

ST. THOMAS COLLEGE PALAI

NAAC Accredited with 'A' Grade (3rd Cycle, CGPA 3.30) in 2015

College with Potential for Excellence (CPE-UGC)

(Affiliated To Mahatma Gandhi University, Kottayam)



COURSE OUTCOMES

OF

POSTGRADUATE PROGRAMMES

(2012 - 2018 Admissions)

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Name of the Programme: MA English

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
PC 1	Chaucer and the Roots of English	CO1	To provide the student with knowledge of the growth of English language and literature up to the age of Chaucer.
		CO2	Introduces the student to the social cultural and intellectual background of the late Medieval period in English Literature and to sensitize him/her to the major literary works of the period.
PC 2	Writings of the Renaissance	CO1	To introduce the English Renaissance and the texts that shaped it/were shaped by it.
		CO2	To provide a theoretical/critical reading of the era and the texts in the light of recent theoretical interventions like New Historicism which had a special interest in Renaissance texts.
PC 3	Revolution and the Enlightenment	CO1	To familiarize the student with the English literature of the Seventeenth Century
		CO2	To provide him/her with analytical/critical perspectives on the social, cultural and intellectual climate of the period
PC 4	Literary Criticism and Academic Writing	CO1	To familiarize the students with the key concepts and texts of literary criticism ever since its emergence
		CO2	To provide practical and theoretical familiarity with the range, approaches, and mechanics of academic writing
PC 5	Indian English Literature	CO1	To familiarize the students with one of the most significant literatures produced in the English language from the non English speaking cultures.
		CO2	To make conscious of the colonial context in which Indian English developed as a language and literature
SEMESTER 2			
PC 6	Literature of the Nineteenth Century	CO1	To familiarize the students with two prominent eras in English literature, namely the latter half of the 18th century, first half of the 19th century and the latter half of the 19th century.
		CO2	To drive home the romantic sensibility that reigned supreme for more than half a century.
PC 7	Modernism in Context	CO1	To familiarize the students with the literary trends of the early twentieth century in the context of the sensibility of literary modernism in the wake of the World War.
		CO2	To introduce the changed literary perspectives in the twentieth century, along with the social, economic and political background. Imperial expansion which had reached a boiling point, the onset of the World War I coupled with the attempts at creating a new world order.

PC 8	Dimensions of the Postmodern	CO1	To introduce the student to the developments in literature written in English since the 1960s.
		CO2	To have an insight into the experimental and metropolitan literature
PC 9	Language and Linguistics	CO1	To inculcate in the pupils awareness about the basic concepts of linguistics, the scientific study of language.
		CO2	Covers the important areas in linguistics and updates the pupil on the most recent advances in the theory of language study.
PC 10	Theories of Knowledge	CO1	To introduce literary theory and its latest developments to students.
SEMESTER 3			
PC 11	American Literature	CO1	To introduce the most important branch of English literature of the non British tradition.
		CO2	To provide an overview of the processes and texts that led to the evolution of American literature as an independent branch or school of literature.
PC 12	Cultural Studies	CO1	To introduce students to the terms, analytical techniques, and interpretive strategies commonly employed in Cultural Studies.
		CO2	To explore how cultural processes and artefacts are produced, shaped, distributed, consumed, and responded to in diverse ways.
PC 13	Gender Studies	CO1	To make the student familiar with the emergence and growth of the notion of gender as a concept central to the reading of literature.
		CO2	To introduce a wide variety of theoretical, critical and creative works that define and redefine the concept as it is understood in contemporary society.
PC 14	Modes of Fiction	CO1	To familiarise the student with the various modes of narrative fiction attempted across centuries, continents and languages.
		CO2	To introduce the various schools, influences and narrative devices that shaped narrative fiction in its present form.
PC 15	Texts and Performance	CO1	To facilitate an understanding of the basic structural and thematic patterns that governs the poetic process, especially in its relation to the performative or the theatrical.
		CO2	To introduce Marginalized theatres, issues like gender, ethnicity, etc.
		CO3	To discuss the development of theatre from classical times, Anti-Aristotelian notions like Alienation Effect, the Indian notion of Rasa etc.
SEMESTER 4			
PC 16	Literature and the Empire	CO1	To introduce the students to the discursive nature of colonialism, and the counter discursive impulses of postcolonial theory, narratives and performance texts.
		CO2	To cover through representative texts the writing, reading and critical-theoretical practices based on the colonial experience

PE01	Modern European Drama	CO1	To familiarize the student with modern European Drama in terms of topics, perspectives, and dramatic literature.
		CO2	To revisit the ideological foundations of modernism.
PE02	Shakespeare across Cultures	CO1	To situate the timeless genius of Shakespeare across cultures, literatures and authors.
		CO2	To address the impact of Shakespeare at the theoretical and textual levels.
PE08	The Indian Poetic Tradition	CO1	To familiarize the students with the major texts of the Indian tradition in the light of Indian poetic principles.
		CO2	To introduce the eight major schools of Indian Aesthetics.
PE 09	Modern European Fiction	CO1	To introduce the student to a selection of European fiction spanning the second half of the nineteenth century and the twentieth century.

Name of the Programme: MA Malayalam

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
ML010101	Kavitha Pracheenam Madhyakalam	CO1	To identify developments of poetry from medieval
		CO2	Realize aesthetics of oral poetry
ML010102	Malayala Bhasha Charithravum Varthamanavum	CO1	Recognize history of Malayalam through critical attitude
		CO2	Recognize the relation of social development and mother tongue
ML010103	Malayala Cherukatha	CO1	Realize evolution and development of Malayalam short story as a narrative
		CO2	Recognize new aesthetic trends in Malayalam short stories
ML010104	Sahithya Rachana Sankethangal	CO1	Introducing Stylistics in world narratives
		CO2	Recognize different meters in Malayalam poetry
ML010105	Sanskrit	CO1	Create an opportunity to study aesthetics of Sanskrit in the same
		CO2	Recognize many aesthetic attitudes of Sanskrit
SEMESTER 2			
ML010201	Adhunika Malayala kavitha onnam gattam	CO1	To identify the changes of Malayalam poetry in the half of nineteen century
		CO2	Realize the influence of renaissance in Malayalam literature

ML010202	Bhasha Sasthram	CO1	Analyze Malayalam language on the basis of linguistic discourse
		CO2	Realize draveedian Language on the basis of dichromatic age
ML010203	Kerala Culture	CO1	Realizing different movements in ages
		CO2	Enquiring about marginalized studies
ML010204	Malayalam Novel	CO1	Realizing the process of evolution of prose in Malayalam
		CO2	Realizing growth of theoretical devices n Malayalam prose
ML010205	Bharatheeya Sahithya Sidhanthangal	CO1	Make an evaluation about analyzing aesthetic theories of ancient India
		CO2	Promote an interest in interdisciplinary theoretical aspects
SEMESTER 3			
ML010301	Adhunika Malayala Kavitha Randam gattom	CO1	Realize modernity in Malayalam poetry
		CO2	Realize cultural difference in post modern poetry
ML010302	Malayala Bhasha vyakaranam Malayala Cherukatha	CO1	Acquiring knowledge of critical thinking in Malayalam Grammar
		CO2	Compare and identify the problems of mile stones in Malayalam grammar
ML010303	Malayala Niroopanam	CO1	Realize evolution and development of Malayalam criticism
		CO2	Inculcate creativity in criticism
ML010304	Drishyakala Sahithyam	CO1	Evaluate different visual arts such s folklore and classical arts
		CO2	Appreciate it as our legacy
ML010305	Paschathya Sahithya Sidhanthangal	CO1	Make an awareness ancient western philosophy from Greek
		CO2	Realize historical events in the development of new philosophical thoughts
SEMESTER 4			
ML010401	Nadakavum cinimayum	CO1	Make an enquiry about human aspects and social reality narrated in visual arts
		CO2	Make a detailed study of history and aesthetics of visual arts
ML010402	Sahithya charithra vinjaneeyam and methodology	CO1	Make an evaluation of the ideology of historical Narrations
		CO2	Make a critical thinking about narration of history in Malayalam
ML800401	Vivarthana Sahithyam	CO1	Make a general awareness of translations in Malayalam
		CO2	Inculcate an attitude towards translations

ML800402	Dalit stree paristhithi sahithya vicharam	CO1	Realize post modernism as a diversity of dalit and so on
		CO2	Make an invention about marginalized literature
ML800403	Cyber samskaravum sahithyavum	CO1	Recognize the importance of cyber aesthetics
		CO2	Appreciate different faces of cyber literature

Name of the Programme: MA Hindi

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
HN1 PC 01	Ancient Poetry	CO1	To make the student familiar with the ancient culture and political tradition of early and Post medieval Hindi Poetry
		CO2	To develop the ability to identify a variety of forms and genres of poetry from diverse culture and historic periods.
		CO3	To familiarize the rhythms, metrics and other musical aspects of poetry.
HN1 PC 02	Prose	CO1	To make students familiar with sketches memories auto biography etc.
		CO2	To develop the ability to write clear sentences and construct paragraphs and essays.
		CO3	To construct personally meaningful and culturally relevant connections to the text.
HN1 PC03	History of Hindi Literature	CO1	To develop an outlook about the ancient history of Hindi literature.
		CO2	To know about the important changes and movements of the referred period.
		CO3	To know about the culture of our country through the famous works of this period.
HN1 PC04	Bhasha Vigyan	CO1	To understand the principles and assumptions governing modern linguistics.
		CO2	Student will be able to understand different branches of linguistics.
		CO3	Student will be able to understand the concepts, theories and methodologies used by linguists in quantitative and qualitative analysis of linguistic structure and patterns of language use.
HN1PC05	Drama and Theatre	CO1	To make the students familiar with drama and other forms of arts.
		CO2	Students will be able to compare and construct characters within the plays.
		CO3	Students will be able to demonstrate an appreciation of the literature through the discussion and written analysis.

SEMESTER 2			
HN2 PC O6	Ancient Poetry –II	CO1	Ancient poetry conveys Philosophical Heritage of the Middle ages.
		CO2	The student will be able to apply the principles of literary criticism to the analysis of poetry.
		CO3	Student will be able to develop their own creativity enhance their writing skills.
HN2 PC 07	Fiction up to 1950.	CO1	To make students familiar with novel and stories
		CO2	To develop the skill to write with proficiency in one or more creative literary form with constrictively and critical proficiency.
		CO3	Student will be able to recognize, explain ,and apply various theoretical models in writing.
HN2 PC08	History of Hindi Literature	CO1	To make the students familiar with ancient and modern culture.
		CO2	To develop an authentic knowledge about the development of literature.
		CO3	To familiarize with great writers and their thoughts and philosophy.
HN2 PC09	History and Structure of Hindi Language.	CO1	To understand the principles and assumptions governing modern linguistics.
		CO2	Student will be able to understand the process of language change and variation, the role of languages in reflecting and constructing social identities.
		CO3	To understand the classification of language and the development of Hindi language and lipi.
HN2 PC10	Bharatheeya Kavya Sastra aur Hindi Alochana.	CO1	To create an ability in the students to analyse and understand Kavya and its definition.
		CO2	Students will learn many notable works of criticism combine discussions of texts with broad arguments about the nature of literature.
		CO3	Criticism will help the students to cover all phrases of literary understanding.
SEMESTER 3			
HN3 PC 11	Aadunik Kavitha -I	CO1	To make aware of the Hindi poets through analyzing their major poetic contributions.
		CO2	To familiarize the different trends in Hindi Poetry such as Chayavad, Pragadivad, Prayogvad etc.
		CO3	Students will be able to offer a critical discussion of major texts in a formal academical way.
HN3 PC 12	Katha Sahitya-II	CO1	To make students familiar with novels and stories.
		CO2	The study of significant writers like Premchand ,Agneya strengthens the moral and human values of the students.
		CO3	To understand and appreciate Hindi prose
HN3 PC13	Bharatheeya Sahithya	CO1	To make the students familiar with ancient and modern culture.
		CO2	To familiarize with the important events of Indian culture.
		CO3	To enrich the knowledge of cultural history in India and the historical developments.

HN3 PC14	Translation Studies	CO1	To understand the principles and assumptions governing modern linguistic.
		CO2	To use new technology like internet and computer in learning language and acquiring skills
		CO3	To understand the process of translation and the qualities of translation.
HN3 PC15.	Paschathya Kavya Sastra	CO1	To study the development of western poetics.
		CO2	Students will be able to understand western theoreticians from Plato to Deride.
		CO3	Students will be able to understand the development of western poetics.
SEMESTER 4			
HN4 PC 16	Aadunik Kavitha-II	CO1	To experience the various dimensions in the content and form of the poetry of this period
		CO2	The students could familiarize and enjoy the aesthetic and sociological scenario of Post-Independent Hindi poetry.
		CO3	The aspects of modern poetry will help the students to understand society and makes them aware of their rights and duties
HN4 PE 1	Dalit Vimarsh	CO1	To make students familiar with major trends of Dalit literature.
		CO2	To develop an awareness about the Dalit movement in India, major trends of Dalit literature, literature of protest, literature of liberty.
		CO3	A study of Dalit literature promotes co-operation and love which are major forces of a good society
HN4 PE 2	Special Author- Nirmal Varma	CO1	To make the students familiar with the famous author Nirmal Varma and his works.
		CO2	To give awareness of different literary works like short story and novel.
		CO3	To develop the capacity of creative process and communication skills.
HN4 PE 3	Special Author- Bhishma Sahnee	CO1	To make the students familiar with Bhishma Sahnee and his novel and drama.
		CO2	Students will be able to appreciate and analyze independently the drama of Bhishma sahnee
		CO3	To understand the distinct features of Hindi Drama
HN4 PE 4	Special Author- Agneyaa.	CO1	The students will have clear idea about the multi-dimensional literary works Agneyaa.
		CO2	The leaner could also familiarize the impact of literary thoughts of Agneya on later generation of Hindi Literature.
		CO3	The student will be able to appreciate and analyze independently the novel, short stories and poems of Agneya

Name of the Programme : MA Economics

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
ECOPGS1 1	Micro Economics Theory of Consumer Behaviour & Firm	CO1	IT enables the student in taking rational buying decisions and also helps a firm to design suitable marketing strategies
ECOPGS1 2	Macro Economic Theory and Policy	CO1	integrating theoretical knowledge to evaluate policy measures and analyze the trade off in the deployment of resources to alternative ends
ECOPGS1 3	Indian Economy: Issues and Policies – I	CO1	It provides the students with a critical thinking of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy
ECOPGS1 4	Economics of Development and Growth –I	CO1	It aims to develop conceptual clarity on the issues on the dimensions of development and to identify the strategic factors in the development of the less developed countries.
EC010105	Mathematical Methods for Economic Analysis	CO1	logical, systematic framework within which quantitative relationships may be explored
		CO2	The deductive reasoning about social and economic phenomena
		CO3	understand, assimilate and thus capable of using the mathematics required for studying economics at the master's level
		CO4	Basics of Linear algebra, Differential Calculus, Integral Calculus
SEMESTER 2			
ECOPGS2 6	Microeconomics Markets, Information and Welfare	CO1	It helps the students to develop skill in formulating business strategy in the context of market imperfections.
		CO2	The student develops the understanding of the economic level of information search possible under different situations and the concept of bounded rationality.
		CO3	The students can understand the basic theory of distribution and the source of income generation.
ECOPGS2 7	Advanced Macroeconomic Theory and Policy	CO1	It also makes the students to understand Indian economic issues which are macroeconomic in nature.
ECOPGS2 8	Indian Economy: Policies and Issues- II	CO1	It helps the students to understand more about Indian economy in relation with policy implementation, planning, and social programmes.

		CO2	It enriches the students with the complete information regarding Indian economic issues like population, poverty, unemployment, financial matters and trade etc.
ECOPGS2 9	Economics of Development and Growth- II	CO1	The students get the chances to know more about international and domestic growth models and developments agendas.
		CO2	It also equips the students with the knowledge of growth and development practices and also generates some interest in them about being a development economist.
EC010205	Statistical Methods for Economic Analysis	CO1	the statistical material required for entry into Econometrics
		CO2	the use of the most common statistical tools and techniques encountered in economics for analysis of data with valid logic and inferences
		CO3	Familiarity with inferential statistics as well as the interpretation of data
SEMESTER 3			
ECOPGS3 11	International Trade Theory and Policy	CO	IT provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term –at the global level.
ECOPGS3 12	Public Economics	CO1	It acquaints the students with the issues relating to the role of Government in the changing era and the justification for Government intervention.
		CO2	It also introduces to the students the nature and theories of Public goods.
ECOPGS3 13	Research Methods in Economics	CO1	It provides the students basic knowledge about the social science research and its relevance in tackling real issues of the society.
		CO2	It creates an enabling environment to identify research issues and to develop scientific approach in the analysis of social problems.
		CO3	It familiarizes with the methods of collection, analysis and interpretation of data.
ECOPGS3 14	Economics of Environment and Social Sector	CO1	It provides the theoretical foundations of environmental economics.
		CO2	It makes the students to understand the theory and practice of sustainable development.
		CO3	Students become familiar with the impacts of environment on health and promote environmental education.
		CO4	It facilitates the optimum use of natural resources in production and consumption.
ECOPGS3 15	Monetary Theory and Policy	CO1	It enables the students to understand the basic concepts regarding money and the functioning of a

			pecuniary economy and capacitates the students to have a thorough understanding of the various theoretical approaches.
SEMESTER 4			
ECOPGS4 16	Global Trading and Monetary System	CO	The course provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital –both short term and long term at the global level.
ECOPGS4 17	Indian Public Finance	CO1	It makes the students aware of the emerging trends in public expenditure and the criteria for Public Investment.
		CO2	It familiarizes the students with the preparation and execution of the budget and the problems and trends in public debt in India.
ECOPGS4 18	Management Theories and Practice	CO1	It makes the students to acquaint with management techniques that prevail in the corporate world.
		CO2	This exposes the students to a variety of skills and concepts in management.
ECOPGS4 19	Capital Market	CO1	It enables the students to understand the basics of savings and investment,
		CO2	It facilitates the students to understand how capital markets work and what functions capital markets fulfill in market economy and
		CO3	It helps to calculate the risk, return and liquidity of various investment instruments.
ECOPGS4 20	Economics of Agriculture	CO1	This course intends to provide the students a detailed idea regarding the role and importance of agriculture
		CO2	It also provides the role of Agriculture in economic development, the land reforms in India, a comparison of the Green revolution in India and Mexico, and the importance of farm budgeting.

Name of the Course: MA Political Science			
Course Code	Course Title	Course Outcome	
SEMESTER 1			
PSS1CO1	Political Thought: Ancient and Medieval Traditions	CO1	The students will be able to demonstrate knowledge of significant political ideas since the time of the Greek City-states to Renaissance Europe.
		CO2	To be familiar with the classical texts of ancient and medieval western political thought and their different interpretations.

		CO3	To be inspired to read original works, the debates around these work, and will become aware of the different ways in which a text can be read.
PSS1CO2	Public Administration : Theory and Concepts	CO1	Students will understand the major theories and concepts of public administration.
		CO2	To be able to explain and analyse budgetary processes and financial administration.
		CO3	To benefit by the insights gained into personnel administration and the skills obtained to apply their knowledge in practical life
PSS1CO3	India: State, Polity and Governance	CO1	Students will be able to demonstrate critical insights into the Indian Constitution – its historical development, ideological perspectives and core values, as well as the different organs of government and some of the major cases and amendments relating to the Constitution.
		CO2	Students will achieve the skills and ability to analyse and evaluate the essential features and processes of Indian polity.
PSS1CO4	Political Theory	CO1	Students will be able to demonstrate an in-depth understanding of the various theories and concepts of political science.
		CO2	Students will be equipped with a critical perspective and analytical skills to understand contemporary political issues and challenges.
PSS1CO5	Theory and Practice of International Relations	CO1	By the end of the course students will be able to demonstrate a broad understanding of International Relations, its major theoretical traditions and concepts.
		CO2	They will be able to apply conceptual tools to understand, analyse and interpret events and processes in contemporary international politics.
		CO3	They will also possess the skills necessary to think critically and communicate effectively about international relations.
SEMESTER 2			
PSS2CO6	Political Thought: Modern Traditions	CO1	Students will be able to demonstrate the ability to identify the dominant political discourses on liberalism, Marxism, sovereignty, justice etc. in a critical perspective so that the scope and limits of such traditions can be ascertained, both theoretically and historically.
PSS2CO7	Indian Administration	CO1	Students will be equipped to demonstrate an understanding of the processes and structures of public administration and decentralisation in India.
		CO2	They will be able to analyse decentralised planning and development and explain contemporary issues and challenges in the implementation of decentralised governance and development.

		CO3	They will also be able to think critically about the Panchayat Raj system and its operations at the grass root level.
PSS2CO8	Issues in Indian Politics	CO1	Students will be able to demonstrate an understanding of the potentials and limits of democratic practices through insights derived from studying specific issues and themes.
		CO2	They will also be equipped to analyse the complex nature of state-society relations through their understanding of how social forces are constituted and function in relation to each other in the context of India.
PSS2CO9	Issues in International Relations	CO1	Students will be able to demonstrate knowledge and understanding of contemporary international politics and will be able to analyse and explain contemporary international phenomena.
		CO2	They will possess the skills necessary to think critically and communicate effectively on international politics.
		CO3	They will also be able to recognize issues of social justice in global contexts and appreciate the rights and responsibilities of global citizenship.
PSS2CO10	Comparative Politics	CO1	On successful completion of the course, students should be able to describe the basic approaches, themes and concepts that are used in comparative politics
		CO2	Gain informed perspectives and have deeper viewpoints about the building blocks and processes in comparative politics
		CO3	Comprehend the distinctiveness and dynamism of comparative political inquiry and Identify on-going socio-political-economic processes, emerging concerns and also subject them to critical and careful comparative inquiry
		CO4	Explain the political systems, forms of governments, ideologies, social forces and its consequences for continents and countries
		CO5	Apply tools and techniques learned from comparative politics to study new cases, and emerging social processes across political systems in the globalising era.
SEMESTER 3			
PSS3CO11	Political Thought: Indian Tradition	CO1	The study of Indian traditions in political thought will enable students to acquire insights useful for understanding contemporary Indian society and politics.

		CO2	They will be equipped with the tools of analysis to comprehend the wide spectrum of Indian traditions in political thought from ancient times.
PSS3CO12	State and Politics of Kerala	CO1	At the end of the course students will develop a comprehensive knowledge about Kerala society, polity and economy.
		CO2	The course will equip students with the necessary skills to analyse key issues in Kerala politics and society.
PSS3CO13	Human Rights in India	CO1	On completion of the course students will be able to demonstrate a theoretical as well as practical understanding of human rights.
		CO2	They will be equipped to perceive and analyse contemporary issues from a rights perspective and will be aware of the institutional mechanisms for the protection of human rights.
PSS3CO14	Decentralisation and Local Governance	CO1	Students will be equipped to understand and demonstrate knowledge about the processes of decentralization.
		CO2	They will be able to analyse decentralised planning and development, and explain contemporary issues and challenges in the implementation of decentralised governance and development.
		CO3	They will also be able to think critically about the Panchayat raj system and its operations at the grassroots level.
PSS3CO15	Research Methodology	CO1	Students will gain an understanding of major methods of Political Science research and be able to utilise both quantitative and qualitative research techniques.
SEMESTER 4			
PSS4CO16	India's Foreign Policy	CO1	At the end of the course students will be able to critically evaluate India's foreign policy and its engagements with the international system.
		CO2	They will be equipped with the framework to understand the changing contours and intricacies of foreign policy making and discern the motivations and goals driving policy decisions.
		CO3	They will also be able to critically identify and discuss the changing contours and key issues surrounding the history and development of India's foreign policy.
PSS4EA3	Theories and Concepts of Administrative Law	CO1	The students will get be familiarised with the ideas and basic concepts of Administrative Law and the functions and powers of the administration and the checks and controls in the exercise of those functions and powers.

PSS4EB2	Political Sociology of India	CO1	Students will be equipped to analyse the relationship between society and politics, as well as the inter-relationships between individuals, groups, institutions, governments and their socio-economic and political environments in India.
		CO2	They will be able to demonstrate knowledge of the basic forces and factors that shape the world such as representation, power, political sociology of caste, linguistic, ethnic and religious mobilisations, state-society dynamics etc.
PSS4EC6	Politics of Postmodernism	CO1	It is expected that, at the end of the course the students will be able to describe fundamental themes and ideas related to Critical theory and Postmodernism and outline the major theoretical writings and locate the nature and distinctiveness of intellectual debates in Critical theory and Post-modernism.
		CO2	They will be able to apply the insights/ideas/resources available Postmodernism to understand and diagnose the problems of contemporary societies
		CO3	They also will be able to recognize the changing nature of social movements/political practices and vocabulary of political debates in everyday life.
PSS4ED4	US Government and Politics	CO1	On completion of the course students will demonstrate an understanding of the nature of government and politics in the United States, including its societal dynamics and their impact on the political processes.
		CO2	They will be able to identify and explain the foundations, institutions and processes of government and politics in the United States, as well as the broad contours of American foreign policy.

Name of the Programme : MA History			
Course Code	Course Title	Course Outcome	
SEMESTER 1			
HISPGC1	Approaches to History	CO1	The paper requires from the students concerted efforts to gain knowledge about the perspectives of past that evolved.
		CO2	The student to grasp why history came to be rewritten differently from time to time and under what conceptual presuppositions, the readings appended are highly selective and devoid of articles.

		CO3	To make aware about various historical trends and trendsetters in accordance with time.
HISPGC 2	Transition from Pre-State to State Societies in Indian History	CO1	The students to be knowledgeable about the processes of social transition from one formation to another and the characteristic features of each formation.
		CO2	This course necessitates acquaintance with the relevant social theories.
		CO3	To provide the students conceptual insights into the transitional processes of early societies in the Indian subcontinent.
HISPGC 3	Social Formations in Kerala till the End of Perumal Rule	CO1	To enabling conceptualization of society in terms of formations or systems .
		CO2	They are expected to acquire knowledge about the ancient and early social formations of Kerala.
HISPGC 4	Revenue Administration in India c. A.D.1000 to 1800	CO1	To provide specific focus on Revenue Administration with a view to enabling the students to learn the nature of resources and modes of their management in enabling the students to learn the nature of resource and the past.
		CO2	It is intended to be an ‘in-depth study of the various aspects revenue extraction
HISPGC 5	History of Social Revolutions in the World	CO1	To provide good awareness about the major social revolutions of the modern world.
		CO2	The focus is on the linkage between the socio-economic revolutions of the modern world
SEMESTER 2			
HISPGC 6	History of Social Institutions and Structures of Early India	CO1	To focus on the history of institutions and structures of early societies in the subcontinent.
		CO2	To provide the students with knowledge about what the institutions mean and how they evolved and worked in the past societies
HISPGC 7	Social Formations of Kerala c. A.D.1200 – 1800	CO1	To enable the students to grasp the interconnectedness of social aspects and develop holistic perspective.
		CO2	To learn about the vaious social conditions prevailed in medieval Kerala
HISPGC 8	Agriculture, Crafts Production and Exchange in India from c. AD 1000 to 1800	CO1	The paper requires from the students an in depth study of the major economic processes of the Indian subcontinent in the 11 th to 19th centuries.
		CO2	The purport of the paper is to provide the students insights into the interconnectedness of agriculture, crafts production, exchange and urban growth. The readings have to be supplemented by articles.
		CO3	To open up a new academic vista on medieval trade practises in India.

HISPGC 9	Perspectives of Women's History and the History of Gender	CO1	It seeks to familiarize the students with the conceptual and methodological innovations brought into the discipline of history by Women's History, and expansion and reframing of the issues at its core, that this intervention has entailed.
HISPGC 10	Making of the Indian Nation: Historical Antecedents	CO1	Through this course the students put emphasis on the study of the historical process of the nation building.
		CO2	The purport is to gain knowledge about the Historical process of the making of the Indian Nation.
SEMESTER 3			
HISPGC 11	History and Social Theory	CO1	To emphasise students the fact that theory is indispensable for reading history seriously.
		CO2	It requires the students to learn the major contributions in social theory that enables appreciation of history with intellectual depth.
		CO3	To develop and encourage critical consciousness among the students.
HISPGC 12	History of Revolts and Protest Movements in Colonial Kerala	CO1	This course provides an indepth study that seeks to keep the student knowledgeable in the history of the major Social revolts of modern Kerala.
		CO2	The focus is on the linkage between the Socio Economic and Political milieu of the colonial period that engendered revolts and protests.
		CO3	To provide the students insights into the condition that makes dissents, protest and reforms possible
HISPGC 13	State and Society in India c.AD 1000 -1800	CO1	To learn about the structure, composition and pattern of power relations that the state under the Sultanate of Delhi and Mughal Empire presented.
		CO2	To enable the students to learn the correspondence as well as interface between the social relations of power and the state's power structure.
HISPGC 14	Methods or Techniques of Research	CO1	To provide the students the methods of research ie, the basic tools and techniques of research as distinguished from methodology.
		CO2	To provide an insight into the science of the construction of knowledge
		CO3	To academically enrich research mentality in students It is primarily a Practice Oriented paper directly linked to research.
HISPGC 15	Knowledge Systems in Pre-modern India	CO1	To enable the students to gain preliminary access to the indigenous knowledge systems of India.
		CO2	To acquaint the students with the traditional knowledge form of Indian subcontinent in the most demystified manner.
		CO3	To analyse pre modern and present knowledge systems of India
		CO4	Identify the ancient semantic tradition
		CO5	Students will be able to examine the philosophical and religious tradition

SEMESTER 4			
HISPGELE 16	Ancient Society	CO1	To enable the students to gain in-depth knowledge about very ancient societies in terms of their formations.
		CO2	It seeks to have a special focus on the institutional and organizational features of ancient Societies. The readings have to be augmented with additions.
HISPGELE 17	Economic History of Modern India	CO1	To seek provide the students a fairly good understanding about the historical roots of Indian economy.
		CO2	To enable the students to identify the historically contingent elements of the Indian economy.
		CO3	To gain insights into the contemporary economic issues
HISPGELE 18	Landmarks in Environmental History of India	CO1	To investigate and make the student to look into the historical perspective of environmentalism and its influence in the global and Indian scenario.
		CO2	It also tries to address various issues related to environment.
HISPGELE 19	History of Human Rights Movements in India	CO1	To provide a better understanding of the various concepts, ideas and history of human rights.
		CO2	To provide an insight into different human rights movements in India.
HISPGELE 20	Contemporary India, Society and Economy	CO1	To keep the students knowledge about the contemporary socioeconomic processes. It addresses itself a bewildering domain for its variety and vastness
		CO2	To provide a comprehensive knowledge only about the characteristic features of the contemporary society and economy of India.
		CO3	Examine the internal and external policy of Jawaharlal Nehru, Lal Bahadur Sastri and Indhira Gandhi..
		CO4	Recognise the role of planning commission, five year plans and the development of science and technology in India.
		CO5	Identify the contemporary challenges like terrorism, liberalization, privatization and globalization

Name of the Programme: MSc Mathematics			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
MT01C01	Linear Algebra	CO1	To generalize the concept of vectors to n-dimensional spaces.
		CO2	To understand matrix as a linear transformation.

		CO3	Finding the eigenvalues and eigenvectors of linear transformations
MT01C02	Basic Topology	CO1	Introducing topology as a generalization of metric spaces
		CO2	To introduce the familiar concept of continuity to arbitrary spaces
		CO3	To introduce the peculiarities of compactness and connectedness in different spaces
		CO4	To get an idea about the hierarchy of separation axioms
MT01C03	Measure Theory and Integration	CO1	Introducing measure as generalization of length
		CO2	To introduce measure theoretic integration.
		CO3	To introduce signed measures and its applications.
		CO4	To introduce product measures.
MT01C04	Graph Theory	CO1	Logical, systematic framework within which ordinary graphs can be generalized
		CO2	To introduce graphs as a solution of practical problems
		CO3	To introduce connectivity, coloring and the concept of planarity
MT01C05	Complex Analysis	CO1	To introduce complex numbers as points on a sphere.
		CO2	To study power series of complex functions.
		CO3	Introduce complex integration to understand analytic functions in a better way.
SEMESTER 2			
MT02C06	Abstract Algebra	CO1	To acquire knowledge about algebraic structures like groups, rings, integral domains and fields.
		CO2	To learn application of algebra on irreducible polynomials.
		CO3	Apply Sylow's theorems in the study of simple groups.
		CO4	Application of Fermat's theorem and Euler's theorem in number theory.
		CO5	Idea of geometric construction of numbers
		CO6	Application of algebra in finding the roots of polynomials
		CO7	To introduce field extensions
		CO8	Discussion of Galois theory
MT02C07	Advanced Topology	CO1	To introduce products in arbitrary space.
		CO2	To make familiar with embedding and metrisation and different types of compactness.
		CO3	Introducing nets as a generalization of sequences.
MT02C08	Advanced Complex Analysis	CO1	To study harmonic functions and its applications.
		CO2	To study Gamma functions and entire functions in detail.
		CO3	To introduce the product development and normal families.
		CO4	To introduce elliptic functions
MT02C09	Partial Differential Equations	CO1	To introduce Partial differential equations for solving real life situations.
		CO2	To study different methods of solution of PDE

		CO3	To study non linear equations and families of equipotential surfaces.
MT02C10	Real Analysis	CO1	Learn the theory of Riemann-Stieltjes integrals, to be acquainted with the ideas of the total variation and to be able to deal with functions of bounded variation.
		CO2	Students should be able to illustrate the effect of uniform convergence on the limit function with respect to boundedness, continuity, differentiability and integrability.
		CO3	The student will gain knowledge of special functions and study various properties of them.
		CO4	After completing the course, the student should be able to recognize, understand and apply concepts and methods in advanced real analysis.
SEMESTER 3			
MT03C11	Multivariate Calculus and Integral Transforms	CO1	Impart basic knowledge of differentiation and integration in n-dimensional Euclidean space.
		CO2	To discuss different types of integral transforms.
		CO3	Applications in Mathematics and also bring the confidence to handle real life problems.
MT03C12	Functional Analysis	CO1	On successful completion of this course, the students will be able to appreciate how functional analysis uses and unifies ideas from vector spaces and metric spaces.
		CO2	The learner will be able to identify various types of normed spaces such as Banach Spaces, Inner Product Spaces and Hilbert Spaces and derive various properties of them.
		CO3	The learner will be able to understand and apply fundamental theorems from the theory of linear operators.
		CO4	The students will have the knowledge and skills to demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from functional analysis.
		CO5	The learner will have the ability to pursue further studies in functional analysis and related areas.
MT03C13	Differential Geometry	CO1	To get an idea of application of real analysis in geometry.
		CO2	To study geodesics and parallel transport.
		CO3	To introduce parametrized surface and study its basic properties
MT03C14	Number Theory and Cryptography	CO1	Familiarize the concept of Finite Fields and Quadratic Residues
		CO2	Gets an idea of public key cryptography
		CO3	To introduce the concept of Primality and Factoring in Number Theory

MT03C15	Optimization Techniques	CO1	To introduce programming to handle real life situations.
		CO2	To introduce Goal programming and potentials in networks.
		CO3	To introduce non-linear programming.
		CO4	Familiarize zero - sum games and strategies.
SEMESTER 4			
MT04C16	Spectral Theory	CO1	The learners will be able to appreciate how functional analysis uses and unifies ideas from normed spaces and complex analysis.
		CO2	Understand and apply fundamental theorems from the theory of normed spaces, including the Uniform Boundedness theorem, the open mapping theorem, the closed graph theorem, and the Banach Fixed Point theorem.
		CO3	Understand the fundamentals of spectral theory and appreciate its power.
		CO4	Have a good grasp of the spectral properties of various operators such as Compact Linear Operators, Self-adjoint linear operators, Positive Operators and Projection Operators.
		CO5	Understand and apply ideas from spectral theory to other mathematical contexts and related areas.
MT04E01	Analytic Number Theory	CO1	To introduce arithmetic functions and its application.
		CO2	To study prime number theorem and distribution of primes.
		CO3	To study the application of congruence and quadratic residues and primitive roots for solving numerical problems.
MT04E02	Combinatorics	CO1	To use algebraic concepts to solve basic problems in real life
		CO2	To introduce Ramsey type problems and Ramsey numbers.
		CO3	To get an idea about generating functions and recurrence relations.
MT04E05	Mathematical Economics	CO1	Understand the theory of consumer behaviour
		CO2	Understand the role of production functions
		CO3	Study input-output analysis
MT04E07	Operations Research	CO1	Study Inventory Models
		CO2	Understand the main topics in queuing systems
		CO3	Understand network sequencing problems and simulation modelling

Name of the Programme: MSc Statistics

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
ST0101101	Probability and Measure Theory	CO1	Basic knowledge in measure theory and probability.
		CO2	Problem solving skill
		CO3	Idea about general integral
ST500101	Distribution Theory	CO1	Acquaint the students familiar with basic probability distributions
		CO2	Acquaint the students familiar with their properties of probability distributions
		CO3	Problem solving skill
ST500102	Analytical Tools for Statistics	CO1	Students are expected to well conversant with basics of linear Algebra
		CO2	Students are expected to well conversant with basics of linear Algebra Matrix theory.
		CO3	Problem solving skill
ST500103	Sampling Theory	CO1	Course students are expected to be able to apply and use the basic concepts related to sampling techniques,
		CO2	To determine sample size so as the estimator will have a desired precision
		CO3	To use appropriate sampling method and determine optimum sample sizes.
ST010102	Statistical Computing I-Using R	CO1	Learn the basics in R programming
		CO2	Programming skill
		CO3	Complete the practical by the R software
SEMESTER 2			
ST500201	Estimation Theory	CO1	Expected to learn the basics of estimation theory
		CO2	Problem solving skill
		CO3	Decision making skill
ST500202	Stochastic Processes	CO1	Impart basic knowledge in Stochastic Models
		CO2	Impart basic skills in Stochastic Models
		CO3	Applications of Stochastic Models in Statistics.
ST500203	Multi-variate Distributions	CO1	General knowledge of bivariate distributions in Statistics
		CO2	General knowledge of multivariate distributions in Statistics
		CO3	Applications of multivariate distributions
ST010201	Advanced Probability Theory	CO1	Ensure that the students are familiar with modern probability theory
		CO2	Ensure that the students are familiar with related applications.
		CO3	Problem solving skill
ST010202	Statistical Computing II Using R	CO1	Make the student capable to do practical problems in more advanced area of Statistics using R software
		CO2	Problem solving skill
		CO3	Programming skill

SEMESTER 3			
ST500301	Testing of Hypotheses	CO1	Make the student understand the concepts of testing of hypothesis
		CO2	Develop appropriate tests for testing certain Statistical hypotheses.
		CO3	Formulation of hypothesis
ST500302	Design and Analysis of Experiments	CO1	Students will be able to conduct experiment by using appropriate design,
		CO2	To test related hypotheses and estimate the parameters
		CO3	Compare different designs and will be capable to use the Analysis Covariance technique for data analysis
ST500303	Multi-variate Analysis	CO1	Impart basic knowledge to the students in applied Multivariate Analysis
		CO2	Impart skills to the students in applied Multivariate Analysis
		CO3	Applied Multivariate Analysis applications in Statistics and also bring the confidence to handle real problems on the spot.
ST500304	Time Series Analysis	CO1	The student will be able to analyse time series data
		CO2	Identify various types of behaviour of the time series.
		CO3	Interpret various types of behaviour of the time series.
ST010301	Statistical Computing III–Using R/SPSS/MATLAB	CO1	Make the students able to handle practical problems in testing of hypotheses
		CO2	Make the students able to handle practical problems in design and analysis of experiments
		CO3	Make the students able to handle practical problems in the multivariate techniques
SEMESTER 4			
ST500401	Econometric Methods	CO1	Handle models of econometrics and Mathematical Economics.
		CO2	apply and use the basic concepts related to the economy of a nation
		CO3	interpret various parameters used to measure economic status of a nation.
ST010401	Statistical Computing IV- Using R/SAS/MATLAB	CO1	impart the practical skills in the students in the theories of Econometrics
		CO2	make them familiar with the software packages
		CO3	impart the practical skills in the students in the theories of other elective papers.
ST800401	Operations Research	CO1	make the students able to deal with optimization problems and the mathematical theory involved in them.
		CO2	Problem solving skill
		CO3	Decision making skill
ST800402	Statistical Quality Control	CO1	make the students aware of the modern quality assurance techniques.
		CO2	make the students aware of the modern quality assurance methods.
		CO3	Decision making skill

ST800403	Advanced Bayesian Computing with R	CO1	the basic Bayesian Inference methods
		CO2	the basic Bayesian Inference computations using computer packages.
		CO3	Decision making skill

Name of the Programme: MSc Physics			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
PH1CO1	Mathematical methods in physics – I	CO1	Implement essential mathematical skills to solve problems in Physics.
		CO2	Describe various processes involved in understanding the behaviour of different systems through Mathematics.
		CO3	Achieve a sound knowledge of curvilinear coordinates, Tensor algebra, matrices and special functions and their various properties that are being extensively used in Physics.
PH1CO2	Classical mechanics	CO1	Provide elementary ideas on classical mechanics to write equations for real time problems using conventional techniques.
		CO2	Define basic mechanical concepts related to discrete and continuous mechanical systems, planar and spatial motion of a rigid body
		CO3	Study in detail on Lagrangian and Hamiltonian formalism, dynamics of rigid body, oscillations, canonical transformations and special relativity
PH1CO3	Electrodynamics	CO1	Acquire in-depth knowledge in electrostatics and familiarize theories of static and moving charges
		CO2	Give idea on the fundamentals of electromagnetic conduction and electromagnetic waves.
		CO3	Extend its applications to instruments involving electric and magnetic fields
PH1CO4	Electronics	CO1	Analyze components associated with digital and analog electronic/communication systems and apply basic mathematical and engineering concepts to technical problem solving
		CO2	Learn the structure of various semiconducting devices and their electronic properties along with underlying physics.
		CO3	Apply the knowledge to understand the working of amplifiers, oscillators, multivibrators and communication systems.
SEMESTER 2			
PH2C05	Mathematical methods in physics – II	CO1	Identify a range of mathematical methods that are essential for solving advanced problems in theoretical Physics and demonstrate the ability to apply mathematical concepts and techniques in to problems in that field

		CO2	Elaborate the understanding of basic concept of complex variables and group theory and integral transforms
		CO3	Describe various processes involved in understanding the behaviour of different systems through Mathematics and implement mathematical skills to solve problems in physics.
PH2C06	Quantum mechanics – I	CO1	Identify and understand the kinds of experimental results which are incompatible with classical Physics and which required the development of a quantum theory of matter and light.
		CO2	Acquire sufficient knowledge on Operator formalism.
		CO3	Makes students familiar with various time independent approximation methods and perform calculations using angular momentum techniques.
PH2C07	Thermodynamics and statistical mechanics	CO1	Understand how statistics of the microscopic world can be used to explain the thermal features of the macroscopic world.
		CO2	Familiarize in depth about Maxwell –Boltzmann, Bose-Einstein and Fermi Dirac Statistics and their application
		CO3	Analyse different statistical ensembles and perform statistical calculation of different thermodynamic quantities
PH2C08	Condensed matter Physics	CO1	Create a clear picture of crystal structures, x-ray diffraction, defects, magnetic and dielectric properties of solids etc.
		CO2	Develop a concept of the crystal classes and symmetries and to understand the relationship between the real and reciprocal space.
		CO3	Learn conduction mechanisms in insulators, semiconductors, conductors and superconductors and apply it in designing novel devices.
SEMESTER 3			
PH3C09	Quantum mechanics – II	CO1	Impart knowledge of advanced quantum mechanics for solving relevant physical problems.
		CO2	Acquire a working knowledge of non-relativistic and relativistic quantum mechanics including time-dependent perturbation theory, scattering theory, relativistic wave equations, and second quantization.
		CO3	Achieve the ability to critically understand and evaluate modern research utilizing quantum theory in Physics.
PH3C10	Computational physics	CO1	Incorporate modern computation and visualization into the scientific problem-solving paradigm.
		CO2	Learn how to interpret and analyze data visually, both during and after computation and understand why hard work along with properly functioning powerful software and hardware do not guarantee meaningful results
		CO3	Understand how the knowledge levels can be advanced by the use of modern scientific computing skills and tools.
PH3EC1	Solid state Physics	CO1	Transfer the knowledge level from theoretical physics subjects solid state matter.

		CO2	Understand the behaviour of electrons in solids including the concepts of energy bands and effect of the same on material properties.
		CO3	familiarize the design considerations of various solid state and gas lasers, modes of their operations and areas of applications
PH3EC2	Crystal growth techniques	CO1	Provide an extended knowledge on advanced condensed matter topic like crystal growth methods.
		CO2	Understanding of theories involves in crystal growth nucleation process and solution, melt and vapour growth techniques and Characterization tools.
		CO3	Demonstrate the various factors affecting crystal growth mechanism.
SEMESTER 4			
PH4C11	Atomic and molecular Physics	CO1	Explain the origin of the atomic spectra and behaviour of atoms in external electric and magnetic field.
		CO2	Become familiar with molecular spectroscopy and gain basic ideas regarding microwave, infrared and Raman Spectroscopy.
		CO3	Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.
PH4C12	Nuclear and particle Physics	CO1	Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity
		CO2	Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.
		CO3	Familiarize different nuclear Models, elementary particles and their interactions.
		CO4	Analyse how nuclear and particle physics phenomena play a role in the description of the evolution of the universe from the Big Bang to present day processes in stars.
PH4EC3	Nanostructures and characterization	CO1	Understand the synthesis and characterization methods of various nanostructured materials.
		CO2	Study on quantum dots, wells and wires and the transport of charge carriers in them.
		CO3	Acquire basic skill in conducting research on fundamental and application aspects of nanotechnology.
PH4OE1	Optoelectronics	CO1	Study the mechanism of charge transport in various optoelectronic devices.
		CO2	Use principles of physics to analyze and design optoelectronic devices like LEDs, lasers, photodiodes and photovoltaics.
		CO3	Understand metrics of optoelectronics devices and be able to incorporate them into systems for optimal performance

Name of the Programme : MSc Chemistry

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
CH1C01	Organo-metallics and Nuclear Chemistry	CO1	Identify the structure and bonding aspects of simple organometallic compounds
		CO2	Apply different electron counting rules to predict the shape/geometry of low and high nuclearity metal carbonyl clusters
		CO3	Identify the different types of organometallic reactions and apply the above concepts to explain different catalytic reactions
CH1C02	Structural and Molecular Organic Chemistry	CO1	Comprehend and Predict the role of temperature, solvents, and catalysts in organic reactions
		CO2	Elucidate reaction mechanisms using isotope effects
		CO3	Identify and differentiate prochirality and chirality at centers, axis, planes and helices and determine the absolute configuration
		CO4	Evaluate the stability of various conformers of acyclic and cyclic systems using steric, electronic and stereo-electronic effects and correlate them to reactivity.
		CO5	Use various models for determining stereo-selectivity of various organic transformations
CH1C03	Quantum Chemistry and Group theory	CO1	Use mathematical techniques in linear algebra for eigenvalues and eigenvectors and first and second order differential equations not only in quantum chemistry but in other areas of physical and theoretical chemistry that will be offered during the whole programme.
		CO2	Solve all the model problems in quantum mechanics for which exact analytical methods and solutions are available and will apply them to analyze the basis behind the postulatory method of quantum mechanics and which forms the foundations for advanced study of the subject.
		CO3	Relate concepts that were originally introduced purely as modern atomic physics to molecular systems through harmonic oscillator, spin and rigid rotator.
		CO4	Determine the symmetry operations of any small and medium-sized molecule and apply point group theory to the study of electrical, optical and magnetic properties and selection rules for absorption
CH1C04	Classical and Statistical Thermodynamics	CO1	Calculate change in thermodynamic properties, equilibrium constants, partial molar quantities, chemical potential. Identify factors affecting equilibrium constant.
		CO2	Apply phase rule and, draw phase diagrams for one, and two component systems, identify the dependency of temperature and pressure on phase transitions, and identify first/second order phase transitions.

		CO3	Solve problems based on Debye-Huckel limiting law. Calculate excess thermodynamic properties.
		CO4	Calculate the absolute value of thermodynamic quantities (U, H, S, A, G) and equilibrium constant (K) from spectroscopic data.
		CO5	Predict heat capacity (Cv, Cp) of an ideal gas of linear and non-linear molecules from the number of degrees of freedom, rotational and vibrational wave numbers.
		CO6	Derive the temperature dependence of the second Virial coefficient (real gases) from interatomic potentials.
SEMESTER 2			
CH2C01	Coordination Chemistry	CO1	Identify the principles, structure and reactivity of selected coordination complexes. Interpret their electronic spectra and magnetic properties.
		CO2	Utilize the principles of transition metal coordination complexes in understanding functions of biological system
CH2C02	Organic Reaction Mechanism	CO1	Comprehend the structure-reactivity pattern of reactive intermediates involved in organic reactions
		CO2	Comprehend the orbital interactions and orbital symmetry correlations of various pericyclic reactions
		CO3	Write mechanism of organic reactions involving reactive intermediates and concerted processes
		CO4	Apply these reactions in organic synthesis
CH2C03	Chemical Bonding and Computational Chemistry	CO1	Apply time independent perturbation theory to complex problems of molecular energy levels in the presence of external electric and magnetic fields
		CO2	Distinguish different types of hybridization based on geometries of the complex and to calculate for a one-electron and two electron system, all the necessary integrals due to coulombic forces.
		CO3	Write short simple programs in FORTRAN and be able to compile and execute them in a host of machines.
		CO4	Use standard software tools such as MATLAB and Mathematica to perform algebraic and numerical calculations often required in elementary physical chemistry in the areas of quantum chemistry, spectroscopy, kinetics and thermodynamics
CH2C04	Molecular Spectroscopy	CO1	Apply NMR, IR, MS, UV-Vis spectroscopic techniques in solving structure of organic molecules and in determination of their stereochemistry.
		CO2	Interpret the above spectroscopic data of unknown compounds.
		CO3	Use these spectroscopic techniques in their research
CH2P01	Inorganic Chemistry Practical-1	CO1	Plan and Conduct experiments for identifying and characterizing inorganic compounds
CH2P02	Organic Chemistry Practical-1	CO1	Separate and purify products in organic reactions
		CO2	Characterize organic compounds using spectroscopic and spectrometric techniques

		CO3	Apply the concepts of nanotechnology and polymer chemistry in to research
CH2P03	Physical Chemistry Practical-1	CO1	Explain the principle behind the experiments performed in the laboratory
		CO2	Plan and Perform experiments and Interpret experimental results.
SEMESTER 3			
CH3C01	Structural Inorganic Chemistry	CO1	Arrive at the chemical compositions based on unit cell contents and fractional coordinates.
		CO2	Calculate densities from powder XRD data
		CO3	Identify and apply a suitable strategy for synthesizing inorganic crystalline solids in polycrystalline and single crystal forms
		CO4	Correlate and Predict structure-composition-properties (magnetic, electrical and optical) in inorganic crystalline solids
CH3C02	Organic Synthesis	CO1	Use various reagents and organic reactions in organic synthesis
		CO2	Use retrosynthetic method for the logical dissection of complex organic molecules and devise synthetic methods
CH3C03	Chemical Kinetics, Surface Chemistry and Photochemistry	CO1	Calculate transport properties of gases, liquids and solids
		CO2	Solve problems on rate/rate constants/efficiency for (i) complex reactions (ii) unimolecular and bimolecular reactions, and (iii) electronically excited state dynamics.
		CO3	Plot equations and functions representing kinetic behaviour of chemical systems in ground and electronically excited states.
CH3C04	Spectroscopic Methods in Chemistry	CO1	Apply NMR, IR, MS, UV-Vis spectroscopic techniques in solving structure of organic molecules and in determination of their stereochemistry.
		CO2	Interpret the above spectroscopic data of unknown compounds.
		CO3	Use these spectroscopic techniques in their research.
SEMESTER 4			
CH4C01	Advanced Inorganic chemistry	CO1	Solve problems based on various analytical concepts
		CO2	Design experiments with improved sample preparation, new measurement procedures and tools
		CO3	Quantify analytes with proper data handling and analysis
CH4C02	Advanced Organic Chemistry	CO1	Comprehend the structure-reactivity pattern of supramolecules involved in organic reactions
		CO2	Comprehend Green alternative to organic synthesis
		CO3	Apply the concepts of nanotechnology and polymer chemistry in to research
CH4C03	Advanced Physical Chemistry	CO1	Write equations representing electrochemical cell, explain various over potential involved during the operation of the cell.
		CO2	Calculate electrochemical cell parameters, electrochemical active surface area, current and over potential under given

			condition, amount of corrosion and its rate.
		CO3	Plot potential vs current, surface coverage vs. potential, potential vs. pH, concentration profile vs. distance from the electrode
CH4P04	Inorganic Chemistry Practical-2	CO1	Plan and Conduct experiments for identifying and characterizing inorganic compounds.
CH4P05	Organic Chemistry Practical-2	CO1	Separate and purify products in organic reactions.
		CO2	Characterize organic compounds using spectroscopic and spectrometric techniques.
		CO3	Apply the concepts of nanotechnology and polymer chemistry in to research.
CH4P05	Physical Chemistry Practical-2	CO1	Explain the principle behind the experiments performed in the laboratory.
		CO2	Plan and Perform experiments and Interpret experimental results.

Name of the Programme : MSc Botany			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
PC1	Microbiology and Phycology	CO1	To understand the world of microbes.
		CO2	To familiarize the algal diversity.
		CO3	To equip the students with in depth knowledge of the kingdom fungi and common diseases affecting plants.
		CO4	To familiarize the diversity of the lower plant groups.
PC2	Mycology and crop pathology	CO1	To acquire the knowledge to understand various groups of fungi.
		CO2	To impart an in depth knowledge in the pathophysiological mechanisms in plants.
		CO3	To familiarize the common diseases affecting plants.
		CO4	To understand the basics of plant quarantine measures.
PC3	Bryology and Pteridology	CO1	To study the external morphology of Bryophytes.
		CO2	To study the internal structure and reproduction in Bryophytes.
		CO3	To understand the diversity in habits and habitats of pteridophytes.
		CO4	To familiarize the students with the classification of lower forms of plants.
PC4	Environmental Biology	CO1	To understand the significance of environmental science.
		CO2	To make the students aware about total biodiversity conservation.
		CO3	To help the students to design novel mechanisms for sustainable utilization of natural resources.

		CO4	To familiarize the students with the vast diversity of biomes and their role in phytogeographical conditions.
SEMESTER 2			
PC5	Gymnosperms, paleobotany and evolution	CO1	To understand the evolutionary trends in gymnosperms.
		CO2	To understand anatomical variations in vascular plants.
		CO3	To understand the significance of paleobotany and its applications.
		CO4	To make the students aware of the past geological factors that led to the evolution of gymnosperms.
PC6	Cell and molecular Biology	CO1	To understand the ultrastructure and functioning of cells.
		CO2	Familiarisation of life processes.
		CO3	To understand the basic and scientific aspects of diversity.
		CO4	To understand DNA as the basis of heredity and variation.
PC7	Plant anatomy and angiosperm systematics	CO1	To understand the internal structure of evolved group of plants.
		CO2	To understand the individual cells and tissues.
		CO3	To understand structural adaptations in plants growing in different environments.
		CO4	To familiarize the students with modern trends in plant systematics.
PC8	Genetics and Bio-chemistry	CO1	To understand the principles of heredity.
		CO2	To understand the patterns of inheritance in different organisms.
		CO3	To understand the role of biomolecules in plant life.
		CO4	To understand structure and importance of biomolecules associated with plant life.
SEMESTER 3			
PC9	Research methodology, Biophysics, Biostatistics and Micro-technique	CO1	To equip the students with deep knowledge in the methodology of research.
		CO2	To make the students understand various biophysical instrumentation.
		CO3	To develop statistical skills and techniques.
		CO4	To familiarize the students with various micro-technique skills.
PC10	Plant physiology and plant breeding	CO1	To understand the physiological processes of plant life.
		CO2	To understand the methods of crop improvement.
		CO3	To make the students skilled to carry out various physiological experiments.
		CO4	To enable the students to understand the different methods used in plant breeding.
PC11	Biotechnology	CO1	Understand the current developments in the field of Biotechnology.
		CO2	Equip the students to carry out plant tissue culture.
		CO3	Introduce the vast repositories of Biological data knowledge.
		CO4	To introduce the novel prospects in Biotechnology that can be used as potential aids to solve the problems of man and nature.
PC12	Taxonomy of angiosperms	CO1	To make the students understand the classification, naming and identification of higher plants.
		CO2	To familiarize with the common plants of Kerala and their classification.

		CO3	To develop inductive and deductive reasoning ability.
		CO4	To make the students able to identify, classify and name unknown plant species.
SEMESTER 4			
PE1	Tissue culture and microbial biotechnology	CO1	To understand the tissue culture techniques.
		CO2	To equip the students with knowledge of the microbial world and their role in commercial production of various products.
		CO3	To enable the students to carry out micro propagation of various plant species.
		CO4	To develop an in depth understanding of the applications of microbial biotechnology in medical and agricultural fields.
PE2	Genetic Engineering	CO1	To understand the recombinant DNA technology.
		CO2	To understand the elements of GE so as to encourage the students' interest in advanced biological techniques.
		CO3	To develop high order thinking skills in students so as to enable them to find practical solutions to problems in Biology.
		CO4	To enhance the knowledge on the genetic organization of organisms.
PE3	Genomics, Proteomics and Bioinformatics	CO1	To familiarize the students with the modern arena of genomics and proteomics.
		CO2	Understand the current developments in the field of Biotechnology.
		CO3	To equip the students to access and analyze data available in databases.
		CO4	To understand the current developments in the area of Genomics and Proteomics.

Name of the Programme: MSc Biostatistics			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
BSTA 101	Descriptive Statistics, Probability and distributions	CO1	Able to summarize, visualize and analyze data
		CO2	Able to compute probabilities
		CO3	Able to develop new probability models and test the goodness of fit
		CO4	Able to represent the data using graphs and diagrams
		CO5	Able to study the relationship between variables
BSTA 102	Sample Survey Methods	CO1	Able to conduct sample surveys using various sampling techniques
		CO2	Able to determine sample size and plan Statistical studies
		CO3	Able to estimate population total, mean and variance
		CO4	Able to apply systematic and stratified sampling technique
		CO5	Able to obtain ratio and regression estimates

BSTA 103	Computer Programming in C++ and SAS	CO1	Become experts in using various operating systems
		CO2	Able to write computer programs using C++ and SAS
		CO3	Able to develop algorithms and flowcharts
		CO4	Exposed to logical thinking and analysis
		CO5	Able to solve problems and make optimum decisions
BSTA 104	Statistical Genetics and Ecology	CO1	Able to understand basics of statistical genetics and ecology
		CO2	Become aware of environment, biodiversity and ecological issues
		CO3	Able to study about population growth and develop models
		CO4	Able to quantitative analysis of biodiversity and abundance
		CO5	Able to estimate linkage between hereditary factors and test them
BSTA 105	Basic Statistical Computing	CO1	Become experts in Excel and SAS for data analysis and interpretation
		CO2	Able to test goodness of fit
		CO3	Able to represent data using graphs and diagrams
		CO4	Able to estimate sample size, sample mean and its variance
		CO5	Able to develop programs and solve programs
		CO6	Able to measure diversity and estimate linkage
SEMESTER 2			
BSTA 201	Linear Algebra, Regression Techniques and Bioassays	CO1	Able to find the correlation between variables
		CO2	Able to develop regression equation for prediction
		CO3	Able to understand and conduct Poison and logistic regression
		CO4	Able to understand bioassays and estimation of safe doses
		CO5	Able to understand non-linear and non-parametric regression
BSTA 202	Statistical Estimation, Theory and Practice	CO1	Able to understand different estimation methods and estimate the parameters
		CO2	Able to study about performance of estimators
		CO3	Able to develop estimators having minimum variance, maximum likelihood etc.
		CO4	Able to develop Confidence intervals
		CO5	Able to apply the techniques to data from various application fields
BSTA 203	Basic Epidemiology and Vital Statistics	CO1	Able to study and plan different epidemiological studies
		CO2	Able to measure disease frequency using different measures
		CO3	Able to find incidence rate, Odds ratio
		CO4	Able to develop the confidence Interval
		CO5	Able to understand vital Statistics and population Models
BSTA 204	Statistical Testing of Hypothesis	CO1	Able to develop hypothesis and understand P-value
		CO2	Able to test hypotheses regarding mean and various
		CO3	Able to understand different techniques in parametric and non-parametric testing

		CO4	Able to apply SPSS for testing
		CO5	Able to understand sequential testing
BSTA 205	Basic Statistical Computing	CO1	Able to understand different techniques in parametric testing using SPSS
		CO2	Able to understand different techniques in non-parametric testing using SPSS
		CO3	Able to estimate the parameters by using different methods
		CO4	Able to find the correlation between variables using SPSS
		CO5	Able to develop regression equation for prediction using SPSS
SEMESTER 3			
BSTA 301	Design of Experiments and Quality Control	CO1	Able to understand different design of experiments
		CO2	Able to do the analysis of different designs using SPSS and SAS
		CO3	Able to understand the efficiency of drugs from different designs
		CO4	Able to understand the concepts of Quality control and ISO certification
		CO5	Able to apply different control charts and interpret the chart
BSTA 302	Stochastic Modeling and Time series analysis	CO1	Able to understand basics concepts on Stochastic process and modelling
		CO2	Able to understand birth/death process and their special cases
		CO3	Able to analyze time series data and fit with appropriate models
		CO4	Able to predict future values
		CO5	Able to develop population models and find probability of extinction
BSTA 303	Multivariate Statistical Methods	CO1	Able to understand multivariate data analysis
		CO2	Able to understand applications in tests on mean vector for one and more multivariate normal populations
		CO3	Able to understand applications in equality of mean vector in a multivariate normal population
		CO4	Able to understand random sampling from a multivariate normal distribution
		CO5	Able to understand the classification and discrimination procedure for discrimination between two multivariate normal populations
BSTA 304	Advanced Epidemiology	CO1	Able to measure the effects of disease by different measures
		CO2	Able to analyze different types of data like categorical, grouped and matched data
		CO3	Able to determine the sample size and power calculation for different epidemiological studies
		CO4	Able to plan different epidemiological studies

		CO5	Able to analyze data from different epidemiological studies and interpret the data
BSTA 305	Advanced Statistical Computing	CO1	Able to apply multivariate data analysis using SPSS and R programming
		CO2	Able to determine the drug effects from different designs by using SPSS
		CO3	Able to estimate missing values from different designs
		CO4	Able to determine the sample size and power calculation for different epidemiological studies
		CO5	Able to analyze time series data and fit with appropriate models
SEMESTER 4			
BSTA 401	R programming, Bayesian Inference and MCMC Methods	CO1	Able to write programs on R programming and Able to apply statistical methods by R program
		CO2	Able to simulate samples from different populations
		CO3	Able to visualize data by graphs and diagrams using R program
		CO4	Able to understand the concepts of Bayesian Inference
		CO5	Able to understand the concepts of simulation techniques
BSTA 402	Survival Analysis and Demography	CO1	Able to distinguish the lifetime distributions
		CO2	Able to identify the prognostic factors and estimate the survival of diseased persons
		CO3	Able to read and understand the life tables
		CO4	Able to predict the population projection
		CO5	Able to analyze the survival data
BSTA 403	Controlled Clinical Trials and Operations Research	CO1	Able to plan a clinical trial
		CO2	Able to understand drug development process
		CO3	Able to analyze continuous, categorical, binary data
		CO4	Able to writing protocol, statistical analysis plan and clinical study report
		CO5	Able to determine the sample size for the clinical trial and able to understand the handling of missing data and multiplicity
		CO6	Able to understand and solve linear programming problems, transportation problems and assignment problems.
BSTA 404	Bioinformatics and Computational Biology	CO1	Able to understand the basics of bioinformatics and biological data analysis
		CO2	Able to classify different types of biological databases and database system
		CO3	Able to understand the sequence alignment, algorithm and tools
		CO4	Able to understand molecular modelling

		CO5	Able to understand phylogenetic analysis
BSTA 405	Advanced Statistical Computing	CO1	Able to solve the linear programming problems, transportation problems and assignment problems
		CO2	Able to visualize data by graphs and diagrams using R program
		CO3	Able to apply statistical methods by R program and Able to simulate samples from different populations
		CO4	Able to apply survival data analysis techniques
		CO5	Able to understand the computational Biology

Name of the Programme: MSc Biotechnology			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
BTPG01	Biochemistry	CO1	The study of biochemistry helps one understand the actual chemical concepts of biology.
		CO2	Biochemistry in general deals with body substance like enzymes, carbohydrates, amino acids, fats, proteins, hormones, DNA, RNA, pigments
		CO3	To study life in terms of biochemical reactions. One can understand all the chemical reactions happening at the molecular level in a living cell or living being. The role of biochemistry and its importance in various fields is as described below.
BTPG02	Cell Biology and Genetics	CO1	Students will know about the cell and its biology, which will help the students to understand the origins of cells and the generation of cell diversity, as well as the common features of cellular structure and function – how they obtain energy, synthesize new molecules, communicate, proliferate and survive.
		CO2	Students will understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles
		CO3	Students will understand the cellular components underlying mitotic cell division.
		CO4	The understanding of cells is used for learning the processes such as, absorption, how electrical signals are carried, secretion, why some things such as lack of oxygen can cause death, etc.
BTPG03	Biophysics and Bioinformatics	CO1	Students will be able to understand and describe and use the biological databases, perform structured query and analyze and discuss the results in biologically significant way
		CO2	Students will be able to explain principle, algorithm and different methods of sequence alignments as well as execute alignments to address research problems

		CO3	Students will become familiar with a wide variety of bioinformatics tools and softwares and apply these to conduct basic bioinformatics research and thus develop platform for molecular biology experiments
		CO4	Study about the different motif analysis that act as specific tools for biological interactions.
BTPG04	Instrumentation and Biostatistics	CO1	Course is designed to train the students bioinstrumentation techniques essential for the understanding of life science and biotechnology.
		CO2	Course consists of basics of instrumentation techniques.
		CO3	Basic understanding of statistical concept is necessary to effectively evaluate biological data
		CO4	Demonstrate and understanding of the central concept of modern statistical theory and interpret result of descriptive statistical methods effectively
SEMESTER 2			
BTPG06	Microbiology	CO1	Student will understand the diversified branches of microbiology
		CO2	Student will know the theoretical and practical aspects of microbial growth and physiology
		CO3	Students will learn about the morphology and physiological characteristics of different groups of microorganisms
		CO4	This course will make the students to understand virus cultivation, phages and bacterial/yeast genetics
BTPG07	Immunology	CO1	Students will understand the basic concept of innate and acquired immunity.
		CO2	Students will gain knowledge about immunoglobulin structures and diversity of antibodies, morphology and functions of various immune cells such as dendritic cells, macrophages, neutrophils and their association with MHC molecules will be studied.
		CO3	This study will make the students to understand the basic mechanisms of hypersensitivity responses and their associations with different diseases.
		CO4	The main goal of the course is to provide basic understanding of immunology and immune responses in response to various infectious and non infectious diseases
BTPG08	Molecular Biology	CO1	Students will learn DNA replication, recombination and repair, transcription and translation
		CO2	Students will be aware of the modern tools and techniques of genomics and isolation and identification of genes
		CO3	Students will understand the biology and application of antisense technologies and biology of cancer
BTPG09	Metabolism and Enzymology	CO1	Basic knowledge of structure and functions of major biomolecules will make the students to understand and implement the acquired knowledge in future.
		CO2	Understanding of metabolic pathways (catabolism as well as anabolism), their diversity and how these are specifically regulated and interrelated in different cells

		CO3	Practical knowledge and hands on tools and techniques for the characterization of bio-molecules will help the students in advanced research programs
		CO4	Concepts of enzyme kinetics, regulation and specificity
SEMESTER 3			
BTPG11	Bioprocess Technology	CO1	Students will gain knowledge of bioreactor
		CO2	Students will understand the application and functioning of bioreactors
		CO3	This course will make the students to understand the downstream procedure and fermenter waste treatment
BTPG12	Recombinant DNA Technology	CO1	Students will become familiar with the tools and techniques of genetic engineering- DNA manipulation enzymes, genome and transcriptome analysis and manipulation tools, gene expression regulation, production and characterization of recombinant proteins.
		CO2	This course exposes students to the applications of genetic engineering in biological research.
		CO3	Students will be able to perform basic genetic engineering experiments at the end of course.
		CO4	Students will acquire knowledge of advances in biotechnology- healthcare, agriculture and environment cleanup via recombinant DNA technology.
BTPG13	Plant and Animal Biotechnology	CO1	Students will learn the principals and technical advances behind the in vitro culture of plant cells and rDNA techniques
		CO2	Students will learn the applications of plant transformation for improving the productivity and performance of plants under biotic and abiotic stresses
		CO3	Students will understand the use of antisense technologies for improvement of crop plants
BTPG14	Environment Biotechnology	CO1	The student will be able to evaluate the potential of biodegradation of organic pollutants, taking microbial and physical/chemical environments, as well as the chemical structure of the compound itself, into consideration
		CO2	Students will understand the phenomenon of phytoremediation for the decontamination of soil and water, wetlands as treatment processes, biofilms/biofilters for vapor-phase wastes, and composting
		CO3	Students will learn about the environmental quality evaluation, monitoring, and remediation of contaminated environments
		CO4	Students will learn about the use of biosensors in environmental analysis, environmental engineering.
SEMESTER 4			
BTPG25 E	Cancer Biology	CO1	Knowledge gained from studying cancer cell biology not only improves our understanding of disease but is essential for the development of clinical advances that benefits patients, as recent progress in the areas of immunotherapy and cancer vaccine

		CO2	Discussed about how we can make greater strides in prevention and early detection.
		CO3	Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases.
BTPG24 E	Molecular Markers in Cancer	CO1	Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors.
		CO2	It introduces advanced diagnosis and prognosis methods for effective cancer treatment
		CO3	Molecular marker technology is now viewed at the molecular level of biomarkers, to gene signature classifiers and gene mutations, all of which provide crucial information about which patient will respond to targeted therapy regimens
BTPG30 E	Microbial biotechnol ogy	CO1	Learn about biosafety guidelines.
		CO2	Discuss about bioremediation, biodegradation and other environmental hazardous effect from microbes and treatment by using itself
		CO3	Discuss about present pollution problems and effective possible treatment methods.

Name of the Programme: MSc Applied Microbiology			
Course Code	Course Title	Course Outcomes	
SEMESTER 1			
PG1AMBC01	Biochemistry and Microbial metabolism	CO1	Explain the fundamental biochemical principles, such as the structure/function of biomolecules.
		CO2	Explain metabolic pathways, fermentation reactions, and the regulation of biological/biochemical processes.
		CO3	Know the reactions of the major catabolic and anabolic pathways of carbohydrate, lipid, and nucleotides
		CO4	Explain the various fermentation reactions executed by microorganisms
		CO5	Explain the general properties of Enzymes and its regulation
PG1AMBC02	Biophysics and Instrumentation	CO1	Explain the installation and operation of various instruments.
		CO2	Explain the importance of thermodynamics in living system.
		CO3	Explain the fundamentals of analytical techniques and steps of a characteristic analysis
		CO4	Evaluate the analytical data
		CO5	Effectively communicate physics basics and how it worth in the biological systems

PG1AMBC03	Virology	CO1	Describe elements of the viral life cycle, explain viral replication strategies and compare replication mechanisms used by viruses relevant for human disease.
		CO2	Explain host antiviral immune mechanisms, explain vaccine strategies and mechanisms of antiviral drugs.
		CO3	Describe viral strategies to evade host immune and cellular factors.
		CO4	Discuss principles of virus pathogenesis, describe methods used for laboratory diagnosis of viral infections.
		CO5	Acquire knowledge about epidemiology and prophylaxis of viruses that are significant as human pathogens.
PG1AMBC04	Fundamentals of Microbiology	CO1	Demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures
		CO2	Understand the basic microbial structure and function and study the comparative characteristics of microbes, and also understand the structural similarities and differences among various physiological groups of bacteria.
		CO3	Know the various culture media and their applications and also understand various physical and chemical means of sterilization
		CO4	Understand the microbial transport systems
		CO5	Know the various Physical and Chemical growth requirements of bacteria and fungi
PG1AMC05	Practical -1	CO1	Knowledge about the qualitative analysis of mixture
		CO2	Acquire, discover, and apply the theories and principles of learned subjects in practical, real-world situations and problems.
PG1AMBC06	Practical-2	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to devise experiments with appropriate hypotheses and controls.
		CO3	Develop success skills in communication, critical thinking, interaction, information acquisition and interpretation, organization, professionalism, leadership, auto-didactics and life-long-learning.
SEMESTER 2			
PG2AMBC07	Microbial genetics and Molecular biology	CO1	Understand the scientific process, in the context of learning the fundamental biological and chemical 'facts' of molecular biology.
		CO2	Gain skills required to effectively do scientific research.
		CO3	Explain the mechanisms of DNA replication and repair, RNA synthesis and processing, and protein synthesis.
		CO4	Describe how gene expression is regulated at the transcriptional and post-transcriptional level.

		CO5	Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathways
PG2AMBC08	Bioinformatics	CO1	To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysis
		CO2	The collection, classification, storage and analysis of biochemical and biological information using computers
		CO3	Introduction to the basics of macromolecular sequences, alignment and analysis
		CO4	Knowledge about the concept of molecular modeling and various approaches in phylogenetic analysis
		CO5	Analysis and handling of various bioinformatics online tools and servers
PG2AMBC09	Immunology	CO1	Describe the basic mechanisms, distinctions and functional interplay of innate and adaptive immunity
		CO2	Define the cellular/molecular pathways of humoral /cell-mediated adaptive responses
		CO3	Define the basic mechanisms that regulate immune responses and maintain tolerance
		CO4	Explain the cellular and molecular aspects of lymphocyte activation, homeostasis, differentiation, and memory.
		CO5	Understand the molecular basis of complex, cellular processes involved in inflammation and immunity, in states of health and disease.
PG2AMBC10	Biostatistics	CO1	Understand the principle concept of biostatistics, recognize the definition of statistics, its subject and its relation with microbial science
		CO2	Analyse data and statistics on living things collected and contribute to the design and execution of research studies
		CO3	Enable the students to disentangle the data received and make valid inferences that can be used to solve problems in public health
		CO4	Knowledge about the application of statistical methods to conduct research in the areas of biology, public health
PG2AMBC11	Practical-III	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to design and carry out experiments (safely) and to interpret experimental data
		CO3	Able to interpret and analyses bioinformatics online tools
PG2AMBC12	Practical -IV	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to design and carry out experiments (safely) and to interpret experimental data
		CO3	Able to interpret and analyses molecular biology experiments

SEMESTER 3

PG3AMBC13	Bioprocess Technology	CO1	Students will gain knowledge of bioreactor
		CO2	Students will understand the application and functioning of bioreactors
		CO3	This course will make the students to understand the downstream procedure and fermenter waste treatment
PG3AMBC14	Recombinant DNA Technology	CO1	Technically know- how on versatile techniques in recombinant DNA technology.
		CO2	Understanding on application of genetic engineering techniques in basic and applied experimental biology
		CO3	Show proficiency in designing and conducting experiments involving genetic manipulation
		CO4	Demonstrate the basic techniques involved in recombinant DNA manipulations including DNA restriction, ligation, transformation and selection of recombinant plasmid.
		CO5	Explain the principles and application of PCR, and other sophisticated machineries.
PG3AMBC15	Medical microbiology	CO1	Identify common infectious agents and the diseases that they cause.
		CO2	Explain general and specific mechanisms by which an infectious agent causes disease.
		CO3	Describe the epidemiology of infectious agents including how infectious diseases are transmitted.
		CO4	Explain interventions employed to prevent infectious diseases including infection control measure and vaccines
		CO5	Acquire comprehensive knowledge and understanding of medically significant microorganisms and its diagnosis and treatment
PG3AMBC16	Food and Dairy Microbiology	CO1	Identify the important pathogens and spoilage microorganisms in foods and the conditions under which they will grow
		CO2	Identify the conditions under which the important pathogens are commonly inactivated, killed or made harmless in foods
		CO3	Explain the significance and activities of microorganisms in Dairy and dairy products.
		CO4	Explain why microbiological quality control programmes are necessary in food production.
		CO5	Commit to the highest standards of professional integrity and ethical values
PG3AMBC17	Practical-V	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to design and carry out experiments (safely) and to interpret experimental data
		CO3	Able to carry out various fermentation techniques

PG3AMBC1 8	Practical - VI	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to design and carry out experiments (safely) and to interpret experimental data
		CO3	Able to carry out various quality analyzing techniques in food microbiology.
SEMESTER 4			
PG4AMBE02	Microbial Ecotechno- logy and Soil Microbiology	CO1	Demonstrate insight into quantitative assessments of microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions
		CO2	Demonstrate an insight to central methods in plant disease microbiology
		CO3	Devise experimental strategies for analysing microbial populations, and their activity in environment.
		CO4	Critically read, analyse, discuss and present topics from the original scientific literature (articles and reviews) in Agricultural and Environmental microbiology.
		CO5	Know various culturing technique for microbes from agricultural field and other environmental niche.
PG4AMBE01	Pharmace- utical microbiology	CO1	The study of microorganisms associated with the manufacture of pharmaceuticals.
		CO2	Determine antimicrobial effectiveness, microbial contamination or bioburden, analyse endotoxins.
		CO3	Include the research and development of antiinfective agents, the use of microorganisms to detect mutagenic and carcinogenic activity in prospective drugs
		CO4	To study the use of microorganisms in the manufacture of pharmaceutical products
PG4AMBE03	Clinical Microbiology	CO1	Study the prevention diagnosis and treatment of infectious disease
		CO2	Study various clinical application of microbes for the improvement of health
		CO3	Study microscopic organisms like bacteria and fungi, to gain knowledge about fighting and preventing diseases
		CO4	Explain how to incorporate testing for diverse group of microorganisms
PG4AMBC1 9	Practical - VII	CO1	Able to design and carry out experiments (safely) and to interpret experimental data
		CO2	Able to design and carry out experiments (safely) and to interpret experimental data
		CO3	Able to carry out various analyzing techniques in clinical , agricultural and environmental microbiology

Name of the Programme: M.Com.

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
AF01C01	Advanced Financial Accounting-II	CO1	To know the methods of valuation of goodwill and share
		CO2	To acquaint with the amalgamation and reconstruction procedures of companies
		CO3	To learn the proceedings of insolvency of an individual
		CO4	To know the international financial Reporting standards.
PM01C02	Principles of Management and Organisational Behaviour	CO1	Help the students to understand the conceptual framework of management and organizational behaviour
		CO2	Understand the managerial applicability of the concepts.
		CO3	To understand Modern techniques in management
FM01C03	Financial Management Principles	CO1	Introduce the various aspects of financial management
		CO2	Acquaint the student with the knowledge of time value of money
		CO3	To learn various methods and techniques of financial management.
RM01C04	Research Methodology	CO1	Help the students to understand how to do research in the area of commerce and management.
		CO2	Equip the students to identify social issues as research problem
		CO3	Helping the students to develop research aptitude
		CO4	Students are able to design a project proposal and research Synopsis.
QT01C05	Quantitative Techniques	CO1	Understand statistical tools for quantitative analysis
		CO2	Understand the statistical tools for research and business decision making.
		CO3	Equip the students for analysing data
SEMESTER 2			
AF02C06	Advanced Financial Accounting- Paper II	CO1	Understand the proceedings of the preparation of consolidated balance sheet
		CO2	Get an idea about Green accounting, Double accounts, Farm accounts, voyage accounts
		CO3	Acquaint the student with liquidation proceedings of companies.
HR02C07	Human Resource Management	CO1	Understand the human resource functions in an organization.
		CO2	Learn various aspects of Human Resource Development

		CO3	Understand the various leadership styles
FM02C08	Financial Management Strategies	CO1	Acquaint students with the advanced concept of financial management
		CO2	Learn the working and current asset management of an organisation
		CO3	Equip the students to formulate financial strategies for the organization.
SM02C09	Strategic Management	CO1	Understand the framework across strategic analysis, strategy formulation, and strategic implementation
		CO2	Learn about various methods of Environmental analysis
		CO3	Equip the students to formulate strategies for the organization.
OR02C10	Operations Research	CO1	Enable the students to understand various techniques used in operation management decisions.
		CO2	Learn about linear programming methods
		CO3	Develop skill in problem solving mechanisms
SEMESTER 3			
MA02C11	Management Accounting	CO1	Understand accounting methods and techniques used for decision making.
		CO2	Equip students for Financial Statement Analysis of companies and take investment decisions.
		CO3	Apply the marginal costing principles in Decision making situations of businesses.
		CO4	Deal with practical issues related to Management Reporting.
DT02C12	Direct Taxes- Law and Practice	CO1	Make the students familiar with the direct tax law of the country.
		CO2	Equip students to compute the income from salary and house property.
		CO3	Acquire knowledge regarding the basic concepts of Income Tax and Determine taxable profit of a business or profession.
		CO4	Learner shall be able to determine eligible deductions and compute Taxable Income and tax liability of an individual
		CO5	Able to compute capital gain and income from other sources and also calculate Gross Total Income of an individual.
		CO6	To give advanced level of knowledge on direct tax laws and computation and assessment.
IB03C13	International Business	CO1	Understand different aspects of international business.
		CO2	Familiarisation with globalisation, internationalisation of business and the International business environment.
		CO3	Understanding about theories of International trade, trade barriers and trade blocks.
		CO4	Imparting idea about various economic Institutions related to international trade.

		CO5	Develop an understanding about the international investment environment.
		CO6	Achieve high level knowledge about various aspects of international monetary system.
CG03C14	Corporate Governance	CO1	Understand the importance of corporate governance
		CO2	Help students to find new ways to promote more effective boards and committees.
		CO3	Identify issues usually addressed by corporate governance structures
		CO4	Students are able to Summarize recent scandals and abuses and the regulatory reaction
		CO5	Inculcate the values of Business Ethics
BE03C15	Business Environment	CO1	Understand the impact of environment in business
		CO2	Understand Economic Environment and its features
		CO3	To study the role played by legal and political environment in Business
		CO4	To familiarize socio-cultural environment of business and learning how to deal with the dynamism of environment by business
		CO5	Thoroughly understand the concept of Corporate Social Responsibility and its need for sustainable development.
SEMESTER 4			
AC 04C16	Advanced Cost Accounting	CO1	Learn about the higher application of cost accounting techniques and methods.
		CO2	Know the application of cost control techniques.
		CO3	Apply the marginal costing principles in decision making situations of businesses.
		CO4	Understand the concepts of standard costing, and the process of cost control through it.
		CO5	Deal with reconciliation of cost and financial accounting
DT 04C17	Direct Taxes- Assessment & Procedures	CO1	Make the students familiar with the assessment and procedures of direct taxes in the country.
		CO2	Compute the total income and tax liability of firms and Association of Persons
		CO3	Carry out assessment of companies and determine their tax liability
		CO4	Understanding about the assessment procedures, TDS and advance payment of tax and application in various situations
		CO5	Learn tax planning concepts and apply the same
IF 04E01	International Finance	CO1	Give a detailed idea about macro environment on which financial transactions are carried out.
		CO2	Give a comprehensive knowledge about ways and means of raising of finance by MNCs'
		CO3	Learn exchange rate regimes and International Liquidity

		CO4	Familiarise the issues of International Financial Management
		CO5	Develop an understanding about the international cash management and investment environment.
FM 04E02	Financial Markets & Derivatives	CO1	Make the students familiar with the financial system of the country in general and capital market operations in particular.
		CO2	Students are able to understand the commodity trading through multi commodity exchanges.
		CO3	Knowledge about the derivative market in India, its evolution, types, players, risks involved and basic quantitative foundations.
		CO4	Analyze the implications of Risk in the perception of individuals and Institutions and measurement of risks.
		CO5	Understand and explain the concept of forward market and its function.
		CO6	Analyse the operation and pricing of various types of futures
		CO7	Understand the concepts and methodology of option trading and apply the models of pricing the option contracts and develop an idea of exchanges through swaps
SA 04E03	Security Analysis and Portfolio Management	CO1	Students are able give a detailed idea about techniques of Security analysis
		CO2	Able to understand the concepts of investments, different types of investments, views of investment and process of investment and apply the theoretical knowledge in investment information for selecting the securities.
		CO3	Understanding the types of risk in security market and Applying various tools for the valuation of bonds as well as economic indicators to predict the market.
		CO4	Understand the tools of technical analysis, analyse the patterns and trends in the market by using various tools and enable to take investment decisions after understanding market efficiency level also.
