of the student.

Core Course 2- Animal Diversity: Non-Chordata (ZY2CRT02)

- CO1:** Generalize and observe the diversity of life on earth.
- CO2:** Discover taxa level identification of animals.
- CO3:** Summarize the diversity and evolutionary significance of invertebrate fauna.
- CO4:** Administer curiosity on invertebrates around our surroundings.

Complementary Course I: Botany 2- Plant Physiology

- CO1:** Understand the mechanism and physiology of life processes in plants.
- CO2:** Gain knowledge about the various uptake and transport mechanisms in plants and are able to coordinate the various processes.
- CO3:** Understand the role of various phytohormones and its actions.
- CO4:** Acquaint knowledge about photosynthesis and its significance.

Complementary Course II: Basic Organic Chemistry (CH2CMT02)

- CO1:** Draw the optical and geometric isomers of various organic compounds
- CO2:** Predict the structure and stability of various reaction intermediates.
- CO3:** Explain various electronic displacements and type of organic reactions:
- CO4:** Explain the synthesis and properties of natural and synthetic polymers

Core Practical 01 - General Perspectives in Science, Protistan Diversity & Animal Diversity: Non-Chordata (ZY2CRP01)

- CO1:** Familiarize taxa level identification of animals
- CO2:** Understand different levels of biological diversity through the systematic classification of invertebrate fauna
- CO3:** Develop dissection skills and to understand the anatomy of invertebrates

Complementary Practical I – Botany- Plant Physiology

- CO1:** Knowledge in various physiological experiments such as transpiration, photosynthesis, chromatography.



CO2: Analyse critically various physiological phenomena in plants.

Complementary Practical I – Chemistry - Volumetric Analysis (CH2CMP01)

CO1: Quantitative analyse various compounds using acidimetry and alkalimetry.

CO2: Quantitative analyse various compounds using permanganometry

CO3: Quantitative analyse various compounds using dichrometry.

CO4: Quantitative analyse various compounds using iodometry.

SEMESTER III

English Common Course 5 - Literature and/as Identity (EN3CC05)

CO1: Evaluate the various ways literature serves as a platform for forming, consolidating, critiquing and re-working the issue of identity at multiple levels.

CO2: Analyse the subtle negotiations of Indigenous and Diasporic identities within the literature.

CO3: Examine the tensions and the crevices present in South Asian regional identities.

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

CO5: Develop an inclusive mindset towards accepting the varied sections of society.

Second Language- Malayalam Common Course 3 - Second Language – Drushyakala Sahithyam (ML3CCT03)

CO1: Generate interest in appreciating art by seeing it

CO2: Gain knowledge of the field of theatre and analysing different trends and its social relevance

CO3: Get acquainted with the ancient visual arts of Kerala

CO4: Create depth knowledge of film and theatre.

CO5: Realizing literary values of visual arts of Kerala.

Second Language- Hindi Common Course 3 - Poetry Grammar & Translation (HN3CCT03)

CO1: Develop grammatical proficiency in Hindi Language.

CO2: Convince the students to use correct punctuation and grammar structure in Translation process.

CO3: Enable the student to critically analyze the ancient, medieval and modern Hindi Poetry.

CO4: Acquaint the students with the rich texture in Poetry.



Core Course 3- Animal Diversity –Chordata (ZY3CRT03)

- CO1:** Memorize in depth knowledge on the diversity of chordates and their systematic position.
- CO2:** Discover the economic importance of some classes.
- CO3:** Correlate the evolutionary importance of selected chordate groups.
- CO4:** Administer curiosity on vertebrates around our surroundings.

Complementary Course I: Botany: Angiosperm Taxonomy and Economic Botany

- CO1:** Acquaint the student with the objectives and components of Taxonomy.
- CO2:** Help the student to understand the systems of classification of angiosperms.
- CO3:** Help the student to identify the common angiosperm species of Kerala.
- CO4:** Familiarize the student with plants of immense economic importance.

Complementary Course II: Chemistry: Inorganic and Organic Chemistry

- CO1:** Discuss the principle and applications of nuclear chemistry
- CO2:** Discuss the applications of bioinorganic chemistry
- CO3:** Explain the chemistry of fertilizers and pesticides.
- CO4:** Explain the synthesis, properties, and reactions of heterocyclic chemistry
- CO5:** Classify the drugs based on their structure and identify its therapeutic uses.
- CO6:** Explain the chemistry of food additives and cosmetics.

SEMESTER IV

English Common Course- 6 Illuminations (EN4CC06)

- CO1:** Analyse different forms of inspiring and motivating literature.
- CO2:** Create a positive attitude to life.
- CO3:** Evaluate and overcome setbacks based on these texts insights.
- CO4:** Analyse and evaluate the translations, their contemporary necessities and their accuracy.
- CO5:** Create a quintessential journey into the unfathomable power of literature, individuality and original thinking.

Second Language- Malayalam Common Course 4 – Malayala Gadhyarachanakal (ML4CCT04)



- CO1:** Appreciate portions of prose
- CO2:** Construct knowledge about autobiography in Malayalam Literature
- CO3:** Get training in creative writing such as News for dailies' and Essays
- CO4:** Construct knowledge about features of languages in E-media

Second Language- Hindi Common Course 4- Drama & Long Poem (HN4CCT04)

- CO1:** Develop interest in Drama.
- CO2:** Demonstrate understanding of Drama and Theatre and will become aware of contribution of play wrights.
- CO3:** Enable the student to appreciate Epic Poetry with a critical eye.
- CO4:** Build a creative outlook towards life.

Core Course 4- Research methodology, Biophysics and Biostatistics (ZY4CRT04)

- CO1:** Familiarize the basic concept of scientific method in research process.
- CO2:** Develop skills in Research Communication and scientific Documentation
- CO3:** Create awareness about the laws and ethical values in biology
- CO4:** Equip students with the basic techniques of animal collection and preservation
- CO5:** Apply the statistical methods in biological studies.

Complementary Course I- Botany- Anatomy and Applied Botany

- CO1:** Understand different types of plant tissues.
- CO2:** Acquaint knowledge on internal structure of different plant organs with reference to their functions.
- CO3:** Understand the process of normal and anomalous secondary thickening in plants.
- CO4:** Understand the morphological and anatomical adaptations of plants growing in different habitats.
- CO5:** Apply how botanical knowledge helps in crop improvement.

Complementary Course II- Advanced Bio-organic Chemistry (CH4CMT06)

- CO1:** Describe the chemistry, structure, and functions of different natural products like Terpenoids and alkaloids
- CO2:** Classify lipids, identify its biological functions and learn the chemistry of soaps and

detergents.

- CO3:** Differentiate the functions of nucleic acids and enzymes
- CO4:** Explain the functions of amino acids and proteins.
- CO5:** Explain the preparation, properties, classification and applications of carbohydrates.
- CO6:** Describe the structure and functions of vitamins, and steroids

Core Practical 04: Animal Diversity – Chordata, Research methodology, Biophysics & Biostatistics (ZY4CRP02)

- CO1:** Familiarize the diversity of chordates.
- CO2:** Develop skills in using statistical tools in data analysis and interpretation.
- CO3:** Distinguish various physiological process in different organisms
- CO4:** Familiarize major equipment's used in biological research.

Complementary-Botany- Practical IV- Anatomy and Applied Botany

- CO1:** Knowledge in identification and staining and microscopic observation of different tissues and non-living inclusions in a cell.
- CO2:** Knowledge in identification and staining and microscopic observation of the primary, secondary, and anomalous structure of stem and root.
- CO3:** Identification of different kinds of stomatal types.

Complementary Course II- Chemistry- Advanced Bio-organic Chemistry (CH4CMT06)

- CO1:** Describe the chemistry, structure, and functions of different natural products like Terpenoids and alkaloids
- CO2:** Classify lipids, identify its biological functions and learn the chemistry of soaps and detergents.
- CO3:** Differentiate the functions of nucleic acids and enzymes
- CO4:** Explain the functions of amino acids and proteins.
- CO5:** Explain the preparation, properties, classification and applications of carbohydrates.
- CO6:** Describe the structure and functions of vitamins, and steroids.

CH4CMP03: Organic Chemistry (Practicals)

- CO1:** Analyse systematically different functional groups.
- CO2:** Determine Melting point of various compounds.



- CO3:** Determine Boiling point of various compounds.
- CO4:** Prepare derivatives of several of organic compounds.

SEMESTER V

Core Course 5 - Environmental Biology and Human Rights (ZY5CRT05)

- CO1:** Differentiate the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.
- CO2:** Criticize environmental issues & conservation strategies.
- CO3:** Distinguish the real sense of Human rights – its concepts & manifestations.
- CO4:** Assess the status of quality of environment with different parameters.
- CO5:** Experiment physico chemical properties of Ecosystem

Core Course 6 - Cell Biology and Genetics (ZY5CRT06)

- CO1:** Understand the structure and function of cell.
- CO2:** Make aware of different cell organelles, their structure and role in living organisms
- CO3:** Develop critical thinking, skill and research aptitudes in basic and applied biology.
- CO4:** Emphasize the central role of genes and their inheritance in the life all organisms.

Core Course 7 - Evolution, Ethology and Zoogeography (ZY5CRY07)

- CO1:** Enumerate and recite the evolutionary history of earth
- CO2:** Compare and contrast theories of organic evolution
- CO3:** Distinguish micro macro and mega evolution
- CO4:** Cite and illustrate the distribution of animals on earth, its pattern and causative factors and sketch the geographical realm.
- CO5:** Observe the patterns of behaviour and compare social organization in insects and mammals.

Core Course 8- Human Physiology, Biochemistry and Endocrinology (ZY5CRT08)

- CO1:** Understanding phases of respiration and nutrition.
- CO2:** Describe the process of excretion and renal disorders.
- CO3:** Explain the nervous system and neurological disorders, EEG and memory.



- CO4:** Describe muscle contraction and theories. Illustrate the ultra-structure of striated muscles. Distinguish simple muscle twitch, muscle fatigue, tetanus and rigor motis.
- CO5:** Define and elaborate biochemistry of carbohydrate, proteins, lipids, vitamins and minerals and enzymes.

Open Course-Public Health and Nutrition (ZY5OPT02)

- CO1:** Teach a general awareness among the students regarding the real sense of health.
- CO2:** Discover the role of balanced diet in maintaining health.
- CO3:** Employ students to practice yoga and meditation in day-to-day life.
- CO4:** Criticize the Waste management system in our state.
- CO5:** Identify major diseases and mode of spreading around us.
- CO6:** Experiment different types of relaxation techniques.

SEMESTER VI

Core Course 9 - Developmental Biology (ZY6CRT09)

- CO1:** Achieve a basic understanding of the experimental methods and designs that can be used for future studies and research in the field of developmental Biology
- CO2:** Create awareness in the reproductive health and reproductive physiology of human.
- CO3:** Compare different stages of embryonic development in frog, chick and man
- CO4:** Understand the major developmental defects in man

Core Course 10-Microbiology and Immunology (ZY6CRT10)

- CO1:** Discover the microbial diversity and metabolism.
- CO2:** Teach about Infections & Diseases.
- CO3:** Discover the role of immune system in sustaining life
- CO4:** Experiment with preparation of solid and liquid media for Microbial cultures and various culture methods.
- CO5:** Differentiate different types of Vaccines with their properties

Core Course 11- Biotechnology, Bioinformatics and Molecular Biology (ZY6CRT11)

- CO1:** Develop basic ideas about tools and techniques in biotechnology.
- CO2:** Evaluate and criticize applications and potential hazards of biotechnology.



- CO3:** Identify various bioinformatics tools and databases.
- CO4:** Students will be able to describe and explain the nature and organization of genetic material in prokaryotes and eukaryotes.
- CO5:** Interpret the basic molecular process such as gene expressions, protein synthesis and gene regulation.

Core Course 12- Occupational Zoology (Apiculture, Vermiculture, Quail Farming & Aquaculture (ZY6CRT12)

- CO1:** Teach students about cottage industries.
- CO2:** Identify self-employment capabilities.
- CO3:** Employ profitable farming practices.
- CO4:** Discover new methods of solid waste management using Earthworms.

Core Course Practical 3 - Environmental Biology, Toxicology, Cell Biology & Genetics (ZY6CRP03)

- CO1:** Assess the status of quality of environment with different parameters.
- CO2:** Develop understanding of different ecosystems through experiential learning.
- CO3:** Distinguish various cell organelles inside the cell
- CO4:** Familiarise major processes of cell division.

Core Course Practical 4 - Evolution, Ethology, Zoogeography, Human Physiology, Biochemistry & Endocrinology (ZY6CRP04)

- CO1:** Develop skills in identifying the geographical realms and biodiversity.
- CO2:** Develop understanding of different stages of evolution in different organisms.
- CO3:** Identify and enumerate various hematological parameters
- CO4:** Develop skills in understanding biochemical properties of biomolecules.

Core Course Practical 5 -Developmental Biology, Microbiology & Immunology (ZY6CRP05)

- CO1:** Compare different stages of embryonic development in frog, chick and man.
- CO2:** Achieve a basic understanding of the experimental methods and designs that can be used for future studies and research in the field of developmental Biology



- CO3:** Familiarize the experiments with preparation of solid and liquid media for microbial cultures and various culture methods.
- CO4:** Develop skills in identifying microorganisms.

Core Course Practical 6 -Biotechnology, Bioinformatics, Molecular Biology & Occupational Zoology (ZY6CRP06)

- CO1:** Develop basic ideas about tools and techniques in biotechnology.
- CO2:** Achieve a basic understanding of various bioinformatics tools and databases
- CO3:** Identify various culture fishes and their importance
- CO4:** Develop skills in doing apiculture, vermiculture and aquarium management.

Core Course Elective 1- Nutrition, Health and Lifestyle management (ZY6CBT04)

- CO1:** Understand the general concepts of health and the parameters that define health and wellness.
- CO2:** Familiarize the relevance of nutrition, food safety, food laws and regulations on health.
- CO3:** Aware about life style diseases.
- CO4:** Promote an understanding of the value of good lifestyle practices, physical fitness and healthy food habits for lifestyle disease management.



B.Com. Finance and Taxation Model I

Programme Specific Outcomes (PSO)

At the completion of three-year B.Com. Finance and Taxation Model I degree programme, the student will be able to:

- PSO1:** Develop theoretical and pragmatic orientation in trade, industry and commerce in a financial system.
- PSO2:** Equip with preparation and analysis of business transactions from financial and costing perspective.
- PSO3:** Create the ability to deal with various concepts and practical modalities of tax system in India.
- PSO4:** Enhance the ability to use knowledge and tools of managerial decision making in business.
- PSO5:** Apply the knowledge of various principles, provisions and practices of banking and insurance to handle the activities associated with banking and insurance sectors.

Course Outcomes (CO)

At the completion of the course under the three-year B.Com. Finance and Taxation Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1 - Fine-Tune your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.



Second Language – Malayalam Common Course 1 - Kathayum Kaviythayum (ML1CCT05)

- CO1:** Develop awareness in short story
- CO2:** Construct an authentic knowledge about the development of literature.
- CO3:** Evaluate poetry by gaining in depth knowledge on its dimensions and sensibility.
- CO4:** Critical reading and appreciation of Malayalam short stories and Poems.

Second Language – Hindi - Prose and Mass Media (HN1 CCT O1)

- CO1:** Familiarize with the Students, the literary form of essays.
- CO2:** Enhance knowledge about mass media.
- CO3:** Evaluate the principles and assumptions governing modern linguistic.
- CO4:** Promote eminent Hindi scholars and encourage them to write and translate relevant works in Hindi.

Core Course 1 -Dimensions and Methodology of Business Studies (CO1CRT01)

- CO1:** Infer an idea about business and its role in society.
- CO2:** Evaluate Business ethics and Corporate Social Responsibility.
- CO3:** Summarize the business environment and various dimensions
- CO4:** Express Technology integration in business

Core Course 2 - Financial Accounting (CO1CRT02)

- CO1:** Prepare Financial Statements.
- CO2:** Distinguish the concept of single entry and double entry.
- CO3:** Assess royalty and consignment accounts.
- CO4:** Assess the details of farm accounts

Core Course 3 - Corporate Regulations and Administration (CO1CRT03)

- CO1:** Evaluate the theoretical aspects of company and its different types
- CO2:** Structure the promotion and formation formalities of company
- CO3:** Evaluate the details of share capital and its issuing procedures.



CO4: Assess in the procedure formalities of company meetings.

CO5: Summarize the procedure of winding up.

Complementary Course 1 - Banking and Insurance (CO1CMT01)

CO1: Familiarize the students basic concepts of banking and insurance

CO2: Enhance the knowledge in practical banking

CO3: Familiarize the students with knowledge on different types of insurance and various insurance schemes

SEMESTER II

English Common Course 2 - Issues that Matter (EN2CC03)

CO1: Evaluate the contemporary issues of concern.

CO2: Examine the major issues of contemporary significance

CO3: Create awareness in learners to respond rationally and positively to the issues raised in society.

CO4: Internalize the values imparted through the selections in the works provided.

Second Language - Malayalam Common Course 2 - Athmakadha, Lekhanam (ML2CCT06)

CO1: Appreciates portions of prose.

CO2: Construct knowledge about autobiography in Malayalam Literature

CO3: The course is designed to train students in creative writing such as News for dailies'and essays

CO4: The course also deals the features of languages in E-media.

Second Language – Hindi - Poetry, Commercial Correspondence and Translation (HN2 CCT O2)

CO1: Enhance students familiar with ancient and modern Culture.

CO2 Enhance knowledge about the development of literature.

CO3: Equip awareness of the famous writers of this period.



CO4: Internalize the culture of our country through the famous works of the poets.

Core Course 4 -Financial Accounting-II (CO2CRT04)

CO1: Illustrate accounting for Hire Purchase.

CO2: Prepare Branch accounts.

CO3: Assess scope and accounting procedure of departmental accounting

CO4: Prepare partnership account and dissolution of partnership firm.

CO5: Evaluate accounting standards and its application.

Core Course 5- Business Regulatory Framework (CO2CRT05)

CO1: Conclude business and corporate law

CO2: Devise on contract and various types of contracts

CO3: Evaluate the concept of sale of goods

CO4: Infer companies and its types

Core Course 6 - Business Management (CO2CRT06)

CO1: Assess evolution of management thoughts.

CO2: Evaluate the planning and decision-making process.

CO3: Write organization structure and different types of organization.

CO4: Report the recruitment process and stages in selection.

CO5: Summarize motivation, importance of communication and Principles of coordination.

Complementary Course 2 -Principles of Business Decisions (CO2CMT02)

CO1: Evaluate the basic elements of managerial economics.

CO2: Assess the law of demand, supply forecasting, consumer durable

CO3: Generalize theories of profit, profit maximization and analysis of Break Even Point

CO4: Consider law of diminishing proportion, product function, Economies of scale

CO5: Report on various Pricing policy in detail.



SEMESTER III

English Common Course 3 - Gems of Imagination (EN3CCT07)

- CO1:** Familiarize different genres of literature and to help them imbibe critical thought in discussing literature.
- CO2:** Appreciate the aesthetic and cultural milieu in which literature resides.
- CO3:** Discern the ways in which different literary genres affect reading.
- CO4:** Excellence in life and art through the assorted experiences offered by literary narratives.
- CO5:** Develop a wide reading of fiction and poetry among the youth

Core Course 7 - Corporate Accounts I (CO3CRT07)

- CO1:** Familiarize with corporate accounting procedures and to understand the provisions of Companies Act 2013 in accounting.
- CO2:** Equip the students to use new accounting schedules for the preparation of final statements.
- CO3:** Develop the students to handle the accounting procedures in the corporate for buy back, redemption, right issue and underwriting.
- CO4:** Students are able to handle the accounting procedure of the insurance company and its clients while raising claims.

Core Course 8 - Quantitative techniques for Business (CO3CRT08)

- CO1:** Students are getting clarity about the statistical theory in real life situation.
- CO2:** Equip the students to handle business issues by using proper statistical tools.
- CO3:** Students are able to identify the appropriate statistical tool for the specific issues of the business firms.

Core Course 9 -Financial Markets and Operations (CO3CRT09)

- CO1:** Familiarize the student about the financial markets rules and laws in India.
- CO2:** Students are able to understand the technical explanation about the financial market operations.



- CO3:** Develop the skill to help others on the different market situations in a specific manner.
- CO4:** Equip the students to get a job in securities trading firms and other market related institutions.

Core Course 10 -Marketing Management (CO3CRT10)

- CO1:** Students are equipped to identify the different marketing strategies used by the business firms.
- CO2:** Understand the pricing strategies adopted in the marketing process.
- CO3:** Develop the skill of sales.
- CO4:** Make the students to be suitable for profession in Marketing field.

Optional Core 1-Finance and Taxation-Goods and Services Tax (CO3OCT01)

- CO1:** Express GST law in the country.
- CO2:** Assess the registration formalities under GST
- CO3:** Develop practical perspective and employability to the students in the commercial tax practices.
- CO4:** Evaluate the provisions regarding filing of returns and assessment under the Act.

SEMESTER IV

English Common Course 4 - Revisiting the Classics (EN3CCT08)

- CO1:** Learns to use literature as a medium to relax and enjoy
- CO2:** Achieves the taste to appreciate classic literature
- CO3:** Capacitates the student to comprehend English poetry and novels
- CO4:** Analyses the stories to learn moral lessons as well as linguistic competencies

Core Course 11 -Corporate Accounts II (CO4CRT11)

- CO1:** Equip the students to prepare the final accounts of Investment Company as per Companies Act 2013.



- CO2:** Familiarizes the students on the different accounting procedures and Provisions of Banking companies, Investment Companies and insurance companies.
- CO3:** Students are equipped to get job in financial organization.
- CO4:** Students are developed to handle different financial issues related to the companies in an effective way as per companies Act 2013.

Core Course 12 - Quantitative Techniques for Business- II (CO4CRT12)

- CO1:** Students are able to select statistical model for the different issues related with business.
- CO2:** Students are equipped to analyze primary data by using appropriate statistical models.
- CO3:** Developed skill to do descriptive analysis on primary and secondary data.

Core Course 13-Entrepreneurship Development and Project Management (CO4CRT13)

- CO1:** Developed the attitude of Entrepreneurship.
- CO2:** Students are familiarized with different technical and financial facilities availed at present.
- CO3:** Students are able to start micro or tiny type business firm.
- CO4:** Equipped the students to engage various activates in the business activities.

Optional Core 2 -Finance and Taxation- Financial Services (CO4OCT01)

- CO1:** Evaluate various financial services.
- CO2:** Assess current financial practices
- CO3:** Structure venture capital, securitisation, leasing, factoring, credit rating and mergers and acquisition.
- CO4:** Assess recent trends in financial services.

Core Course 12 - Quantitative Techniques for Business- II (CO4CRT12)

- CO1:** Students are able to select statistical model for the different issues related with business.
- CO2:** Students are equipped to analyze primary data by using appropriate statistical models.
- CO3:** Developed skill to do descriptive analysis on primary and secondary data.



Core Course 13-Entrepreneurship Development and Project Management (CO4CRT13)

- CO1:** Developed the attitude of Entrepreneurship.
- CO2:** Students are familiarized with different technical and financial facilities availed at present.
- CO3:** Students are able to start micro or tiny type business firm.
- CO4:** Equipped the students to engage various activates in the business activities.

Optional Core 2 -Finance and Taxation- Financial Services (CO4OCT01)

- CO1:** Evaluate various financial services.
- CO2:** Assess current financial practices
- CO3:** Structure venture capital, securitisation, leasing, factoring, credit rating and mergers and acquisition.
- CO4:** Assess recent trends in financial services.

SEMESTER V

Core Course 14 -Cost Accounting – 1 (CO5CRT14)

- CO1:** Familiarize the students with cost concepts and to make the students learn the Fundamentals of cost accounting as a separate system of accounting.
- CO2:** Familiarize the students with latest inventory control techniques.
- CO3:** Make students aware of accounting of Labour and overhead costs
- CO4:** Equip students to prepare cost sheets.

Core Course 15 -Environment and Human Rights (CO5CRT15)

- CO1:** Familiarise Multidisciplinary nature of environmental studies, Natural resources, eco-systems, pollution, issues, and human rights
- CO2:** Acquaint students with biodiversity of India and its conservation
- CO3:** Invite student's attention on the serious environmental pollutions and social issues related with environment.



CO4: Enable students to be aware of human rights related with environment.

Core Course 16-Financial Management (CO5CRT16)

- CO1:** Familiarise the students with the functional areas and principles of financial management
- CO2:** Equip students to take financial decisions based on the analysis of financial statements.
- CO3:** Familiarise students with the various techniques of investment decisions.
- CO4:** Equip students to estimate the working requirements of an organisation.

Optional Core 3 -Finance and Taxation - Income Tax- I (CO5OCT01)

- CO1:** Assess basic concept of Income Tax
- CO2:** Distinguish the different know-how and heads of income with its components
- CO3:** Assess income from house property.
- CO4:** Assess income from business or profession
- CO5:** Evaluate the concept of depreciation and its provisions

Open Course - Fundamentals of Accounting (CM05D AA01)

- CO1:** Familiarize the students with the basic accounting principles and practices in business
- CO2:** Equip students in preparing Journal and Ledger accounts
- CO3:** Equip students in preparation of Final Accounts of Sole proprietary concerns

SEMESTER VI

Core Course 17 -Cost Accounting – 2 (CO6CRT17)

- CO1:** Make the students aware of the strategy, concept and methods of advertising and sales promotion.
- CO2:** Make students aware of ad agencies and regulations of advertisement in India
- CO3:** Equip students to personal selling skills



Core Course 18 -Advertisement and Sales Management (CO6CRT18)

- CO1:** Make the students aware of the strategy, concept and methods of advertising and sales promotion.
- CO2:** Make students aware of ad agencies and regulations of advertisement in India
- CO3:** Equip students to personal selling skills

Core Course 19 -Auditing and Assurance (CO6CRT19)

- CO1:** Familiarize the students with the principles and procedure of auditing.
- CO2:** Enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing.
- CO3:** Make students aware of special audits and investigation procedures.
- CO4:** Familiarise the students with preparation of audit documents, and internal control systems in organisations.

Core Course 20-Management Accounting (CO6CRT20)

- CO1:** Explain the three primary purposes of management accounting namely, inventory valuation, decision support and cost control.
- CO2:** Develop and apply standards and budgets for planning and controlling purposes.
- CO3:** Apply and analyze different types of activity-based management tools through the preparation of estimates.

Optional Core -4 - Income Tax- II (CO6OCT01)

- CO1:** Estimate Total Income and tax payable
- CO2:** Summarize returns to be filed by an individual and also assessment procedure
- CO3:** Evaluate the powers and functions of Income Tax Authorities.

Project and Viva (CO6PR01)

- CO1:** Develop research and analytical skill and compile comprehensive study report
- CO2:** Measure the knowledge in research and analysis



B.Com. Finance and Taxation Model I (Self Financing)

Programme Specific Outcomes (PSO)

At the completion of three-year B.Com. Finance and Taxation Model I degree programme, the student will be able to:

- PSO1:** Develop theoretical and pragmatic orientation in trade, industry and commerce in a financial system.
- PSO2:** Equip with preparation and analysis of business transactions from financial and costing perspective.
- PSO3:** Create the ability to deal with various concepts and practical modalities of tax system in India.
- PSO4:** Enhance the ability to use knowledge and tools of managerial decision making in business.
- PSO5:** Apply the knowledge of various principles, provisions and practices of banking and insurance to handle the activities associated with banking and insurance sectors.

Course Outcomes (CO)

At the completion of three-year B.Com. Finance and Taxation Model I degree programme, the student will be able to:

SEMESTER I

English Common Course 1 - Fine-Tune your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

Second Language – Malayalam Common Course 1 – Kathayum Kaviythayum (ML1CCT05)



- CO1:** Develop awareness in short story
- CO2:** Construct an authentic knowledge about the development of literature.
- CO3:** Evaluate poetry by gaining in depth knowledge on its dimensions and sensibility.
- CO4:** Critical reading and appreciation of Malayalam short stories and Poems.

Core Course 1 - Dimensions and Methodology of Business Studies (CO1CRT01)

- CO1:** Infer an idea about business and its role in society.
- CO2:** Evaluate Business ethics and Corporate Social Responsibility.
- CO3:** Summarize the business environment and various dimensions
- CO4:** Express Technology integration in business
- CO5:** Evaluate the importance and fundamentals of business research

Core Course 2 - Financial Accounting (CO1CRT02)

- CO1:** Prepare Financial Statements.
- CO2:** Distinguish the concept of single entry and double entry.
- CO3:** Assess royalty and consignment accounts.
- CO4:** Assess the details of farm accounts

Core Course 3 - Corporate Regulations and Administration (CO1CRT03)

- CO1:** Evaluate the theoretical aspects of company and its different types
- CO2:** Structure the promotion and formation formalities of company
- CO3:** Evaluate the details of share capital and its issuing procedures.
- CO4:** Assess in the procedure formalities of company meetings.
- CO5:** Summarize the procedure of winding up.

Complementary Course 1 - Banking and Insurance (CO1CMT01)

- CO1:** Assess the basic concepts and practice of banking.
- CO2:** Convince various Innovations and Reforms in Banking sector.
- CO3:** Evaluate the details of customer relationship



CO4: Summarize the concept of insurance and its principle

SEMESTER II

English Common Course 2 - Issues that Matter (EN2CC03)

CO1: Evaluate the contemporary issues of concern.

CO2: Examine the major issues of contemporary significance

CO3: Create awareness in learners to respond rationally and positively to the issues raised in society.

CO4: Internalize the values imparted through the selections in the works provided.

Second Language - Malayalam Common Course 2 - Athmakadha, Lekhanam (ML2CCT06)

CO1: To appreciate portions of prose.

CO2: Construct knowledge about autobiography in Malayalam Literature

CO3: The course is designed to train students in creative writing such as News for dailies'and Essays

CO4: The course also deals the features of languages in E-media.

Core Course 4 -Financial Accounting-II (CO2CRT04)

CO1: Illustrate accounting for Hire Purchase.

CO2: Prepare Branch accounts.

CO3: Assess scope and accounting procedure of departmental accounting

CO4: Prepare partnership account and dissolution of partnership firm.

CO5: Evaluate accounting standards and its application.

Core Course 5- Business Regulatory Framework (CO2CRT05)

CO1: Conclude business and corporate law

CO2: Devise on contract and various types of contracts

CO3: Evaluate the concept of sale of goods

CO4: Infer companies and its types



Core Course 6 - Business Management (CO2CRT06)

- CO1:** Assess evolution of management thoughts.
- CO2:** Evaluate the planning and decision-making process.
- CO3:** Write organization structure and different types of organization.
- CO4:** Report the recruitment process and stages in selection.
- CO5:** Summarize motivation, importance of communication and Principles of coordination.

Complementary Course 2 -Principles of Business Decisions (CO2CMT02)

- CO1:** Evaluate the basic elements of managerial economics.
- CO2:** Assess the law of demand, supply forecasting, consumer durable
- CO3:** Generalize theories of profit, profit maximization and analysis of Break Even Point
- CO4:** Consider law of diminishing proportion, product function, Economies of scale
- CO5:** Report on various Pricing policy in detail.

SEMESTER III

English Common Course 3 - Gems of Imagination (EN3CCT07)

- CO1:** Familiarize different genres of literature and to help them imbibe critical thought in discussing literature.
- CO2:** Appreciate the aesthetic and cultural milieu in which literature resides.
- CO3:** Discern the ways in which different literary genres affect reading.
- CO4:** Excellence in life and art through the assorted experiences offered by literary narratives.
- CO5:** Develop a wide reading of fiction and poetry among the youth

Core Course 7 - Corporate Accounts I (CO3CRT07)

- CO1:** Distinguish the features of Shares and Debentures.
- CO2:** Write redemption of Shares and Debenture and its types.



- CO3:** Prepare company final accounts.
- CO4:** Structure accounting for banking companies.
- CO5:** Infer with corporate accounting procedures.

Core Course 8 - Quantitative techniques for Business (CO3CRT08)

- CO1:** Evaluate the role of statistics and quantitative techniques in business and illustrate them with basic tools applied.
- CO2:** Assess the concept of statistics.
- CO3:** Estimate measures of average.
- CO4:** Evaluate the concept of interpolation and extrapolation

Core Course 9 -Financial Markets and Operations (CO3CRT09)

- CO1:** Write financial market operations in India.
- CO2:** Structure Indian financial system.
- CO3:** Distinguish primary market and secondary market.
- CO4:** Devise regarding mutual funds and various schemes of mutual funds.
- CO5:** Assess the derivative market and instruments.

Core Course 10 -Marketing Management (CO3CRT10)

- CO1:** Devise about marketing and its functions
- CO2:** Generalise product and its classifications
- CO3:** Appraise pricing policies
- CO4:** Express the concept of SCM and logistics management.
- CO5:** Evaluate recent trends in marketing.

Optional Core 1-Finance and Taxation-Goods and Services Tax (CO3OCT01)

- CO1:** Express GST law in the country.
- CO2:** Assess the registration formalities under GST
- CO3:** Develop practical perspective and employability to the students in the commercial tax practices.



CO4: Evaluate the provisions regarding filing of returns and assessment under the Act.

SEMESTER IV

English Common Course 4 - Revisiting the Classics (EN3CCT08)

- CO1:** Learns to use literature as a medium to relax and enjoy
- CO2:** Achieves the taste to appreciate classic literature
- CO3:** Capacitates the student to comprehend English poetry and novels
- CO4:** Analyses the stories to learn moral lessons as well as linguistic competencies

Core Course 11 -Corporate Accounts II (CO4CRT11)

- CO1:** Structure amalgamation, absorption and external reconstruction
- CO2:** Construct accounts of banking companies
- CO3:** Prepare accounts of insurance companies
- CO4:** Structure liquidation of companies
- CO5:** Develop knowledge of holding companies accounts.

Core Course 12 - Quantitative Techniques for Business- II (CO4CRT12)

- CO1:** Estimate measures of correlation and Regression.
- CO2:** Construct index numbers.
- CO3:** Evaluate time series analysis.
- CO4:** Assess the concept of probability.

Core Course 13-Entrepreneurship Development and Project Management(CO4CRT13)

- CO1:** Develop Entrepreneurship talents
- CO2:** Integrate various Entrepreneurship Development Programme.
- CO3:** Evaluate project formulation
- CO4:** Choose EDP schemes.
- CO5:** Distinguish MSME, EDI and other training institutes in Entrepreneur

Optional Core 2 -Finance and Taxation- Financial Services (CO4OCT01)

- CO1:** Evaluate various financial services.



- CO2:** Assess current financial practices
- CO3:** Structure venture capital, securitisation, leasing, factoring, credit rating and mergers and acquisition.
- CO4:** Assess recent trends in financial services.

SEMESTER V

Core Course 14 -Cost Accounting – 1 (CO5CRT14)

- CO1:** Evaluate the concept of cost accounting.
- CO2:** Illustrate material cost control and labour cost control
- CO3:** Estimate overhead cost.
- CO4:** Prepare cost sheet in its practical point of view.

Core Course 15 -Environment and Human Rights (CO5CRT15)

- CO1:** Summarize key concepts from environment studies, environmental policies and institutions.
- CO2:** Generalize concepts and methods from renewable and non-renewable sources and their application in environmental problem solving.
- CO3:** Summarize on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.
- CO4:** Assess 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.
- CO5:** Evaluate RTI Act and Human rights.

Core Course 16-Financial Management (CO5CRT16)

- CO1:** Assess the basics of Financial Management
- CO2:** Evaluate capital structure and theories of capital structure
- CO3:** Estimate the cost of capital in wide aspects
- CO4:** Write dividend policies and various dividend models.
- CO5:** Report working capital management



Optional Core 3 -Finance and Taxation - Income Tax- I (CO5OCT01)

- CO1:** Assess basic concept of Income Tax
- CO2:** Distinguish the different know-how and heads of income with its components
- CO3:** Assess income from house property.
- CO4:** Assess income from business or profession
- CO5:** Evaluate the concept of depreciation and its provisions

Open Course - Modern Banking (BM 5 OPT25)

- CO1:** Evaluate banker customer relationship
- CO2:** Deduce various deposits
- CO3:** Devise modern developments in Banking Sector
- CO4:** Summarize various financial markets

SEMESTER VI

Core Course 17 -Cost Accounting – 2 (CO6CRT17)

- CO1:** Measure order costing
- CO2:** Estimate operating cost
- CO3:** Prepare process accounts
- CO4:** Evaluate marginal costing.
- CO5:** Evaluate budget and budgetary control

Core Course 18 -Advertisement and Sales Management (CO6CRT18)

- CO1:** Assess strategy, concept and methods of advertising.
- CO2:** Evaluate advertisement appeal and media
- CO3:** Assess advertising research.
- CO4:** Distinguish sales promotion and personal selling.

Core Course 19 -Auditing and Assurance (CO6CRT19)

- CO1:** Evaluate the principles and procedure of auditing.



CO2: Assess the duties and responsibilities of auditors and to undertake the work of auditing.

Core Course 20-Management Accounting (CO6CRT20)

CO1: Test management accounting techniques for the analysis and interpretation of financial statements

CO2: Evaluate the framework of financial reporting.

Optional Core -4 - Income Tax- II (CO6OCT01)

CO1: Estimate Total Income and tax payable

CO2: Summarize returns to be filed by an individual and also assessment procedure

CO3: Evaluate the powers and functions of Income Tax Authorities.

Project and Viva (CO6PR01)

CO1: Develop research and analytical skill and compile comprehensive study report

CO2: Measure the knowledge in research and analysis



B.Com. Co-operation Model I (Self Financing)

Programme Specific Outcomes (PSO)

At the completion of three-year B.Com. Co-operation Model I degree programme, the student will be able to:

- PSO1:** Gain insights about contemporary Commerce, Management Co-Operative practices.
- PSO2:** Understand the fundamentals in Business Management, Financial accounting and Co- Operative accounts
- PSO3:** Find a shining career either in business, accounting or co-operative sector.

Course Outcomes (CO)

At the completion of the course under three-year B.Com. Co-operation Model I degree programme, the student will be able to:

SEMESTER I

English Common Course I - Fine-Tune your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

Second Language Common Course I- Kathayum Kavithayum (ML1CCT01)

- CO1:** Develop awareness in short story.
- CO2:** Construct an authentic knowledge about the development of literature.
- CO3:** Evaluate poetry by gaining in depth knowledge on its dimensions and sensibility.
- CO4:** Critical reading and appreciation of Malayalam short stories and Poems.

Core Course 1- Dimensions and Methodology of Business Studies (CO1CRT01)

- CO1:** Infer an idea business and its role in society.
- CO2:** Gather an overview of Business ethics and Corporate Social Responsibility.
- CO3:** Illustrate the business environment and various dimensions.

- CO4:** Extend the Technology integration in business.
- CO5:** Review the importance and fundamentals of business research.

Core Course 2 - Financial Accounting (CO1CRT02)

- CO1:** Prepare Financial Statements.
- CO2:** Assess the concept of single entry and double entry.
- CO3:** Assess royalty and consignment accounts.
- CO4:** Devise the details of farm accounts

Core Course 3- Corporate Regulations and Administration (CO1CRT03)

- CO1:** Memorize the theoretical aspects of company and its different types.
- CO2:** Illustrate the promotion and formation formalities of company.
- CO3:** Assess the details of share capital and its issuing procedures.
- CO4:** Assess the procedure formalities of company meetings.
- CO5:** Link the procedure of winding up.

Complementary Course I - Banking and Insurance (CO1CMT01)

- CO1:** Test the basic concepts and practice of banking.
- CO2:** Detect various Innovations and Reforms in banking sector.
- CO3:** Moderate the details of customer relationship.
- CO4:** Associate the concept of insurance and its principle

SEMESTER II

English Common Course II- Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance.
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalise the values imparted through the selections in the works provided.

Second Language Common Course II- Athmakadha, Lekhanam (ML2CCT06)

- CO1:** Illustrate portions of prose.
- CO2:** Construct knowledge about autobiography in Malayalam Literature.
- CO3:** Link in creative writing such as News for dailies' and Essays.
- CO4:** Familiarise features of languages in E-media

Core Course 4 - Financial Accounting-II (CO2CRT04)

- CO1:** Illustrate accounting for Hire Purchase.
- CO2:** Prepare of Branch accounts.
- CO3:** Examine the scope and accounting procedure of departmental accounting.
- CO4:** Enable the students to illustrate partnership account and dissolution of partnership firm.
- CO5:** Review accounting standards and its application.

Core Course 5 - Business Regulatory Framework (CO2CRT05)

- CO1:** Discuss about the Law of Contract, its kinds, essentials, performance and breach of contract.
- CO2:** Identify Bailor & Bailee, Finder of lost goods, rights & duties of Pawner & Pawnee.
- CO3:** Differentiate Indemnity & Guarantee.
- CO4:** Summarize the Law of Agency.
- CO5:** Estimate the concept of sale of goods.

Core Course 6 - Business Management (CO2CRT06)

- CO1:** Assess evolution of management thoughts.
- CO2:** Evaluate the planning and decision-making process.
- CO3:** Write organization structure and different types of organization.
- CO4:** Report the recruitment process and stages in selection.
- CO5:** Summarize motivation, importance of communication and Principles of coordination.

Complementary Course II –Principles of Business Decisions (CO2CMT02)

- CO1:** Evaluate the basic elements of managerial economics.
- CO2:** Explain the law of demand, supply forecasting, consumer durable.
- CO3:** Connect theories of profit, profit maximization and analysis of Break Even Point.
- CO4:** Consider law of diminishing proportion, product function, Economies of scale.
- CO5:** Focus on various Pricing policies in detail.



SEMESTER III

English Common Course III - Gems of Imagination (EN3CCT07)

- CO1:** Familiarize different genres of literature and to help them imbibe critical thought in discussing Literature.
- CO2:** Appreciate the aesthetic and cultural milieu in which literature resides.
- CO3:** Discern the ways in which different literary genres affect reading.
- CO4:** Excellence in life and art through the assorted experiences offered by literary narratives.
- CO5:** Develop a wide reading of fiction and poetry among the youth

Core Course 7 - Corporate Accounts I (CO3CRT07)

- CO1:** Enabling the students to differentiate the features of Shares and Debentures.
- CO2:** Categorise redemption of Shares and Debenture and its types.
- CO3:** Explain company final accounts.
- CO4:** Illustrate on accounting for banking companies.
- CO5:** Make the students infer with corporate accounting procedures.

Core Course 8 - Quantitative Techniques for Business I (CO3CRT08)

- CO1:** Make the students explain the role of statistics and quantitative techniques in business and illustrate them with basic tools applied.
- CO2:** Explain the concept of statistics.
- CO3:** Equip students to calculate measures of average.
- CO4:** Enable the students to evaluate the concept of interpolation and extrapolation

Core Course 9 - Financial Markets and Operations (CO3CRT09)

- CO1:** Enable the students to explain financial market operations in India.
- CO2:** Illustrate about Indian financial system.
- CO3:** Categorise primary market and secondary market.
- CO4:** Devise regarding mutual funds and various schemes of mutual funds.
- CO5:** Assess the derivative market and instruments.



Core Course 10 - Marketing Management (CO3CRT10)

- CO1:** Devise about marketing and its functions
- CO2:** Generalise product and its classifications
- CO3:** Appraise pricing policies
- CO4:** Express the concept of SCM and logistics management.
- CO5:** Evaluate recent trends in marketing.

Optional Course I - Basics of Co-operation (CO3OCT03)

- CO1:** Describe the origin & development of Co-operation.
- CO2:** Distinguish Capitalism, Socialism, Communism & other forms of business organization with Co-operative Enterprises.
- CO3:** Discuss about the evolution & development of Co-operative principles.
- CO4:** Classify the types of Co-operatives in India & Kerala.
- CO5:** Identify the Co-operative movement in Foreign countries.

SEMESTER IV

English Common Course IV – Revisiting the Classics (EN3CCT08)

- CO1:** Learns to use literature as a medium to relax and enjoy
- CO2:** Achieves the taste to appreciate classic literature
- CO3:** Capacitates the student to comprehend English poetry and novels
- CO4:** Analyses the stories to learn moral lessons as well as linguistic competencies

Core Course 11 - Corporate Accounts II (CO4CRT11)

- CO1:** Structure amalgamation, absorption and external reconstruction
- CO2:** Construct accounts of banking companies
- CO3:** Prepare accounts of insurance companies
- CO4:** Structure liquidation of companies
- CO5:** Develop knowledge of holding companies accounts.



Core Course 12- Quantitative Techniques for Business- II (CO4CRT12)

- CO1:** Enable the students to calculate measures of correlation and Regression.
- CO2:** Equip students to construct index numbers.
- CO3:** Measure time series analysis.
- CO4:** Sketch the concept of probability.

Core Course 13 - Entrepreneurship Development and Project Management (CO4CRT13)

- CO1:** Express about Entrepreneurship development
- CO2:** Organise various Entrepreneurship Development Programme.
- CO3:** Assess project formulation
- CO4:** Connect with EDP schemes.
- CO5:** Distinguish MSME, EDI and other training institutes in Entrepreneur

Optional Course II– Management of Co-Operative Enterprises (CO4OCT03)

- CO1:** Infer the principles and practice of co-operative management and administration.
- CO2:** Illustrate the issues in the process of management and administration of co-operative.
- CO3:** Generalize Administrative set up of Co-operative Department in Kerala.
- CO4:** Develop the Co-operative Education & Training importance among the students.
- CO5:** Interpret the Management & working of major Co-operative organization and Institutions.

SEMESTER V

Core Course 14 - Cost Accounting I (CO5CRT14)

- CO1:** Review the concept of cost accounting.
- CO2:** Illustrate on stock valuation.
- CO3:** Sketch out wages under time rate and piece rate system.
- CO4:** Validating overhead cost.
- CO5:** Devising cost sheet in its practical point of view.



Core Course 15 - Environment Management and Human Rights (CO5CRT15)

- CO1:** Summarise key concepts from environment studies, environmental policies and institutions.
- CO2:** Highlight concepts and methods from renewable and non-renewable sources and their application in environmental problem solving.
- CO3:** Summarize on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.
- CO4:** Explain 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.
- CO5:** Rate RTI Act and Human rights.

Core Course 16 - Financial Management (CO5CRT16)

- CO1:** Associate basics of Financial Management
- CO2:** Illustrate capital structure and theories of capital structure
- CO3:** Measure the cost of capital in wide aspects
- CO4:** Comment on the dividend policies and various dividend models.
- CO5:** Illustrate working capital management

Optional Course III - Co-Operative Legal System (CO5OCT03)

- CO1:** Summarise an insight into the prevailing Co-operative Legal system in India & in Kerala
- CO2:** Generalize the Kerala Co-operative Societies Act 1969
- CO3:** Describe the Management of Co-operatives
- CO4:** Administer the settlement of Disputes, Arbitration and Awards.
- CO5:** Evaluate the Winding up and Dissolution of Co-operative Societies.

Open Course-Modern Banking (BM5OPT25)

- CO1:** Validate banker customer relationship
- CO2:** Categorise various deposits and schemes
- CO3:** Devise modern developments in Banking Sector
- CO4:** Distinguish various financial markets



SEMESTER VI

Core Course 17 - Cost Accounting II (CO6CRT17)

- CO1:** Illustrate on Order costing
- CO2:** Estimate operating and process costing.
- CO3:** Estimate profit or loss on contract accounts.
- CO4:** Comment on marginal cost.
- CO5:** Sketch budget and associating with budgetary control

Core Course 18 -Advertisement and Sales Management (CO6CRT18)

- CO1:** Highlight strategy, concept and methods of advertising.
- CO2:** Review advertisement appeal and media
- CO3:** Gather about advertising research.
- CO4:** Categorise sales promotion and personal selling.

Core Course 19 -Auditing and Assurance (CO6CRT19)

- CO1:** Infer the principles and procedure of auditing.
- CO2:** Gather knowledge on audit engagement, documentation and evidence.
- CO3:** Summarise the procedures of internal control.
- CO4:** Correlate the duties and responsibilities of auditors while undertaking the work of auditing
- CO5:** Distinguish between audit and investigation and to interpret the duties and powers of CAG.

Core Course 20 - Management Accounting (CO6CRT20)

- CO1:** Associate the basics of Management Accounting and distinguish between management and financial accounting.
- CO2:** Infer management accounting techniques for the analysis and interpretation of financial statements
- CO3:** Gather knowledge on different types of ratio for making meaningful financial interpretations
- CO4:** Sketch out fund flow statement.



CO5: Sketch out Cash flow statement.

Optional Course IV - Accounting for Co-Operative Societies (CO6OCT03)

CO1: Infer about the books and registers maintained by co-operative societies.

CO2: Compare the owned funds and borrowed funds of co-operative societies and gather knowledge about the State Government aid to co-operative societies.

CO3: Sketch out Receipts and disbursement statements of different co-operative societies and apex banks.

CO4: Prepare the final accounts of different co-operative societies and apex banks.

CO5: Summarise the procedure of co-operative audit

Project and Viva (CO6PR01)

CO1: Develop research and analytical skill and compile comprehensive study report

CO2: Measure the knowledge in research and analysis



B.Com. Computer Application Model III (Self Financing)

Programme Specific Outcomes (PSO)

At the completion of the three-year B.Com. Computer Application Model III degree programme, the student will be able to:

- PSO1:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.
- PSO2:** Demonstrate understanding of facts and ideas by organizing, comparing, interpreting, giving descriptions and stating main ideas.
- PSO3:** Solving problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.
- PSO4:** Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.

Course Outcomes (CO)

At the completion of the course under three-year B.Com. Computer Application Model III degree programme, the student will be able to:

SEMESTER I

English Common Course 1 - Fine-Tune your English (EN1CC01)

- CO1:** Attain the basics of grammar, usage and effective communication.
- CO2:** Confidently apply English in both written and spoken forms.
- CO3:** Create confidence in English to communicate effectively.
- CO4:** Analyse the vocabulary and syntax.
- CO5:** Evaluate and use grammar effectively by becoming advanced learners.

Core Course 1 - Dimensions and Methodology of Business Studies (CO1CRT01)

- CO1:** Infer an idea about business and its role in society.
- CO2:** Evaluate Business ethics and Corporate Social Responsibility.
- CO3:** Summarize the business environment and various dimensions.
- CO4:** Express Technology integration in business.



CO5: Evaluate the importance and fundamentals of business research.

Core Course 2 - Financial Accounting (CO1CRT02)

CO1: Prepare Financial Statements.

CO2: Distinguish the concept of single entry and double entry.

CO3: Assess royalty and consignment accounts.

CO4: Assess the details of farm accounts.

Core Course 3 - Corporate Regulations and Administration (CO1CRT03)

CO1: Explain the theoretical aspects of company and its different types

CO2: Illustrate the promotion and formation formalities of company.

CO3: Enable the students to evaluate the details of share capital and its issuing procedures.

CO4: Assess in the procedure formalities of company meetings.

CO5: Analyse the procedure of winding up.

Complementary Course 1 - Banking and Insurance (CO1CMT01)

CO1: Enable the students to explain the basic concepts and practice of banking.

CO2: Correlate various Innovations and Reforms in Banking sector.

CO3: Evaluate the details of customer relationship.

CO4: Summarize the concept of insurance and its principle.

Complementary Course 2 -Business Communication and Management Information System (C01CMT03)

CO1: Familiarize with the importance of communication in business.

CO2: Impart knowledge in students on different communication methods used in Workplaces.

CO3: Familiarizing different legal deeds and documents available.

CO4: Providing exposure to the latest communication technologies.

CO5: Providing students an insight into management information system, its role and functions.



SEMESTER II

English Common Course 2 - Issues that Matter (EN2CC03)

- CO1:** Evaluate the contemporary issues of concern.
- CO2:** Examine the major issues of contemporary significance.
- CO3:** Create awareness in learners to respond rationally and positively to the issues raised in society.
- CO4:** Internalize the values imparted through the selections in the works provided.

Core Course 4 -Financial Accounting-II (CO2CRT04)

- CO1:** Illustrate accounting for Hire Purchase.
- CO2:** Prepare of Branch accounts.
- CO3:** Assess scope and accounting procedure of departmental accounting
- CO4:** Prepare partnership account and dissolution of partnership firm.
- CO5:** Evaluate accounting standards and its application

Core Course 5- Business Regulatory Framework (CO2CRT05)

- CO1:** Conclude business and corporate law.
- CO2:** Devise on contract and various types of contracts.
- CO3:** Evaluate the concept of sale of goods.
- CO4:** Infer companies and its types.

Core Course 6 - Business Management (CO2CRT06)

- CO1:** Assess evolution of management thoughts.
- CO2:** Evaluate the planning and decision-making process.
- CO3:** Write organization structure and different types of organization.
- CO4:** Report the recruitment process and stages in selection.
- CO5:** Summarize motivation, importance of communication and Principles of coordination.



Complementary Course 3- Principles of Business Decisions (CO2CMT02)

- CO1:** Evaluate the basic elements of managerial economics.
- CO2:** Explain the law of demand, supply forecasting, consumer durable.
- CO3:** Connect theories of profit, profit maximization and analysis of Break Even Point.
- CO4:** Consider law of diminishing proportion, product function, Economies of Scale.
- CO5:** Focus on various Pricing policy in detail.

Complementary Course 4- Business Environment (CO2CMT04)

- CO1:** Identifying and evaluating business and its environment.
- CO2:** Enabling students to observe business and society .
- CO3:** Analyzing the contemporary issues in business.
- CO4:** Examine and evaluate business in international environment.

SEMESTER III

Core Course 7 - Corporate Accounts I (CO3CRT07)

- CO1:** Enabling the students to differentiate the features of Shares and Debentures.
- CO2:** Categorize redemption of Shares and Debenture and its types.
- CO3:** Explain company final accounts.
- CO4:** Illustrate on accounting for banking companies.

Core Course 8 - Quantitative techniques for Business (CO3CRT08)

- CO1:** Evaluate the role of statistics and quantitative techniques in business and illustrate them with basic tools applied.
- CO2:** Assess the concept of statistics.
- CO3:** Estimate measures of average.
- CO4:** Evaluate the concept of interpolation and extrapolation.

Core Course 9- Financial Markets and Operations (CO3CRT09)

- CO1:** Explain financial market operations in India.
- CO2:** Illustrate about Indian financial system.
- CO3:** Categorise primary market and secondary market.
- CO4:** Devise regarding mutual funds and various schemes of mutual Funds.
- CO5:** Assess the derivative market and instruments.



Core Course 10 -Marketing Management (CO3CRT10)

- CO1:** Devise about marketing and its Functions.
- CO2:** Illustrate product and its classifications.
- CO3:** Appraise pricing policies.
- CO4:** Express the concept of SCM and logistics management.
- CO5:** Evaluate recent trends in marketing.

Complementary Course 5 -Business Ethics and Corporate Social Responsibility (CO3CMT05)

- CO1:** Describe the concept of the business ethics and to provide best practices of business Ethics.
- CO2:** Analyse the corporate social responsibility.
- CO3:** Analyse the various ethical codes in corporate governance.
- CO4:** Evaluate the employee's conditions and business ethics.

Choice Based Course: Information Technology for Business (CO3OCT02)

- CO1:** Express the concepts of Information Technology and the basic concepts of computer hardware and software.
- CO2:** Analyze the social informatics and identifying the cyber threats and cyber crimes prevailing in India.
- CO3:** Identify the different types of computer networks and to learn about network security, firewalls and communication media.
- CO4:** Develop the basic programming skills on creating web pages using html and to discover the key concepts of html.
- CO5:** Analyze the working concepts of internet and its protocols.

SEMESTER IV

Core Course 11 -Corporate Accounts II (CO4CRT11)

- CO1:** Support the students to understand about amalgamation, absorption and external Reconstruction.
- CO2:** Make them explain about accounts of banking companies.
- CO3:** Organize accounts of insurance companies.
- CO4:** Enable the students to illustrate liquidation of companies.

CO5: Decide to develop knowledge of holding companies accounts.

Core Course 12 – Quantitative Techniques for Business- II (CO4CRT12)

CO1: Enable the students to calculate measures of correlation and Regression.

CO2: Equip students to construct index numbers.

CO3: Evaluate time series analysis.

CO4: Enable the students to explain about the concept of probability.

Core course 13-Entrepreneurship Development and Project Management (CO4CRT13)

CO1: Develop students about Entrepreneurship development.

CO2: Organize the various Entrepreneurship Development Programme.

CO3: evaluate project formulation.

CO4: connect with EDP schemes.

CO5: Identify MSME, EDI and other training institutes in Entrepreneur.

Complementary Course 6 Logistics and Supply Chain Management (CO4CMT06)

CO1: Identify the importance of logistics to business organizations, provide a brief overview of the set of activities that make up the logistics process.

CO2: Understand the nature of inventory and its role in the logistics management process.

CO3: Understand the relationship between Supply chain Management and Integrated Logistics.

CO4: Examine why Supply Chain Management has become increasingly important in today's business environment.

CO5: Identify the technologies needed for the traceability of the materials in the logistics chain of the company.

Optional course -Information Technology for Office (CO4OCT02)

CO1: Identify the word's advanced formatting techniques and presentation styles.

CO2: Introduce various versions concepts and applications of PageMaker.

CO3: Understand the knowledge of organizing and displaying large amounts and complex data.

CO4: Analyze formulae , charts and graphs to easily simplify complex information and Data

CO5: Inculcate working knowledge on powerpoint slides,texts, graphics, animations, transitions and themes.



SEMESTER V

Core course 14 -Cost Accounting – 1(CO5CRT14)

- CO1:** Evaluate the concept of cost accounting.
- CO2:** Estimate overhead cost.
- CO3:** Prepare cost sheet in its practical point of view.
- CO4:** Familiarize with the estimation of overhead cost.
- CO5:** Develop the skills in preparing cost sheets.

Core course 15 -Environment and Human Rights (CO5CRT15)

- CO1:** Explain key concepts from environment studies, environmental policies and institutions.
- CO2:** Rate concepts and methods from renewable and non- renewable sources and their application in environmental problem solving.
- CO3:** Summarize on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.
- CO4:** Students correlate 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.
- CO5:** Evaluate RTI Act and Human rights.

Optional core - Computerized Accounting (CO5OCT02)

- CO1:** Equip the students to meet the demands of the industry by mastering them with industry sought after computerized accounting packages.
- CO2:** Expose the students to computer applications in the field of accounting.
- CO3:** Develop practical skills in the application of tally accounting packages.
- CO4:** Develop awareness regarding statutory features especially GST features.
- CO5:** Aware of the payroll information and vouchers.

Complementary course 5 - Programming In C(CO5CMT08)

- CO1:** Examine the basics of C programming.

- CO2:** Analyze different decision making and branching statements in C.
- CO3:** Illustrate the working of arrays.
- CO4:** Identify different user defined functions in C.
- CO5:** Identify the concepts of structures, pointers and union.

Open course- Modern Banking (BM5OPT25)

- CO1:** Evaluate banker customer relationship.
- CO2:** Identify various deposits.
- CO3:** Devise modern developments in Banking Sector.
- CO4:** Classify various financial markets.

SEMESTER VI

Core Course 16 -Cost Accounting – 2 (CO6CRT17)

- CO1:** Illustrate on Order costing.
- CO2:** estimate operating and process costing.
- CO3:** Appraise cost of capital in wide aspects.
- CO4:** Evaluate marginal costing.
- CO5:** Evaluate budget and budgetary control.

Core Course 18 -Advertisement and Sales Management (CO6CRT18)

- CO1:** Explain strategy, concept and methods of advertising.
- CO2:** Evaluate advertisement appeal and media.
- CO3:** Explain about advertising research.
- CO4:** Categorizing sales promotion and personal selling.

Core Course 19 -Management Accounting (CO6CRT20)

- CO1:** Categorizing management accounting techniques for the analysis and interpretation of financial statements.
- CO2:** Explain the framework of financial reporting.
- CO3:** understand different ratios used for analyzing financial Statements.
- CO4:** Prepare fund flow statement for the business organization.



CO5: Prepare the cash flow statement required for the business.

Complementary Courses 6 - Database Management System (CO6CMT10)

CO1: Familiarize students about the key concepts and terminologies of database.

CO2: Discover various data models and relationships in database and to efficiently organize data in database.

CO3: Impart practical knowledge in students on how to create databases in Ms Access.

CO4: Analyze on how to update data in database using queries.

CO5: Prepare the students in generating reports using Access.

Optional Course - Software for business and Research (CO6OCT02)

CO1: Impart knowledge to use IT in business research analysis.

CO2: Analyze data for business research.

CO3: Familiarize the student to use SPSS for business research analysis.

CO4: Equip the students to use Libre office writer for research.

CO5: Support the students to use Libre office calc for business research operations.

Project and Viva (CO6PR01)

CO1: Build research and analytical skill, thereby equipping the students to prepare comprehensive study report.

CO2: Appreciate the knowledge and understanding of the students in research and analysis.