ST. THOMAS COLLEGE PALAI

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

(Affiliated To Mahatma Gandhi University, Kottayam)



COURSE OUTCOMES (Academic Year 2018-19)

ARUNAPURAM P. O., KOTTAYAM, KERALA – 686 574 www.stcp.ac.in, e-mail: principal@stcp.ac.in, principal.stc@gmail.com Phone: 04822-212316, 212317; Fax: 04822-216313; Mob: +919447140859

COMMON COURSE – ENGLISH

Name of	Course	Course	Cours	se Outcomes
the	code	Title		
Programme			FMFS	TFD 1
DA	EN1CC01	Eine terre		Te confidently use English in both multiple
BA	ENICCOI	Fine-tune	COI	To confidently use English in both written
BSC		Your	<u> </u>	and spoken forms
BCom		English	02	effectively
BA	EN1CC02	Pearls	CO1	To introduce students to the different genres
BSc		from the		of literature and to the niceties of literary
		Deep		Expression
			CO2	To appreciate and enjoy works of literature.
			CO3	To appreciate the aesthetic and structural elements of literature
		S	EMES	TER 2
BA	EN2CC03	Issues that	CO1	To sensitize the learners to contemporary
BSc		Matter		issues of concern.
BCom			CO2	To identify the major issues of
				contemporary significance.
			CO3	To respond rationally and positively to the
				issues raised.
		S	EMES	TER 3
BA BSc	EN3CC05	Literature and/ as Identity	CO1	To sensitize students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re- working the issue of identity at various levels.
			CO2	To introduce the subtle negotiations of Indigenous and Diasporic identities with-in Literature.
			CO3	To give an idea of the fissures, the tensions and the interstices present in South Asian regional identities
BCom	EN3CC07	Gems of Imagina-	CO1	To introduce students to the different genres of literature and to the niceties of literary
		tion		Expression
			CO2	To appreciate and enjoy works of literature.
			CO3	To appreciate the aesthetic and structural elements of literature

		S	EMES	STER 4
BA	EN4CC06	Illumina-	CO1	To acquaint the learners with different forms
BSc		tions		of inspiring and motivating literature.
			CO2	To maintain a positive attitude to life.
			CO3	To evaluate and overcome setbacks based on
				the insights that these texts provide.
BCom	EN4CC08	Revisiting	CO1	To introduce the students to the taste of time
		the		tested world classics
		Classics	CO2	To make the students familiar with the
				classics from various lands.
			CO3	To help them understand the features that go
				into the making of a classic

SECOND LANGUAGES

Name of the Programme	Course code	Course Title	Cours	se Outcomes				
SEMESTER 1								
		Ν	ALAY	YALAM				
BA	ML1CCT	Katha	CO1	Recognize general awareness in literature				
BSc	01	Sahithyam		Appreciate importance of literature and life				
			CO2	To sensitize aspects in Malayalam				
BCom	ML1CCT	Kathayum	CO1	General awareness about Malayalam				
	05	Kavithayu		literature				
		m	CO2	Introducing new common trends in				
				Malayalam literature				
		1	HIN	NDI				
BA	HN1	Prose and	CO1	To develop students competence with				
BSc	CCT 01	One Act		reference to Hindi language and literature.				
		Play.	CO2	To give an authentic knowledge about the				
				development of literature.				
BCom	HN1	Prose and	CO1	To make familiar with the Students, the				
	CCT O1	Mass		literary form of essays.				
		Media	CO2	To give knowledge about mass media.				
			CO3	To understand the principles and assumptions				
				governing modern linguistic.				
			CO4	To promote eminent Hindi scholars and				
				encourage them to write and translate				
				relevant works in Hindi.				
	T	1	GER	MAN				
BA History	GR1CCT	Basic	CO1	Familiarize students with German alphabets				
	07	Grammar		and pronunciations				
		and	CO2	Imparts basic knowledge of grammar				
		Transla-	CO3	Develops skills of translations with dialogue				
		tions		patterns				

			CO4	Develops common skills in reading, writing, listening and speaking
BA BSc	GR1CCT 01	Grammar and	CO1	Introducing the basic grammar and vocabulary.
		Transla- tions	CO2	Developing the skills of reading, writing and listening.
			CO3	Speaking along with dialogue patterns, conversations and oral exercises
			CO4	Translations from German to English and English to German.
BCom	GR1 CCT05	Introduct- ory	CO1	Familiarize students with German business life
		German for	CO2	Imparts basic knowledge of grammar
		Business People	CO3	Enables them to communicate in the target language
			CO4	Develops common skills in reading, writing, listening and speaking.
	r	1	SYR	IAC
BA BSc	SY1CCT 01	Poetry Grammar	CO1	Introducing the basic grammar and vocabulary.
		and History of Syriac Language and	CO2	Developing the skills of reading, writing and listening.
			CO3	Acquire the knowledge of origin and development of Syriac language
			CO4	Recitation of Syriac poems from the syllabi
BCom	SY2CCT 02	Poetry Grammar and History of Syriac	CO1	Introducing the basic grammar and vocabulary.
			CO2	Developing the skills of reading, writing and listening.
			CO3	Acquire the knowledge of origin and development of Syriac language and literature
			CO4	Recitation of Syriac poems from the syllabi
		S	EMES	STER 2
		Ν	IALA	ALAM
BA	ML2CC	Kavitha	CO1	General awareness in poetry.
BSc	T02		CO2	To identify new trends in poetry.
			CO3	Appreciate importance of poetry and life To sensitize aspects in Malayalam.
BCom	ML2CC T06	Autobiogra phy and	CO1	Realize Aesthetic power of prose in Malayalam.
		popular articles	CO2	Introducing awareness about creativity in Malayalam Literature.
			HIN	NDI
BA	HN2	Hindi	CO1	To develop students competence with
BSc	CCT 02	Novel and		reference to Hindi language and literature.
		Stories	CO2	To make students familiar with novel and stories.
			1	L

BCom	HN2	Poetry,	CO1	To make the students familiar with ancient
	CCT 02	Commer-		and modern Culture.
		cial Correspon-	CO2	To give an authentic knowledge about the development of literature.
		dence and Translation	CO3	To create an awareness of the famous writers of this period.
			CO4	To know about the culture of our country through the famous works of the poets
			GER	MAN
BA History	GR2	Communi-	C01	Familiarize knowledge of grammar
	CCT08	cative German	CO2	Translates short texts from German to English
		and Transla-	CO3	Efficiency in effective use of dialogue patterns
		tions	CO4	Perfecting the Pronunciation of target language
BA, B.Sc	GR2	Grammar,	CO1	Imparts proper usage of grammar
	CCT02	Translation	CO2	Increases German word power
		and	CO3	Enables simple conversations
		ation	CO4	Translates seen and unseen texts of German
B.Com	GR2 CCT06	Communic	CO1	Enables students to communicate in real life
	CC100	German for	CO2	Learns to write Business Letters
			CO3	Imparts efficient and effective use of German Expressions
			CO4	Sufficient knowledge of grammar
			SYR	IAC
BA, B.Sc.	SY2CC	Poetry	CO1	Imparts proper usage of grammar
	T01	Grammar	CO2	Increases Syriac vocabulary
		and History	CO3	Enables simple conversations
		Literature	CO4	Imparts the knowledge of Syriac literature
B.Com	SY2CC	Prose	CO1	Enables simple conversations
	102	and History	CO2	Learns to translate the Syriac Manuscripts to English
		Of Syrian Church in	CO3	Familiarize the history and culture of Syrian
		India	<u> </u>	churches in India especially in Kerala
			CO4	Sufficient knowledge of grammar.
		S		ALAM
BA/BSc	ML1C	N Kathayum		General awareness about Malayalam
	CT05	Kavitha-		literature.
		yum	CO2	Introducing new common trends in Malayalam literature
			HIN	
BA/BSc	HN3	Poetrv	CO1	To make the students familiar with ancient
	CCT	Grammar		and Modern Culture.
	03	and	CO2	To understand the principles and assumptions
		Translation		governing modern linguistic.

			GER	MAN
BA, B.Sc.	GR03	Grammar,	CO1	Applies acquired knowledge of grammar.
	CCT03	German	CO2	Acquire knowledge of German society and
		history and		culture.
		society	CO3	Gets a general view of Germany before and
				after World War II.
			SYR	IAC
BA, B.Sc.	SY3C	Prose	CO1	Learns to translate the Syriac Manuscripts to
	CT01	Grammar		English.
		and History	CO2	Familiarize the history and culture of Syrian
		of Syrian		churches in India especially in Kerala.
		Church in	CO3	Enables simple conversations.
		India		
		S	EMES	STER 4
		N	IALAY	ALAM
BA/BSc	ML2C	Pathra	CO1	Introducing basics of Journalism.
	CT06	Pravartha-	CO2	Familiarizing new trends in journalism.
		nam		
	T === = .	Г – – – –	HIN	NDI
BA/BSc	HN4	Drama and	CO1	To make the students familiar with Drama
	ССТ	Long		and other forms of arts.
	04	Poem.	CO2	To build a creative outlook towards life.
			CO3	To form an imaginative mindset.
			GER	MAN
BA, B.Sc.	GR4	German	CO1	Awareness of German literature.
	CCT04	literature-	CO2	Understands history, culture and society.
		selected	CO3	Proficiency in target language
		readings:		
		prose and		
		poetry		
DA DC	GVAC	D	SYR CO1	
BA, B.Sc.	SY4C	Prose	COI	Awareness of literature.
	C101	Grammar	CO ₂	Understands history and culture of Syrians
		and History		especially from 15 th cen. Onwards.
		of Syrian	CO3	Students will be able to compare and describe
		Church in		the Syriac Traditions.
		India		
		(From 15 th		
		Century)		

CORE COURSES

Course	Course Title	Course Outcomes		
Code			SEMESTER 1	
EN1CR01 Me of I	Methodology of Literary Studies	CO1	To introduce the student to the major signposts in the historical evolution of literary studies from its inception to the current postcolonial realm.	
		CO2	Introducing the emergence of literature as a specific discipline within the humanities.	
		CO3	Introducing the tenets of what is now known as traditional approaches and also that of formalism.	
			SEMESTER 2	
EN2CR02	Introducing Language	CO1	To introduce the student to the basics of English language and literature.	
	and Literature	CO2	To introduce the evolution and the differential traits of the English language till the present time.	
		CO3	To introduce the evolution of literature from antiquity to postmodern times.	
			SEMESTER 3	
EN3CR03	Harmony of Prose	CO1	The student is given space to mature in the presence of glorious essays, both Western and Non-Western.	
		CO2	To make the students familiar with varied prose styles of expression.	
		CO3	To create awareness of eloquent expressions, brevity and aptness of voicing ideas in stylish language.	
EN3CR04	Symphony of Verse	CO1	To acquaint the student with the rich texture of poetry in English.	
		CO2	To create an understanding of the representation of poetry in various periods of the English tradition.	
		CO3	To make an awareness of the emerging cultural and aesthetic expressions that poetry makes Possible	
			SEMESTER 4	
EN4CR05	Modes of	CO1	To acquaint students with various modes of fiction.	
	Fiction	CO2	The students will have comprehended the categories of British and non- British short fiction, and also the novel as a form of literary expression.	
		CO3	To encourage the students to explore the realm of fiction.	
EN4CR06	Language and Linguistics	CO1	Introduction to the science of linguistics. It seeks to give an overview of the basic concepts of linguistics and linguistic analysis to the students.	
		CO2	To show the various organs and processes involved in the production of speech, the types and typology of speech sounds, segmental & supra-segmental features of the English language, and transcription using IPA.	
		CO3	To describe and explain morphological processes and phenomena.	

			SEMESTER 5
EN5CR07	Acts on the	CO1	The course seeks to introduce the student to select
	Stage		theatre texts that form the canon of English drama.
		CO2	On completion of the course, the student shall be
			familiar with the works of the playwrights.
		CO3	Enables the student to appreciate and critique drama as
EN5CD09	Litanony	CO1	an art form.
ENJCR08	Criticism and Theory	COI	signposts in Literary Criticism, Literary Theory and Indian Aesthetics.
		CO2	On completion of the course, the student will have awareness about the major developments in literary criticism from the ancient times to the twentieth century.
		CO3	The student will be initiated to the realm of literary theory and major theoretical schools.
EN5CR09	Indian Writing in English	CO1	The course is intended to sensitize students to the various ways in which literature written in English, in the Indian sub-continent serves as a platform for forming, consolidating, critiquing and re-working the issue of national identity' at various levels.
		CO2	On completion of the course, the student should be aware of the subtle flavours that distinguish the Indian quotient in English writings from India.
		CO3	Teaching the different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.
EN5CRE N01	Environment al Science and Human Rights	CO1	Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It encourages character building, and develops positive attitudes and values.
		CO2	It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.
		CO3	Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future.
	1	T	SEMESTER 6
EN6CR10	Postcolonial Literatures	CO1	To familiarize the students the varied dimensions of postcolonial subjectivity through theory and literature.
		CO2	To make the students aware of the social, political, cultural aspects of postcolonial societies
		CO3	To make the students realise the impact of colonialism and imperialism on native cultural identities
EN6CR11	Women	CO1	To introduce the theoretical and literary responses by women and the concerns that governs feminist literature
	*********	CO2	To critically respond to literature from a feminist perspective.

		CO3	To make the students realize how the patriarchal notions pervade in the social and cultural scenario and how feminism exposes these notions.
EN6CR12	American	CO1	To enable the students to have a holistic understanding
	Literature		of the heterogeneity of American culture and to study
			works of prose, poetry, drama, and fiction in relation to
			their historical and cultural contexts.
		CO2	To make the students familiar with the evolution of
			various literary movements in American literature.
		CO3	To get them acquainted with the major authors in
			American Literary History.
EN6CR13	Modern	CO1	To make the students aware of the stupendous variety
	World		that resides in Literatures the world over.
	Literature	CO2	To discern that literatures the world over engage in very
			deep ways with the vicissitudes of life.
		CO3	To discern that World literatures often defy genres/
			regionalities and canonical assumptions to emerge as a
			platform where poetics and politics fuse.

Name of the Programme: BA Malayalam						
Course Code	Course Title	Course Outcomes				
			SEMESTER 1			
ML1CRT	Modern	CO1	To sensitize aspects in Malayalam poetry			
01	Poetry	CO2	To identify new trends in poetry			
		CO3	Scope of cyber literature			
SEMESTER 2						
ML2CRT 02	Malayala Kavitha	CO1	Familiarize poetry from medival to modern trio			
	Ezhuthachan	CO2	Familiarizing new trends in medieval poetry			
	Muthal					
	Kavithraym					
	vare					
			SEMESTER 3			
ML3CRT	Kerala	CO1	Familiarizing Culture of Kerala through historical			
03	Samskaram	~~~	method.			
		CO2	Introducing historical events as cultural relations.			
			SEMESTER 4			
ML4CRT	Kerala	CO1	A general awareness of rise of middle class imperialism.			
04	Culture after Medieval	CO2	General awareness in missionary moments and so on.			
			SEMESTER 5			
ML5CRT	Paristhini	CO1	Introducing basic environmental knowledge and eco			
05	Vinjanavum		system.			
	Manushyavaka	CO2	Introducing basics of human right laws.			
	sa Padanavum					

ML5CRT	Sahithya	CO1	Introducing aesthetic theories of east and west.
06	Meemamsa	CO2	Recognize the influence of world philosophy in
			Malayalam literature and so on
ML5CRT	Cherukatha,	CO1	Introducing ages of short story and novels
07	Novel	CO2	Familiarizing Cultural changes through Dalit and
			Feminine Studies
ML5CRT	Bhashah	CO1	Introducing General awareness about linguistics
08	Sasthram	CO2	Recognize the importance of further research in
			linguistics
			SEMESTER 6
ML6CRT	Keraleeya	CO1	Introducing social importance and Aesthetics of visual
09	Dhrishyakala		arts
		CO2	Realizing literary values of visual arts of Kerala.
ML6CRT	Pracheena	CO1	Introducing general awareness about evolution of
10	Sahithyam		Malayalam Language.
		CO2	Appreciate different attitudes in ancient Malayalam
			literature.
ML6CRT	Gadhya-	CO1	Introducing some milestones in Malayalam prose.
11	sahithyam	CO2	Realizing different areas of prose.
	Niroopanam		
ML6CRT	Vyakaranam,	CO1	Realizing basics of phonetics
12	Bhasha	CO2	Acquiring proper steps of phonetics
	Charithram		

Name of the Programme : BA Economics				
Course	Course Title	Cours	se Outcomes	
Code				
	1	T	SEMESTER 1	
EC1CRT	Perspectives	CO1	It identifies the main concerns of social science disciplines	
01	and	CO2	It articulates the basic terminology and theories prevalent	
	Methodology		across various disciplines.	
	of Economics	CO3	It helps to understand qualitative and quantitative models	
			within the social sciences, especially Economics	
SEMESTER 2				
EC2CRT	Micro	CO1	It gives the foundation for economic analysis and problem	
02	Economic		solving.	
	Analysis 1	CO2	It introduces a framework for learning about consumer	
			behaviour and analyzing consumer decisions.	
		CO3	The course also attends to firms and their decisions about	
			optimal production.	
		CO4	This course provides an introduction to supply and demand	
			and the basic forces that determine equilibrium in a market	
			economy.	
			SEMESTER 3	
EC3CRT	Micro	CO1	This course is designed to provide basic understanding of	
03	Economic		micro economic concepts.	
	Analysis- II	CO2	Students are provided with the working and performance	
			of firms in the market.	
		CO3	It deals with behavior of economic agents - consumer,	
			producer, factor owner – price fluctuations in the market.	

EC3CRT 04	Economics of Growth &	CO1	This courser enables the students to understand the theories and strategies of growth and development.
	Development	CO2	It imparts knowledge about the issues relating to sustainable development, environmental protection and pollution control measures.
		CO3	IT makes the students more insightful about modern approaches to development.
			SEMESTER 4
EC4CRT	Macro	CO1	This paper provides the students the information regarding
05	Economics 1		the theory of cost, market performance and welfare economics.
		CO2	This course also makes a picture regarding the cost analysis which seems to be integral to their life.
		CO3	It also aids the students to know more about the theoretical background of market structure
EC4CRT	Public	CO1	The purpose of this course is to give an understanding of
06	Economics		the role of state in fostering the economic activities via budget and fiscal policies.
		CO2	Students get a chance to know about the financial position
			of the country.
		CO3	This course enables the students to understand the various issues between Central and State Governments
		I	SEMESTER 5
EC5CRT0	Macro	CO1	This course is designed to make the students aware of the
8	Economics II		theoretical aspects of Macro economics.
		CO2	It helps the students to think issues which are a nature of economy as a whole.
		CO3	It presents macro economic trends of various variables and the theory behind it.
EC5CRT0 9	Environmental Economics	CO1	This course imparts an awareness regarding the issues like environment conservation and climate change
		CO2	It also emphasizes the need of environmental protection
		<u> </u>	and its role in economic development.
		003	reserving nature and nurture human values
EC5CRT	Introductory Econometrics	CO1	IT introduces various concepts and application of econometrics
10		CO2	It helps the students to know the interrelationship between
		002	econometric variables.
		CO3	It also provides an access to mathematical and econometric methods which are employed for economic measurement.
			SEMESTER 6
EC6CRT	International	CO1	The objective of this course is to arrive at an understanding
12	Economics		of theories of international trade
		CO2	It examines the impact of the trade policies on the world
		CO3	It helps the students to know about the recent trade
			relations of the country.
EC6CRT	Money &	CO1	The present course is designed to acquaint the students
13	Financial		with the changing role of the financial sector of the
	markets		economy.

		CO2	It introduces the students the functioning of stock markets in India
		CO3	The stake-holders are to familiarize with the basic
			concepts, the financial institutions and markets.
EC6CRT	Indian	CO1	The objective of the course is to equip the students with the
14	Economy		theoretical, empirical
		CO2	This course discusses the policy issues relating to the
			society, polity and economy of India.
		CO3	It also highlights the recent economic problems which are
			crucial for the growth of economy.

Name of the Programme : BA History with Archaeology and Museology(Vocational) Model II

Course	Course Title	Cours	se Outcomes
Coue			SEMESTER 1
HY1CRT 01	Perspectives and Method- ologies in Social Sciences – History	CO1	An introduction about different methodologies of social sciences
		•	SEMESTER 2
HY2CRT 02	Understanding Early India: From Hunting Gatherers to Land Grants.	CO1	An idea about the life of man and the evolution process of different institutions in early India
			SEMESTER 3
HY3CRT 03	Polity, Society and Economy in Pre Colonial Period.	CO1	Creates an awareness about the socio-economic- political and cultural life of medieval India
HY3CRT 04	Cultural Trends in Pre Colonial Kerala	CO1	Creates knowledge about colonial relations and maritime trade.
	•		SEMESTER 4
HY4C RT05	Making of Modern Kerala	CO1	Imbibe an awareness about freedom struggle of Kerala, origin of Marxist ideologies, nationalism, unification of Kerala and role of people in the freedom struggle
HY4CRT 06	Researching the Past	CO1	Develops historical perspectives and inspire the student to make their own understanding of various schools of historiography and inspire them to create their own perspectives that enables them to anchor in an area of research.

			SEMESTER 5
HY5CRT 07	Inheritance and Departures in Historiography	CO1	Gain knowledge about the perspectives of past that evolved and to grasp why history came to be rewritten differently from time to time and under what conceptual presuppositions.
HY5CRT 08	India: Nation in the Making	CO1	Emphasis on the study of the struggle for independence in India.
HY5CRT 10	Environment al Studies and Human	CO1	To understand about various aspects, concepts, issues and movements related to the growth of environmental studies and environmental history of India.
	Rights in Historical Outline	CO2	To learn about various environmental impacts and climate changes
HY5VO T17	Systems of Museology	CO1	Students learn basics of museum, collection, documentation, exhibition, conservation and legislations relating to museums.
		CO2	Students will learn the basic conservation of structures and monuments
		CO3	Students also will learn the significance of preservation of cultural heritage
			SEMESTER 6
HY6CRT	Making of	CO1	To analyse and examine the emergence of Modern India.
11	India	CO2	To generate a healthy nationalist feeling.
		CO3	To make students aware about the political, though, economic and social situation of contemporary India
HY6CRT 12	Understanding Modern World	CO1	To learn about the various political, social and economic aspects of contemporary world.
		CO2	To provide good awareness about the major social revolutions of the modern world.
HY6CRT 13	Capitalism and	CO1	To learn about the expansion of colonies across the world.
0	Colonialism	CO2	To study about various theories related to Marxism, Capitalism and Colonialism
HY6VO T18	Understandin g Ancient	CO1	On the successful completion of this course the students will able to identify the coins.
	Indian History through Archaeology	CO2	To understand the development of coinage in ancient India.
		CO3	Students will be able to read the scripts in inscriptions

Name of the Programme: BA Political Science				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
PS1CRT 01	Methodology and Perspectives of Political	CO1	The course will provide knowledge by studying the historical evolution of modern social scientific practices as well as the changing concerns in the modern and post-modern conditions.	
	Science	CO2	The course also seeks to provide some ideas on the major debates in the social scientific methodologies and also to inquire certain core concepts in political science.	
		1	SEMESTER 2	
PS2CRT 02	Indian Constitution:	CO1	The course is helpful to the students to understand the historical evolution of democratic political system in India.	
	Institutions	CO2	To trace the constitutional developments in India	
	and Processes	CO3	To inquire on the basic structures and values of Indian political system.	
		CO4	It also deals with the evolution of constitutional and statutory institutions in India.	
			SEMESTER 3	
PS3CRT 03	Issues and Political	CO1	It will help the students to understand a growing trend of assertion of autonomy on the part of the states.	
	Modern India	02	It also emphasizes on local influences that derive from social stratification of castes, from languages, religions and ethnic determinants and critically assess its impact on the political processes	
PS3CRT 04	Political Thought:	CO1	Political philosophy is a product that encourages our quest for good life and good society.	
Indian Traditions.	CO2	Values as well as facts are indispensable part of Political Philosophy which enables us to undertake a critical and coherent analysis of political institutions and activities.		
			SEMESTER 4	
PS4CRT Introduction 05 to Political Theory.	Introduction to Political Theory.	CO1	The course introduces various approaches and traditions in political theory and also engages with aspects of state, nation, sovereignty and political system etc.	
		CO2	The course seeks to achieve this understanding by studying the changing concerns of political theory in the pre- modern, modern and postmodern conditions.	
		CO3	The course also intends to generate some fruitful discussions on public policies in contemporary democracies on the basis certain normative concepts like rights, equality, justice, democracy and so on.	
PS4CRT 06	PS4CRT Political 06 Thought: Western	CO1	The course seeks to recognize the continuity and change in the grand traditions of political thought in the Western world.	
	Traditions.	CO2	It further engages with the central ideas and values of political texts and also traces the empirical and normative justifications provided by various political thinkers in the case of state, authority, justice, equality, political obligation and so on.	

	SEMESTER 5				
PS5CRT 07	Theories and Principles of Public Administra-	CO1 CO2	The course explores some contemporary social values and how the call for greater democratization and how far it is restructuring the realm of public administration. The course will also attempt to provide the student some		
	tion		administration and policy concerns.		
PS5CRT 08	Environment al Studies and Human Rights	CO1	Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills.		
		CO2	It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.		
		CO3	Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future		
PS5CRT	Methodology	CO1	It provides an idea of preparing a Research design,		
09	in Political	CO2	To understand various techniques of Data collection		
	Science	CO3	To analyse data and writing reports.		
PS5CRT 10	Introduction to	CO1	To equip students with the basic intellectual tools for understanding International Relations.		
	International Relations	CO2	To contextualize the evolution of the international state system and discussing the agency-structure problem through the levels-of-analysis approach.		
		CO3	Students are introduced to different theories in International Relations		
			SEMESTER 6		
PS6CRT 11	Comparative Politics	CO1	The historical backgrounds to individual constitutions are to be emphasized to gain an understanding of its evolution.		
		CO2	The comparative perspective enables the student to understand the differences and similarities between the various constitutional arrangements		
PS6CRT 12	Society, State and Political Processes in	CO1	It provides a detailed analysis of the socio-political evolution political processes, structures & social movements in the state of Kerala.		
	Kerala	CO2	To equip the student's skills in analyzing key issues in Kerala politics and society		
PS6CRT 13	Issues in International Politics	CO1	This course provides insights into significant issues that inherently occupy the global political space in the post- Cold War era.		
		CO2	The course introduces students to the important debates within the globalization discourse.		
		CO3	The course also offers vital understanding of contemporary global concerns such as environmental issues, the proliferation of nuclear weapons, global terrorism, and human security.		

PS6CRT	Human	ıman CO1	The learner gets an opportunity to understand about various rights, including political, civil, social, economic and cultural rights.
14	Rights	ghts	
		CO2	It also provides an information concerning issues relating to human rights, judicial independence and the rule of law.

Name of the Programme: BA English Language and Communication Studies				
Course	Course Title	Cours	se Outcomes	
Code				
			SEMESTER 1	
EN1CRT	Methodology	CO1	At the end of the course students would be familiar with	
01	of Literary		the different tenants of what is known as traditional approaches and formalism	
	Studies	CO2	Would be oriented towards contextual, political critiques of literary studies	
		CO3	Would be familiar with the issues of sub alternity and rationality	
EN1CST 01	English in Informal situations	CO1	At the end of the course the students would be able to converse in English with high degree of accuracy and fluency.	
		CO2	To be capable of answering questions of a conversational nature and to have a command of arrange of questions to elicit information from other people with an awareness of contextual appropriateness	
		CO3	To take part with confidence in conversation, to initiate, sustain and close a conversation.	
EN1CST 02	Conversation al skills	CO1	At the end of the course the students would be aware of the nuances of spoken forms of English	
		CO2	Would be experts n speech sounds and the phonological aspects of English.	
		CO3	Would develop more accuracy in pronunciation and diction	
		CO4	Would be familiar with the intonation patterns of English.	
			SEMESTER 2	
ENCRT0 2	Introducing language and literature.	CO1	At the end of the course the students would be able to understand the evolution and the differential traits of the English language till the present time.	
		CO2	The evolution of literature from antiquity to postmodern times.	
		CO3	The diversity of genres and techniques of representation and narration	
		CO4	The links between literature and film as narrative expressions	

EN2CST	Introduction	CO1	Would become conversant with key terms of
05	10 Communicati	CO^2	Would be able to deliver effective messages based on
	on	02	audience and concepts
	on	CO3	Would relate theoretical knowledge with practical issues
EN2CST	Business	CO1	Would be able to use current technology related to
04	Communicati	001	communication.
	on	CO2	Would be able to use of various types of oral, written and
			communication to the range of business communication.
		CO3	Would be effective business writers
		CO4	Would be professional communicators
			SEMESTER 3
EN3CRT	Indian	CO1	Would be aware of the subtle flavours that distinguishes
05	writing		the Indian quotient In English writing in India
		CO2	Would be aware of the different issues the Indian writers
			share.
		CO3	Would be acquainted with the diasporic Indian writers
EN3CRT	Symphony of	CO1	Would be familiar with the different genres of poetry
04	Verse	CO2	Would be familiar with poetry of various ages of
			literature
		CO3	Would be familiar with the diction, language and
			technique of poetry
		CO4	Would familiar with rhetorical devices such as figures of
			speech ,rhymes, and meters
EN3CRT	Harmony of	CO1	Would be familiar with varied prose styles of expression.
03	prose	CO2	Would be able to aware of eloquent expressions, brevity
			and aptness of voicing ideas in stylish language
		CO3	Would be familiar with the celebrated prose writers of the
			west and east
EN3	Print media	CO1	Would understand the history of Indian journalism and its
CST05	and		pioneers
	journalism	CO2	Would understand the role of journalism in Indian
			freedom struggle
		CO3	Would understand the importance of freedom of press.
		CO4	Would understand the consequence of censorship on
			press
			SEMESTER 4
EN4	Print media	CO1	Would become a member of a global community of
CST06	and		journalism by knowing the various qualities,
	journalism 2		responsibilities and work profiles.
		CO2	Would have a know-how of the making of a news paper
		003	would understand the role of editing and editor in the
EN/	Modes of	CO1	Would understand the different genres of fiction
CRT05	fiction	$C0^{1}$	Would be able to distinguish between fiction and non-
211100			fiction
		CO3	Would be able to differentiate the difference between
			realism and fantasy.

		CO4	Would be acquainted with the different categories of British and non-British writers
EN4 CRT06	Language	CO1	Would be acquainted himself with the various organs and
CK100	linguistics	CO2	Would be thorough in phonology, morphology and
		CO3	Would be equipped to speak English in right accent and
		CO4	diction Would be familiar with modern concepts of grammar
EN/	Acts on the	C01	Would be familiar with different genres of plays
CRT07	Stage	CO1	Would be able to appreciate and criticula drame as an art
CKI07	Stage		revolution
		CO3	Would be familiar with British and non-British play
		05	writers
		CO4	Would understand the techniques of making of dramas
		04	SEMESTED 5
EN 5	Creation	COL	SEMIESTER 5
EN 5 CST07	writing and	COI	situations with emphasis on figurative usage
	Translation	CO2	Would have a know-how of formal and informal writing
	Studies	CO3	Would achieve creativity in writing and translation
		CO4	Would understand the different technique of translations
			and its hassles
EN5	Mass	CO1	Would have a practical knowledge of the principles of
CST08	Communicati		Mass communication and journalism.
	on and Broad	CO2	Would have hands on experience on radio programming
	Casting	CO3	Would have critical and analytical thinking in
			appreciating movies
		CO4	Would develop ethical journalism
EN5 CST09	Public Relation 1	CO1	Would demonstrate the understanding of the fundamentals of PR
		CO2	Would be skilled and Professional PR.
		CO3	Would possess a thorough understanding of the history of PR
		CO4	Would be able to discern the roles and responsibility of departments in an establishment
EN 5	English for	CO1	Would the skills needed to be an active participant in a
CROPG0	Careers	001	conversation.
3		CO2	Would develop communication skills
		CO3	Would acquire the techniques in making effective
			presentations processes
		CO4	Would be competent in the global market
		.	SEMESTER 6
EN6CST	Visual Media	CO1	Would be familiar with the principles functions and
11			characteristics of Visual Media
		CO2	Would acquire the skills required for editing films
		CO3	Would be aware of film censorship and its criteria
		CO4	Would imbibe the production techniques of film making
EN6	PR 2	C01	Would have hands on experience in organizing PR
CST12			campaign
		CO2	Would demonstrate an understanding on managing
			various organizational emergencies based on their
			practical .knowledge

		CO3	Would be able to make PR interventions to manage
			specific issues
		CO4	Would imbibe the ethics of PR
EN6	Entrepreneur	CO1	Would understand the role of an entrepreneur in
CST10	ship		economic development.
	Development	CO2	Would be capable of floating SS industries.
		CO3	Would imbibe the skills required for making a new
			business plan
EN6CST	Office	CO1	Would understand the basic and management functions of
13	Administratio		an office
	n and HR	CO2	Would understand the responsibilities and functions of an
	Management		office manager
		CO3	Understand the nature and characteristics and functions of
			HR management
		CO4	Would develop the of HR planning and recruitment

Name of the Programme: BSc Mathematics				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
MM1CR T01	Foundations of Mathematics	CO1	Familiarize mathematical terminologies and symbols, notations, propositional logic, equivalences etc.	
		CO2	Develop standard methods of proofs.	
		CO3	Learn methods to solve equations, transformed equations, cubic, bi-quadratic and reciprocal equations.	
		CO4	Relate factor theorem and remainder theorem.	
			SEMESTER 2	
MM2CR	Analytic	CO1	Find the equation to tangent, normal at a point on a conic.	
T01	Geometry, Trigonometry	CO2	Find the polar equation of a line, circle, tangent and normal to conics.	
	and	CO3	Familiarize real and imaginary parts of a circular and	
	Differential		hyperbolic functions of a complex variable.	
	Calculus	CO4	Familiarize successive differentiation and indeterminate forms.	
			SEMESTER 3	
MM3CR T01	Calculus	CO1	Find the higher order derivative of the product of two functions.	
		CO2	Expand a function using Taylor's and Maclaurin's series.	
		CO3	Conceive the concepts of convexity, envelopes,	
		<i><u><u></u></u></i> <u></u> <u></u> <u></u> <u></u> <u></u>	asymptotes.	
		CO4	Learn about partial derivatives and its applications.	
	T		SEMESTER 4	
MM4CR T01	Vector Calculus, Theory of	CO1	Acquaint with the concept of vector valued functions and its curvature, torsion, directional derivatives.	
	Numbers and Laplace Transform	CO2	Extend the tools of integral calculus to vector valued functions.	

		CO3	Apply Greens Theorem, Stokes Theorem, Gauss divergence theorem for evaluation of line, surface and
			volume integrals.
		CO4	Get familiar with the Number system and related
			concepts.
	1	1	SEMESTER 5
MM5CR T01	Mathematical Analysis	CO1	The learner understands the structure and properties of the real number system.
		CO2	Study the basic topological properties of the real numbers.
		CO3	Have the knowledge of the sequence of real numbers and convergence.
		CO4	The student will be able to construct rigorous mathematical proofs of basic results in real analysis
MM5CR	Differential	CO1	Recognize and solve separable, exact, homogeneous and
102	Equations	CO2	Convert certain types of differential equations to exact
		<u> </u>	form by using integrating factors.
		C03	Use power series method to solve differential equations
MM5CR	Abstract	C04	Understand basic algebraic concepts like binary
T03	Algebra	001	operations, groups, cosets, rings, ideals etc.
		CO2	Know how to construct new groups by taking quotients
			and direct products
		CO3	Prove classical theorems like Lagrange's theorem and
		<u>CO4</u>	Learn how to relate different algebraic objects by
		04	homomorphisms and isomorphisms
MM5CR	Human Rights	CO1	Address complex environmental issues, and take
T08	and		necessary steps to keep our environment healthy and
	Mathematics		sustainable for the future
	for	CO2	Have a brief idea of Fibonacci numbers and Golden ratio
	Studies	CO3	Learn the idea of Human Rights and study its importance
	~	1	SEMESTER 6
MM6CR	Real Analysis	CO1	Have the knowledge of the series of real numbers and
T01	recui i marysis	001	convergence.
		CO2	Determine the Riemann integrability of a bounded
			function and establish properties of integrable functions.
		CO3	Recognize the difference between point-wise and uniform convergence of sequences and series of functions.
		CO4	Develop a higher level of mathematical maturity combined with the ability to think analytically.
MM6CR T02	Graph Theory and Metric	CO1	Write precise and accurate mathematical definitions of objects in Graph theory
	Spaces	CO2	Analyze different properties that depend on the connectivity of a graph
		CO3	Understand Euclidean distance and generalize that idea to arbitrary sets.
		CO4	Extend the concepts like convergence and limits of
			analysis to Metric spaces

MM6CR	Complex	CO1	Learn about Complex valued functions and determine
T03	Analysis		whether a given function is differentiable
		CO2	Comprehend what an analytic function
		CO3	Understand Complex integration
		CO4	Identify and classify Singular points to use in Complex
			integrals
MM6CR	Linear Algebra	CO1	To Solve systems of linear equations.
T04		CO2	Comprehend the concept of Vector spaces.
		CO3	Learn deeply about linear transformations and represent
			them in matrix form.
		CO4	Determine eigenvalues of a given matrix and use it to
			diagonalize the given matrix.

Name of the Programme : BSc Physics				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
PH1CR	Methodology	CO1	Create Awareness on the History of Physics, giving	
T01	and		emphasis on the contributions of great scientists.	
	perspectives of	CO2	Introduce the mathematical methods physicists often use,	
	Physics		including differential, integral and vector calculus,	
		~ ~ ~ ~	curvilinear coordinates etc.	
		CO3	Study the principles of various measuring instruments,	
			errors and its propagation.	
			SEMESTER 2	
PH2CR	Mechanics and	CO1	Empower the student to acquire engineering skills and	
T02	properties of		practical knowledge, useful in their everyday life.	
	matter	CO2	Learn the basics of properties of matter, demonstrate how	
			Young's modulus and rigidity modulus are defined and	
		~~~	how they are evaluated.	
		CO3	Understand the working of different types of pendulum,	
			study the elastic behaviour of materials, surface tension	
		<u>CO4</u>	and viscosity of fluids etc.	
		C04	Learn the fundamentals of narmonic oscillator model,	
		ļ	including damped and forced oscillations.	
		1	SEMESTER 3	
PH3CR	Optics, laser	CO1	Use the principles of wave motion and superposition to	
T03	and fiber optics		explain the physics of polarisation, interference and	
			diffraction.	
		CO ₂	Understand the basics of modern optics like Lasers, Fiber	
		COA	optics and holography.	
		003	Solve problems in optics by selecting the appropriate	
			equations and performing numerical or analytical	
		l		
DUACD	Comission loss:	CO1	SEMIESTEK 4	
PH4CK	Semiconductor	COI	Understand the fundamentals of diodes and their	
104	Physics		applications.	

		CO2	Analyse the characteristics of transistor and transistor
			biasing circuits, integrated circuits, modulation etc.
		CO3	Gain basic ideas on construction and working of electronic devices and circuits and communication
			systems.
		CO4	Apply the principles of electronics in day today life.
	<u> </u>		SEMESTER 5
PH5CR	Electricity and	CO1	Gain elaborated knowledge about electrostatics and laws
T05	Electro-		governing the charge distribution.
	dynamics	CO2	Realize the importance of Maxwell's equations,
			displacement current and wave propagation
		CO3	Study in depth the transient current response which is
			essential in designing as well as understanding the
			working of circuits.
		CO4	Solve complex problems involving linear electrical
			networks employing the symmetry concepts together with
DUCOD		<u>CO1</u>	various network theorems.
PHOCK	Classical and	COI	Study different frames of references, constraints,
100	quantum	$CO^{2}$	Lagrangian and Hamiltonnan formalisms etc.
	meenames	02	to the development of quantum concepts
		CO3	Grasp the idea of Wave Mechanics, the concept of eigen
		005	values, eigen functions and learn the basic postulates of
			quantum mechanics
		CO4	Formulate and solve Schrödinger's equation for many
			systems such as particle in a box, potential barrier,
			Harmonic oscillator etc.
PH5CR	Digital	CO1	Understand the fundamentals of codes and number
T07	electronics and		system, binary arithmetic, logics and boolean functions.
	programming	CO2	Study the design and working of various combinational
		~ ~ ~ ~	and sequential logic circuits.
		CO3	Develop a greater understanding of the issues involved in
		<u>CO4</u>	programming language design and implementation
		C04	fram the students the basic concepts of object offended
			solving through programming in C++
PH5CR	Environmental	CO1	Prepare students for careers as leaders in understanding
T08	Physics and		and addressing complex environmental issues from a
	human rights		problem oriented interdisciplinary perspective.
	C	CO2	Master core concepts and methods from ecological and
			physical sciences and application in environmental
			problem solving.
		CO3	Understand human rights, its protection and activities
			against it in a global perspective.
			SEMESTER 6
PH6CR	Thermal and	CO1	Understand the central concepts and basic formalisms of
109	statistical		specific heat, entropy, quantum theory of radiation etc.
	Physics	CO2	acquire knowledge in heat transfer, production of low
			temperature, liquefaction of gases etc.
		CO3	Study the statistical distribution of particles, ensembles,
			classical and quantum statistics etc.

DITION		<b><i>a</i></b> ₆ (	
PH6CR T10	Relativity and spectroscopy	CO1	Provide an idea of Galelian and Lorentz transformations and effects of special relativity which has significance in high energy Physics
			ingh chorgy r hysics.
		CO2	Gain deeper understanding of interaction between matter and radiation.
		CO3	Study the principle and instrumentation of various spectrometers including NMR and ESR systems.
PH6CR T11	Nuclear, particle	CO1	Understand the concepts and potential applications nuclear and particle Physics.
	Physics and astrophysics	CO2	Apply general considerations of quantum physics to atomic and nuclear systems.
		CO3	Expand and evaluate the theoretical predictions on nuclear models and nuclear reactions.
		CO4	Understand the evolution of stars and other heavenly bodies.
PH6CR T12	Solid state Physics	CO1	Outline the importance of solid state Physics in the modern society.
		CO2	Explore the relationships between chemical bonding & crystal structure and their effects.
		CO3	Study the conduction mechanism in solids including superconductors.
		CO4	Transfer the knowledge level from theoretical physical subjects towards the understanding of basic properties of solid state matter.

Name of the Programme : BSc Chemistry				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
CH1CR T01	General and Analytical	CO1	This part of the syllabus will impart an interest in studying chemistry	
	Chemistry	CO2	students are getting more ideas about theoretical and experimental Chemistry	
		CO3	Students can apply these skills in the analysis of experimental data in chemistry practical and further for jobs.	
			SEMESTER 2	
CH2CR T02	Theoretical and Inorganic	CO1	By studying this part of the syllabus students are getting basic ideas of chemistry, which enables them to build a better foundation	
	Chemistry	CO2	The course aims to inculcate an atomic/molecular level thinking in the minds of the students	
		CO3	It also develops an interest in various branches of inorganic chemistry.	

	SEMESTER 3			
CH2CR T03	Organic Chemistry-1	CO1	For a thorough understanding in Organic Chemistry an undergraduate student need to be exposed to three fundamental aspects: structure, reaction dynamics and synthesis	
		CO2	The curriculum is so designed as to fulfil these objectives	
		CO3	The philosophy adapted in choosing the topics is to provide sufficient Chemistry for the reactions and also to minimize the unnecessary repetition of materials found in higher secondary classes	
		1	SEMESTER 4	
CH4CR T04	Organic Chemistry-II	CO1	After studying basic ideas in SEMESTER III students are getting thorough knowledge about the chemistry of some selected functional groups with a view to develop proper aptitude towards the study of organic compounds and their reactions.	
			SEMESTER 5	
CH5CR T05	Environment, Ecology and Human rights	CO1	Students will possess the intellectual flexibility necessary to view environmental questions from multiple perspectives, prepared to alter their understanding as they learn new ways of understanding.	
		CO2	Students will solve problems systematically, creatively, and reflexively, ready to assemble knowledge and formulate strategy	
		CO3	When encountering environmental problems students will assess necessary scientific concepts and data, consider likely social dynamics, and establish integral cultural contexts.	
CH5CR T06	Organic Chemistry -III	CO1	This part of the syllabus gives the idea of prediction of mechanisms for organic reactions	
		CO2	How to use their understanding of organic mechanisms to predict the outcome of reactions	
		CO3	How to design syntheses of organic molecules and how to determine the structure of organic molecules using IR and NMR spectroscopic techniques	
CH5CR T07	Physical Chemistry -I	CO1	The objective of this academic plan is to make the concepts and methods of physical chemistry clear and interesting to students, who have basic ideas in mathematics and physics	
		CO2	The underlying theory of chemical phenomena is completed, and so it is a challenge to make the most important concepts and methods understandable to undergraduate students.	
CH5CR T08	Physical Chemistry -II	CO1	The objective of this academic plan is to make the concepts and methods of physical chemistry clear and interesting to students, who have basic ideas in mathematics and physics	
		CO2	The underlying theory of chemical phenomena is completed, and so it is a challenge to make the most important concepts and methods understandable to undergraduate students.	

			SEMESTER 6
CH6CR	Inorganic	CO1	By considering the rapid development in the field of
T09	Chemistry		inorganic chemistry since the late 1950's it has become
			necessary that an undergraduate chemistry student should
			gain perspective on the past, without compromising the
			modern developments.
		CO2	An inorganic chemistry student is expected to be
			conversant with the chemistry of all the elements and has
			been closely allied with analytical chemistry, with
			physical chemistry and even with organic chemistry
CH6CR	Organic	CO1	This part of the curriculum deals with biological aspects
T10	Chemistry-IV		of chemistry, which help students to understand
			medicinal chemistry, useful in daily life
		CO2	By studying the details of Natural products students can
			get the job of chemist in medicinal companies
CH6CR	Physical	CO1	This part of the syllabus covers Thermodynamics,
T11	Chemistry-III		Equilibrium and Kinetics, three important topics in
			chemistry, which will help students to get foundation for
			further studies
		CO2	The main advantage of the syllabus is that students are
			getting enough information about the speed and energy
			requirements for chemical reactions.
CH6CR	Physical	CO1	Physical chemistry is one of interesting area for many
T12	Chemistry -IV		students, in this part of the syllabus students are gathering
			information about Solution Chemistry
		CO2	What makes it interesting is that students have an idea
			about the reactions that takes place in solutions, which
			are beyond their imagination.

Name of the Programme: BSc Botany				
Course	Course Title	Cours	se Outcomes	
Code				
			SEMESTER 1	
BO1CRT 01	RT Methodology of science and introduction	CO1	To acquire fundamental knowledge in plant science and diversity of plants.	
		introduction CO2	CO2	To understand the universal nature of science.
	to Botany	CO3	To demonstrate the use of scientific method.	
		CO4	To develop basic skills to study Botany in detail.	
			SEMESTER 2	
BO2CRT	Microbiology,	CO1	To understand the world of microbes, fungi and lichens.	
02	Mycology and Plant Pathology	CO2	To understand mechanism of various physiological processes related to plant life.	
		CO3	To study the pathological importance of microorganisms.	
		CO4	To enable the students to identify and culture different types of microbes.	

SEMESTER 3			
BO3CRT	Phycology	CO1	To make the students understand objectives and
03	and Bryology		components of taxonomy.
		CO2	To study the evolutionary importance of algae.
		CO3	To understand the unique features of algae and
			bryophytes.
		CO4	To realize the applications of Phycology in different
			fields.
			SEMESTER 4
BO4CRT	Pteridology,	CO1	To understand the different plant organs with their
04	Gymnosperms		functions.
	allu Paleobotany	CO2	To enhance the botanical knowledge on Paleobotany.
	1 alcobotally	CO3	To study the anatomical variations in vascular plants.
		CO4	To understand the significance of paleobotany and its
			applications.
	Ι.		SEMESTER 5
BO5CRT	Anatomy,	CO1	To study the internal structure of evolved group of plants.
05	Rep. Botany	CO2	To understand the individual cells and also tissues.
	technique	CO3	To understand the morphology and development of
	teeninque	<u> </u>	reproductive parts.
		CO4	To get an insight into the fruit and seed development.
BO5CRT	Research	CO1	Equip the students to conduct research and prepare
06	Riophysics	000	research report.
and	02	To make the students understand the different tools and techniques used in research	
	Biostatistics	CO3	To equip the students with basic computer skills
		$CO_4$	To equip the students with basic computer skins.
		04	out research.
BO5CRT	Plant	CO1	To acquire the basic knowledge of plant functioning.
07	Physiology	CO2	To understand the basic skills and techniques related to
	and		plant physiology.
	Biochemistry	CO3	To understand the role of biomolecules in plant life.
		CO4	To understand structure and importance of biomolecules
DO5CDT	Environmente	CO1	associated with plant life.
08	l science and	C01	To make the students aware about the extent of the total
00	Human rights	002	biodiversity.
		CO3	To enable the students to understand the structure and
			function of ecosystem.
		CO4	To make the students aware about various env. laws in
			India.
		and i	SEMESTER 6
BO6CRT	Genetics,	CO1	To understand the principles of heredity.
09	Plant Breeding and	002	10 understand the patterns of inneritance in different
	Horticulture	CO3	Understand the methods of crop improvement
	Listiculuic	CO4	To develop skills in gardening techniques in students
BO6CRT	Cell and	CO1	To understand the ultrastructure and functioning of cells.
10	molecular	CO2	Familiarization of life processes.
	Biology	CO3	To understand the basic and scientific aspects of diversity.

		CO4	To understand DNA as the basis of heredity and
			variation.
BO6CRT	Ang.morpho-	CO1	To understand the aims, objectives and significance of
11	logy,		Taxonomy.
	Taxonomy	CO2	To identify the common species of plants growing in
	and		Kerala.
	Eco.Botany	CO3	To understand the basic techniques in the preparation of
			herbarium.
		CO4	Familiarize the plants having immense economic
			importance.
BO6CRT	Bio-	CO1	Understand the current developments in the field of
12	technology		Biotechnology.
	and Bio-	CO2	Equip the students to carry out plant tissue culture.
	informatics	CO3	Introduce the vast repositories of Biological data
			knowledge.
		CO4	To equip the students to access and analyze data available
			in databases.

Name of the Programme: BSc Zoology				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
ZY1CRT Gener 01 Persp In Sci	General Perspectives In Science & Protistan	CO1 CO2	To create an awareness on the basic philosophy of science, concepts and scope. To understand different levels of biological diversity	
	Diversity	002	through the systematic classification.	
	Diversity	CO3	To familiarize taxa level identification of animals.	
		CO4	To make interest in Protistan diversity.	
		CO5	To impart knowledge on parasitic forms of lower invertebrates.	
			SEMESTER 2	
ZY1CRT	Animal	CO1	To create appreciation on diversity of life on earth.	
02	Diversity - Non Chordata	CO2	To understand different levels of biological diversity through the systematic classification of invertebrate fauna.	
		CO3	To familiarize taxa level identification of animals.	
		CO4	To understand the evolutionary significance of invertebrate fauna.	
		CO5	To instill curiosity on invertebrates around us.	
		CO6	To impart knowledge on parasitic forms of lower invertebrates.	
			SEMESTER 3	
ZY1CRT 03	Animal Diversity –	CO1	To acquire in depth knowledge on the diversity of chordates and their systematic position	
	Chordata	CO2	To make them aware of the economic importance of some classes	

		CO3	To understand the evolutionary importance of selected chordate groups
			SEMESTER 4
ZY1CRT 04	Research Methodology,	CO1	To familiarise the learner the basic concept of scientific method in research process.
	Biophysics	CO2	To have a knowledge on various research designs.
	and	CO3	To develop skill in research communication and scientific
	Biostatistics	~ ~ .	documentation.
		CO4	To create awareness about the laws and ethical values in
		COS	Diology.
		COS	rearing collection and preservation
		CO6	To help the student to apply statistical methods in
			biological studies.
			SEMESTER 5
ZY1CRT 05	Environment al Biology and Human	CO1	To instill the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.
	Rights	CO2	To make the students aware of natural resources, their protection, conservation, the factors polluting the environment, their impacts and control measures
		CO3	To teach the basic concepts of toxicology, their impact on human health and remedial measures
		CO4	To create a consciousness regarding Biodiversity, environmental issues & conservation strategies.
		CO5	To develop the real sense of Human rights – its concepts & manifestations.
ZY1CRT 06	Cell Biology and Genetics	CO1	To understand the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.
		CO2	To make aware of different cell organelles, their structure and role in living organisms.
		CO3	To develop critical thinking, skill and research aptitudes in basic and applied biology.
		CO4	To emphasize the central role of genes and their inheritance in the life of all organisms.
ZY1CRT 07	Evolution, Ethology & Zoo- geography	CO1	To acquire knowledge about the evolutionary history of earth - living and non-living.
		CO2	To acquire basic understanding about evolutionary concepts and theories.
		CO3	To study the distribution of animals on earth, its pattern, evolution and causative factors.
		CO4	To impart basic knowledge on animal behavioural patterns and their role.
ZY1CRT 08	Human Physiology,	CO1	This course will provide students with a deep knowledge in biochemistry, physiology and endocrinology.
	Biochemistry and Endocrinology	CO2	Defining and explaining the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function and metabolism.

		CO3	Explaining various aspects of physiological activities of animals with special reference to humans.
		CO4	Students will acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.
		CO5	By the end of the course, students should be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems.
		CO6	This also will provide a basic understanding of the experimental methods and designs that can be used for further study and research.
		CO7	The achievement of above objectives along with periodic class discussions of current events in science, will benefit students in their further studies in the biological/physiological sciences and health-related fields, and will contribute to the critical societal goal of a scientifically literate citizenry.
			SEMESTER 6
ZY1CRT 09	Development al Biology	CO1	To achieve a basic understanding of the experimental methods and designs that can be used for future studies and research
		CO2	To provide the students with the periodic class discussions of current events in science which will benefit them in their future studies in the biological/physiological sciences and health-related fields
		CO3	To contribute to critical societal goal of a scientifically literate citizenry.
ZY1CRT	Microbiology	CO1	To make the students aware of microbial pathogens.
10	and Immunology	CO2	To provide students with knowledge of methods for prevention and treatment of microbial diseases.
		CO3	To make students aware of the immune system of human body
		CO4	To give precise knowledge of methods involved in solving various immunological problems.
		CO5	To give practical knowledge of basic techniques.
ZY1CRT 11	Bio- technology,	CO1	To introduce students about Tools and Techniques in Biotechnology
	Bio- informatics	CO2	To make students aware of the scope and application of biotechnology in daily life
	and Molecular	CO3	To introduce a taste for biotechnological research in students
	BIOLOGY	CO4	To impart students with knowledge and to make them aware of the potential of Bioinformatics and Molecular Biology for shaping the future of society.
ZYICRT 12	Occupational Zoology	CO1	To equip the students with self-employment capabilities
	(Apiculture, Vermiculture,	CO2	To provide scientific knowledge of profitable farming
	Farming & Aquaculture)	CO3	To make the students aware of cottage industries

#### Name of the Programme: BSc Recreation, Leisure & Sports Studies

	1	1		
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
PE1CRT 01	Methodology of recreation	CO1	To appraise the concept of recreation leisure and sports studies	
	and sports	CO2	To describe the need of sports & recreation in industry	
	services	CO3	To find out the professional ethics and issues in recreation	
			and leisure administration	
PE1CRT	Basic human	CO1	To understand the relationship between sports and anatomy	
02	anatomy	CO2	To describe the importance of human body, organs in	
			human body bone and its functions importance of human	
			bone and other organs	
		CO3	To identify different type of joints in human body and its	
			movements helps in sports activity	
		CO4	To understand whole human body related with sports	
			activity	
			SEMESTER 2	
PE2CRT	Kinesiology	CO1	To develop the basic understanding of Biomechanics and	
03	and		Kinesiology and its application in performing sports	
	biomechanics		activities	
		CO2	To explain the concept of mechanical laws involved in	
			human motion Analyze the mechanical principles of motor	
			skills and sports related skills along with their proper	
			techniques and corrective measures	
		CO3	To develop a comprehensive understanding of movement	
			analysis To develop the ability to perform mechanical	
			analysis of various fundamental movements and sports	
		<u> </u>	SK1llS	
		C04	Explain the basic mechanical concepts and will be able to	
			and specify the overall goal of the course	
		COS	Apply and analyze the factors of mechanical laws involved	
		005	in human movement Explain the principles of movement	
			analysis	
PE2CRT	Anatomy and	CO1	To develop the basic understanding of anatomy and	
04	physiology		physiology and its application in performing and	
			developing of sports	
		CO2	To understanding different organs and organism acting at	
			the time of sports activity	
		CO3	To understand and study the different organs and its	
			functions, importance in human body and its effect in	
			sports.	
PE2CRT	Human	CO1	To describe organization and administration of human	
05	resource		resource management and its relation to sports Understand	
	management		the process of administrating various events.	
	in sports and	CO2	Identify issues relevant to modern physical education and	
	recreation		HRM, Explore the area as a career perspective	
		CO3	Create & understand the concept of the various types of	
			sports jobs	

		CO4	To understand manpower planning employees wellness
			problems in employment
	-		SEMESTER 3
PE3CRT 06	Sports training	CO1	To provide knowledge and concept of sports training develop an understanding of the technical and tactical training and provide the role of sport sciences to achieve the excellence
		CO2	Gain knowledge of the training coaching filed, Plan and prepare training programs
		CO3	Develop the skills to fundamentals and strategies of Game/Sport
		CO4	Learn the tactical approaches of each game & sports and Demonstrate various drills & lead up activities related to Game/Sport.
PE3CRT 07	Marketing of recreation	CO1	To provide the knowledge about market segment and marketing of sports product and service
	and sports service	CO2	To understand national international market and promotional activities
		CO3	To develop the knowledge type of marketing of different product by different ways
		CO4	To understand different type of sports market different type of sports good and its promotional activity
PE3CRT	Adventure	CO1	To understand the various aspects of Adventure sports
08	Sports	CO2	To develop the skills required for the adventure sports
	Management	CO3	To Learn and participate in various types of adventure activity.
PE3CRT	Exercise	CO1	To assess basic concepts of exercise physiology
09	physiology	CO2	To employ students to apply the knowledge of energy systems during exercise.
		CO3	To explain the effect of environment and ergogenic aids on exercise and training.
		CO4	Develop a thorough understanding of the relationship between physical activity and health
			SEMESTER 4
PET4CR	Teaching and	CO1	To define and acquaint training preparation of Game/Sport
T10	Training Methodology	CO2	To acquaint students with the skills of Teaching and Training
		CO3	To emphasis on preparation for the Game/Sport.
PE4CRT 11	Research Methods	CO1	To understand the research context within the area of physical Education and sports.
		CO2	To understand the processes and requirements for conducting successful research in physical education and sports.
		CO3	Understand and apply basic research methods.
		CO4	To understand the process of sampling, the uses of questionnaires as data-gathering instruments, how a survey
			is carried out in terms of process and method, the uses of surveys and to be able to capture their own data
PE4CRT 12	Sports Injury Assessment	CO1	Illustrate and apply the concepts of sports injuries and rehabilitation.
12	&	CO2	Interpret the concept of therapeutic aspects of exercise
	management		

		CO3	Demonstrate and take care of the preventive and curative
		<u>CO1</u>	Aspect of sports injuries.
		04	Apply the concept of renabilitation of sports injuries
	T	T	SEMESTER 5
PE5CRT	Exercise	CO1	To appraise the concept of holistic health through fitness.
13	Prescription	CO2	To explain the students about the concept of exercise
	& Design.		designing, health and motor related fitness
		CO3	To apply practical principles of the fitness training.
PE5CRT	Environment	CO1	To appraise about the environment issue
14	studies in	CO2	To understand how sports can be inculcated without in
	Sports		harmony with the environment.
	. –		SEMESTER 6
PE6CRT	Entrepreneur	CO1	To understand the basics of Business
15	ship	C02	To learn the various skill and qualities required for an
	Development		entrepreneur.
		C03	To understand the various issues and schemes related to
			Business ventures.
PE6CRT	Basic of	CO1	To understand the concept of accounting
16	Accounting	CO2	To describe various techniques and methods of maintain
	for Sports		the accounts
		CO3	To understand budgets preparation.
PE6CRT	Sports Event	CO1	To describe organization and administration of sports
17	Management		programmes.
	C	CO2	To analyze and interpret sports philosophy, sports
			sociology, business systems, sports management, public
			administration and marketing techniques.
		CO3	To develop opportunities to construct & design the
			curriculum of PE in broader aspects realizing the age
			group, gender consideration and physiological basis.
PE6CRT	Therapeutic	CO1	To understand the concept of Therapeutic Recreation
18	Recreation	CO2	To develop a sense of Love & Support for the fellow
			being.
		CO3	To design and develop various programs for the
			differentially abled people.

Name of the Programme : BCom				
Course	<b>Course Title</b>	Cours	se Outcomes	
Code				
SEMESTER 1				
CO1CRT	Dimensions	CO1	To create understanding on the role of business in society	
01	and	CO2	To familiarize the technology integration in business	
	Methodology	CO3	To inculcate the fundamentals of business research in the	
	of Business		life of students	
	Studies			
CO1CRT	Financial	CO1	To equip the students with the skill of preparing financial	
02	Accounting I		accounts	
		CO2	To enable students to develop financial reports from	
			incomplete accounts	

		CO3	To enable the students to prepare financial reports for different types of business
CO1CRT 03	Corporate Regulations	CO1	To familiarize the students with the management of companies in India
	and Administra- tion	CO2	To create an understanding among the students on administration of joint stock companies in India
		CO3	To help the students to understand the implications of business laws in India with special focus to Companies
			SEMESTER 2
CO2CRT	Financial	CO1	To equip the students with the skill of preparing financial
04	Accounting II		accounts with advanced techniques
		CO2	To enable students to account for dissolution of partnership firms
		CO3	To familiarize the application of important accounting standards
CO2CRT 05	Business Regulatory	CO1	To familiarize the students with the legal framework influencing business decisions
00	Framework	CO2	To make an understanding among students about principal
			– agency relationship in business
		CO3	To equip the students with practical implications of Sale of
COACDT	D :	001	Goods Act, 1930
CO2CRT	Business	COI	To familiarize the students with concepts and principles of management
00	Wanagement	CO2	To introduce various management techniques
		CO3	To introduce various management practices
			SEMESTER 3
CO3CRT 07	Corporate Accounts I	CO1	Familiarize with corporate accounting procedures and to understand the provisions of Companies Act 2013 in accounting.
		CO2	Equip the students to use new accounting schedules for the preparation of final statements.
		CO3	Develop the students to handle the accounting procedures in the corporate for buy back, redemption, right issue and underwriting.
		CO4	Students are able to handle the accounting procedure of the insurance company and its clients while raising claims.
CO3CRT 08	Quantitative Techniques	CO1	Students are getting clarity about the statistical theory in real life situation.
	for Business- 1	CO2	Equip the students to handle business issues by using proper statistical tools.
		CO3	Students are able to identify the appropriate statistical tool for the specific issues of the business firms.
CO3CRT 09	Financial Markets and	CO1	Familiarize the student about the financial markets rules and laws in India.
	Operations	CO2	Students are able to understand the technical explanation about the financial market operations.
		CO3	Develop the skill to help others on the different market situations in a specific manner.

		CO4	Equip the students to get a job in securities trading firms and other market related institutions.
CO3CRT 10	Marketing Management	CO1	Students are equipped to identify the different marketing strategies used by the business firms.
		CO2	Understand the pricing strategies adopted in the marketing process.
		CO3	Develop the skill of sales.
		CO4	Make the students to be suitable for profession in Marketing field.
	•		SEMESTER 4
CO4CRT 11	Corporate Accounts II	CO1	Equip the students to prepare the final accounts of Investment Company as per Companies Act 2013.
		CO2	Familiarizes the students on the different accounting procedures and Provisions of Banking companies, Investment Companies and insurance companies.
		CO3	Students are equipped to get job in financial organization.
		CO4	Students are developed to handle different financial issues related to the companies in an effective way as per companies Act 2013.
CO4CRT	Quantitative	CO1	Students are able to select statistical model for the different
12	Techniques	CO2	1ssues related with business.
	II II	02	appropriate statistical models
		CO3	Developed skill to do descriptive analysis on primary and secondary data.
CO4CRT	Entrepreneur	CO1	Developed the attitude of Entrepreneurship.
13	ship	CO2	Students are familiarized with different technical and
	and Project	CO3	financial facilities availed at present.
	Management	CO3	Equipped the students to engage various activates in the
	Ũ		business activities.
			SEMESTER 5
CO5CRT 14	Cost Accounting - 1	CO1	Familiarize the students with cost concepts and to make the students learn the Fundamentals of cost accounting as a separate system of accounting
		CO2	Familiarize the students with latest inventory control techniques.
		CO3	Make students aware of accounting of Labour and overhead costs
		CO4	Equip students to prepare cost sheets.
CO5CRT 15	Environment and Human Rights	CO1	Familiarise Multidisciplinary nature of environmental studies, Natural resources, eco-systems, pollution, issues, and human rights
		CO2	Acquaint students with biodiversity of India and its conservation
		CO3	Invite student's attention on the serious environmental pollutions and social issues related with environment.
		CO4	Enable students to be aware of human rights related with environment.

CO5CRT	Financial	CO1	Familiarise the students with the functional areas and
16	Management		principles of financial management
	_	CO2	Equip students to take financial decisions based on the
			analysis of financial statements.
		CO3	Familiarise students with the various techniques of
			investment decisions.
		CO4	Equip students to estimate the working requirements of an
			organisation.
	T	1	SEMESTER 6
CO6CRT	Cost	CO1	Acquaint the students with different methods and
17	Accounting - 2		techniques of costing. and to enable the students to identify
			the methods and techniques applicable for different types
		<u> </u>	of industries.
		02	Make students aware of operating and process costing
		CO3	Familiarisa students with decision making based on
		005	marginal costing mechanism
CO6CRT	Advertiseme	CO1	Make the students aware of the strategy concept and
18	nt and Sales	001	methods of advertising and sales promotion.
	Management	CO2	Make students aware of ad agencies and regulations of
	U		advertisement in India
		CO3	Equip students to personal selling skills
CO6CRT	Auditing and	CO1	Familiarize the students with the principles and procedure
19	Assurance		of auditing.
		CO2	Enable the students to understand the duties and
			responsibilities of auditors and to undertake the work of
		002	auditing.
		CO3	Make students aware of special audits and investigation
			procedures.
		04	rammarise the students with preparation of audit
COCCRT	Management	CO1	Explain the three primary purposes of management
20	Accounting		accounting namely inventory valuation decision support
	1 recounting		and cost control.
		CO2	Develop and apply standards and budgets for planning and
		_	controlling purposes.
		CO3	Apply and analyze different types of activity-based
			management tools through the preparation of estimates.

Name of the Programme: BCA				
Course	<b>Course Title</b>	Cours	se Outcomes	
Code				
			SEMESTER 1	
CA1CRT	Computer	CO1	Students have a thorough understanding of the	
01	Fundamentals		fundamental concepts and techniques used in digital	
	&Digital		electronics.	
	Principles	CO2	Students would be able to understand examine the	
			structure of various number systems and its application in	
			digital design.	
		CO3	Students would be able to understand, analyze and design	
			various combinational and sequential circuits.	

		CO4	Students would be able to understand identify basic
			requirements for a design application and propose a cost
			effective solution.
CA1CRT	Methodology	CO1	Students would be able to Read, understand and trace the
02	of		execution of programs written in C language.
	Programming	CO2	Students would be able to write the C code for a given
	and C	000	algorithm.
	Language	CO3	Student would be able to Implement Programs with
			pointers and arrays, perform pointer arithmetic, and use
		<u>CO4</u>	Student would be able to Write programs that perform
		04	operations using derived data types
CA1CRP	Software Lab	CO1	Students should able to know concepts in problem solving
01	I	CO2	Students should able to do Programming in C language
		$CO^{2}$	Students should able to write diversified solutions using
		COS	C language
		CO4	Students should able to write programs that perform
			operations using derived data types
			SEMESTER 2
CA2CRT	Database	CO1	Students should able to identify the basic concepts and
03	Management	COI	various data model used in database design and FR
05	Systems		modeling concepts.
	~ ) ~ · · · · · ·	CO2	Students should able to design queries using SOL.
		CO3	Students should able to recognize and identify the use of
			normalization and functional dependency, indexing and
			hashing technique used in database design.
		CO4	Students should able to apply and relate the concept of
			transaction, concurrency control and recovery in
			database.
CA2CRT	Computer	CO1	Students should able to describe the fundamental
04	Organization	002	organization of a computer system
	and Architecture	CO2	Students should able to explain the functional units of a
	Alcintecture	CO3	Students should able to explain addressing modes
		05	instruction formats and program control statements
		CO4	Students should able to distinguish the organization of
		001	various parts of a system memory hierarchy
CA2CRT	Object	CO1	Students should able to describe the object-oriented
05	Oriented		programming approach in connection with C++
	Programming	CO2	Students should able to apply the concepts of object-
	using C++		oriented programming
		CO3	Students should able to apply virtual and pure virtual
			function & complex programming situations
		CO4	Students should able to understand the difference between
			the top-down and bottom-up approach
CA2CRP	Software Lab	CO1	Students should able to formulate query, using SQL,
02	II		solutions to a broad range of query and data update
			problems.
		CO2	Students should able to transform an information model
			into a relational database schema and to use a data
			definition language and/or utilities to implement the
			scnema using a DBMS.
		CO3	Students should able to understand how to apply the
--------	--------------	----------	-----------------------------------------------------------------------------
			major object-oriented concepts to implement object
			oriented programs in C++, encapsulation, inheritance and
			polymorphism
		CO4	Students should able to Develop solutions for a range of
			problems using objects and classes.
			SEMESTER 3
CA3CRT	Computer	CO1	Students should able to understand the basics of computer
06	Graphics		graphics, different graphics systems and applications of
		<u> </u>	computer graphics.
		CO2	Students should able to discuss various algorithms for
			scan conversion and filling of basic objects and their comparative analysis
		CO3	Students should able to extract scene with different
		000	clipping methods and its transformation to graphics
			display device.
		CO4	Students should able to use geometric transformations
			on graphics objects and their application in composite
			form
CA3CRT	Microprocess	CO1	Students should able to Understand the taxonomy of
07	ors and PC		microprocessors and knowledge of contemporary
	Hardware	CO2	microprocessors.
		02	interfacing I/O devices to the microprocessor 8085
			including several specific standard I/O devices such as
			8251 and 8255.
		CO3	Students should able to demonstrate programming using
			the various addressing modes and instruction set of 8085
			microprocessor
		CO4	Students should able to design structured, well
			commented, understandable assembly language programs
CASCRT	Operating	COL	Students should able to understand the basics of
08	Systems	COI	operating systems like kernel shell types and views of
00	b ystems		operating systems
		CO2	Students should able to describe the various CPU
			scheduling algorithms and remove deadlocks
		CO3	Students should able to use disk management and disk
			scheduling algorithms for better utilization of external
		GQ i	memory.
		CO4	Students should able to explain various memory
	Doto	CO1	Inanagement techniques and concept of thrashing
09	Structures		Dynamic memory management data types algorithms
	using C++	CO2	Students should able to understand basic data structures
	<u> </u>		such as arrays, linked lists, stacks and queues.
		CO3	Students should able to solve problem involving graphs,
			trees and heaps
		CO4	Students should able to apply Algorithm for solving
			problems like sorting, searching, insertion and deletion
			of data

CA3CRP	Software Lab	CO1	Students should able to implement basic data
03	III		structures such as arrays and linked list.
		CO2	Students should able to do programs to demonstrate
			fundamental algorithmic problems including Tree
			Traversals, Graph traversals, and shortest paths.
		CO3	Students should able to do programs to demonstrate the
			implementation of various operations on stack and queue.
		CO4	Students should able to implement various searching and
			sorting algorithms
			SEMESTER 4
CA4CRT	Design and	CO1	Students should able to define the basic concepts of
10	Analysis of		algorithms and analyze the performance of algorithms
	Algorithms	CO2	Students should able to use various algorithm design
			techniques for developing algorithms.
		CO3	Students should able to estimate time complexity of
		<u> </u>	various searching, sorting and graph traversal algorithms.
		C04	Students should able to understand NP completeness and
CAACPT	System	CO1	Students should able to plan a software engineering
11	analysis &	COI	process life cycle including the specification design
11	Software		implementation and testing of software systems that
	Engineering		meet specification, performance, maintenance and
	0 0		quality requirements
		CO2	Students should able to elicit, analyze and specify
			software requirements through a productive working
			relationship with various stakeholders of the project
		CO3	Students should able to analyze and translate a
			specification into a design, and then realize that
			design practically, using an appropriate software
		<u>CO1</u>	engineering methodology.
		C04	Students should able to able to use modern engineering
			management and software reuse
CA4CRT	Linux	CO1	Students should able to understand the basic set of
12	Administ-	001	commands and utilities in Linux systems.
	ration	CO2	Students should able to learn to develop software for
			Linux systems.
		CO3	Students should able to learn the C language and get
			experience programming in C.
		CO4	Students should able to learn the important Linux library
			functions and system calls
CA4CRT	Web	CO1	Students should able to understand the general concepts
13	Programming		of PHP scripting language for the development of Internet
	using PHP	CO2	Websites. Students should able to understand the basis functions of
			MySOL database program
		CO3	Students should able to learn the relationship between the
			client side and the server side scripts
		CO4	Students should able to develop a final project using the
			learned techniques
CA4CRP	Software Lab	CO1	Students should able to design a basic web site using
04	IV		HTML and CSS to demonstrate responsive web design.

		CO2	Students should able to display and insert data using PHP and MySQL.
		CO3	Students should able to test, debug, and deploy web pages
			containing PHP and MySQL.
			SEMESTER 5
CA5CRT	Computer	CO1	Students should able to identify and use various
14	Networks		networking components. Understand different
			transmission media and design cables for establishing
		CO2	a network
		02	network devices
		CO3	Students should able to State the fundamentals related
			to network security and basics of IPv6 and IPsec
		CO4	Students should able to explain various protocols related to internet key exchange.
CA5CRT	IT &	CO1	Students should able to recognize the importance of
15	Environment		environment and the sustainable of natural resources
		CO2	Students should able to analyze interaction between social and environmental processes.
		CO3	Students should able to use scientific reasoning to
			identify and understand environment problems and
		CO4	Students should able to visualize the impacts of
		001	human activities on Environment and role of society
			in these impacts.
CA5CRT	Java	CO1	Students should able to acquire the knowledge of the
16	Programming		structure and model of the Java programming language,
	Using Linux	CO2	Students should able to use the Java programming language for various programming technologies
		CO3	Students should able to evaluate user requirements for
			software functionality required to decide whether the Java
			programming language can meet user requirements
		CO4	Students should able to develop software in the Java programming language
CA50PT	Fundamentals	CO1	Students should able to understand fundamental
	of Accounting		accounting concepts and principles, as well as to develop
			the capability to perform the basic accounting functions.
		CO2	Students should able to develop and understand the nature
			and purpose of financial statements in relationship to
		CO3	decision making Students should able to develop the ability to use the
		COS	fundamental accounting equation to analyze the effect of
			business transactions on an organization's accounting
			records and financial statements.
		CO4	Students should able to develop the ability to use a basic
			accounting system to create (record, classify, and
			summarize) the data needed to solve a variety of business
			problems
CA5CRP	Software Lab	CO1	Students should able to demonstrates how to achieve
05	V		reusability using inheritance, interfaces and packages and
			describes faster application development can be achieved.

		CO2	Students should able to demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development.
		CO3	Students should able to Identify and describe common abstract user interface components to design GUI in Java using Applet & AWT along with response to events
		CO4	Students should able to Identify, Design & develop complex Graphical user interfaces using principal Java Swing classes
CA5CRP 06	Software Development	CO1	Students should able to identify the requirements for the real world problems.
	Labl	CO2	Students should be able to demonstrate and build the project successfully by hardware requirements, coding, emulating and testing.
		CO3	Students should able to report and present the findings of the study conducted in the preferred domain
		CO4	Students should able to demonstrate an ability to work in teams and manage the conduct of the research study
			SEMESTER 6
CAC6RT 17	Cloud Computing	CO1	Students should able to articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the- art cloud computing
		CO2	Students should able to identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.
		CO3	Students should able to explain the core issues of cloud computing such as security, privacy, and interoperability.
		CO4	Students should able to provide the appropriate cloud computing solutions and recommendations according to the applications used
CAC6RT 18	Mobile Application	CO1	Students should able to install and configure Android application development tools.
	Development -Android	CO2	Students should able to design and develop user Interfaces for the Android platform.
		CO3	Students should able to save state information across important operating system events
		CO4	Students should able to apply Java programming concepts to Android application development.
CA6CRP 07	Software Lab VI &	CO1	Students should able to apply essential Android Programming concepts.
	Seminar	CO2	Students should able to develop Android applications related to mobile related server-less database like SQLITE
		CO3	Students should able to develop various Android applications related to layouts & uses interactive interfaces

		CO4	Students should able to understand and discuss current, real-world issues
CA6CRP 08	Software Development	CO1	Students should able to demonstrate a sound technical knowledge of their selected project topic.
	Lab II	CO2	Students should able to undertake problem identification, formulation and solution.
		CO3	Students should able to design engineering solutions to complex problems utilizing a systems approach.
		CO4	Students should able to conduct an engineering project
CA6CRP 08	Viva Voce	CO1	Students should able to face interview both in the academic and the industrial sector
		CO2	Students should able to get an overall knowledge in the relevant field of computer applications.
		CO3	Students should able to serve industry requirement.

#### **OPEN COURSES**

# (Offered During Semester 5)

Name of the Department	Course Code	Course Title	Cours	se Outcomes
English	EN5CR OP03	English for Careers	CO1	On completion of the course, the students should be able to develop communicative skills, which will enable them to prepare for a career and function effectively in it.
			CO2	To make the students competent in their job- seeking, job-getting and job-holding needs. The course shall cater to equipping the students in Comprehensive Language Enhancement.
			CO3	To equip them in oral and written communication and to enhance their academic and professional use of language.
Malayalam	ML5OP	Pathra	CO1	Introducing basics of journalism
	T01	Pravartha- nam	CO2	Familiarizing new trends in journalism
Economics	EC5OP T01	Fundament als of Economics	CO1	This course is designed to make the undergraduate students of other disciplines aware of the basic ideas and concepts in economics.
			CO2	Students get the basic idea regarding national income, production, distribution etc.
			CO3	This course also inculcates some reasoning ability in students from other disciplines.
Political Science	PS5OPT 04	Human Rights in India	CO1	The course provides an understanding of the structure of Indian constitution as well as it provides a better understanding of the origin, evolution of rights and various steps taken by

				the national and international agencies for the protection and promotion of the Human Rights.
			CO2	This course also helps to get a comprehensive knowledge of the concept in the Indian context through dealing with various Human Rights movements.
			CO3	It also deals with the problems confronted by the marginalised sections in the Indian context.
History	HY50C T02	Social Implica-	CO1	To provide good awareness about the major social revolutions of the modern world.
		tions of Modern Revolu- tions	CO2	To focus on the linkage between the socio- economic revolutions of the modern world.
Communica -tive English	EN5CR OPG03	English for Careers	CO1	On completion of the course, the students should be able to develop communicative skills, which will enable them to prepare for a career and function effectively in it.
			CO2	To make the students competent in their job- seeking, job-getting and job-holding needs. The course shall cater to equipping the students in Comprehensive Language Enhancement.
			CO3	To equip them in oral and written communication and to enhance their academic and professional use of language.
Mathematics	MM5O PT02	Applicable Mathe- matics	CO1	To prepare students of all streams particularly those with arts and commerce background for their higher studies and to approach competitive examinations
			CO2	To acquire better understanding in basic concepts of mathematics
			CO3	To introduce shortcut methods for developing problem solving skills
Physics	PH5OP T02	Physics in Daily Life	CO1	Recognize the importance of applied Physics in describing natural phenomena
			CO2	Realize the significance of units and measurements, optical phenomena, electricity and its applications, matter and energy etc.
			CO3	Obtain a fundamental understanding about our universe, including galaxies, solar system, artificial satellites and their use in global positioning system.
Chemistry	CH5OP T01	Chemistry in	CO1	To know the importance of Chemistry in everyday life, because it provides medicine
		Everyday Life	CO2	To understand the chemical processes involved in the digestion of food we eat.

Botany	BO5OP T02	Horticultu re and Nursery Managem ent	CO1	To understand the importance of horticulture in human welfare.
			CO2	To understand the propagation and cultural practices of vegetables, fruit and garden plants.
			CO3	To understand the basic concepts of landscaping and garden designing.
			CO4	To understand the modern technology in horticultural plants.
Zoology	ZY5OP T01	Vocational Zoology	CO1	To develop critical thinking skill and research aptitude among students, by introducing the frontier areas of the biological science.
			CO2	To emphasize the central role that biological sciences plays in the life of all organisms.
			CO3	To introduce the student to some of the present and future applications of bio-sciences
			CO4	To acquire basic knowledge and skills in aquarium management, Quail farming, vermin-composting and apiculture for self- employment
			CO5	To learn the different resources available and to develop an attitude towards sustainability
			CO6	Give awareness to society about need for waste management and organic farming
Commerce (Finance &	CM05D AA01	Funda- mentals	CO1	Familiarize the students with the basic accounting principles and practices in business
Taxation)		of Account-	CO2	Equip students in preparing Journal and Ledger accounts
		ing	CO3	Equip students in preparation of Final Accounts of Sole proprietary concerns
Commerce (Computer	CO5OP T03	Funda- mentals	CO1	Familiarize the students with the basic accounting principles and practices in business
Applications)	105	Computer fundament als, internet	CO2	Equip students in preparing Journal and Ledger accounts
			CO3	Equip students in preparation of Final Accounts of Sole proprietary concerns
Computer Science	CS5OP T02		CO1	Students are equipped to meet the Computer aspects in a better way
			CO2	Assisting students to be expertise in computer related jobs
		and MS Office	CO3	Developing practical skills in internet

## **CHOICE BASED COURSES**

Name of the	Course	Course	Cours	se Outcomes
Programme	Code	Title		
and Semester	ENGO		0.01	
BA English	EN6CB	Comparati	COI	To introduce the student to the various
Literature;	01	ve Litonotuno		concepts relating to comparative study of
Semester o		Literature		interature and to promote an international
			CO2	approach to the study of interature.
			02	the study of literatures in comparison.
			CO3	To undertake a methodological investigation
				of problems involving more than one literature
				so that she/he may acquire a broader sense of
				literary history and tradition.
BA	ML6CB	Malayala-	CO1	Realize Women Status based on feminine
Malayalam;	101	thile Sthree	000	writings
Semester 6	FOCOD	Rachanakal	CO2	Analyse Feminine as a gender.
BA	EC6CB	History of	COI	This course aims to portrait through which the
Somostor 6	105	Thought		science of economics has evolved.
Semester 0		Thought	CO2	It provides an opportunity for the students to
				know about the economic history.
			CO3	Students also get chance to realize the
				different line of thought from ancient
		~ 1	<b>a a t</b>	economists to modern economists
BA History	HY6CB	Gender	COI	To familiarize the students with the conceptual
with	105	Studies		and methodological innovations brought into
Archaeology				and expansion and reframing of the issues at
and				its core that this intervention has entailed
Semester 6			CO2	To provide knowledge about various issues
Semester 0			02	related to women, children, transgenders etc.
BA Political	PS6CB	Internation	CO1	This paper equips the students with the basic
Science:	T03	al	001	intellectual tools for understanding
Semester 6		Organisati		international issues.
		ons and	CO2	The course historically contextualizes the
		World		evolution of the international state system.
		Affairs	CO3	Students are expected to learn about the key
			000	milestones in world politics and equip them
				with the tools to understand and analyze the
				same from different perspectives.
<b>BA</b> English	EN6CB	Compara-	CO1	Would acquire a broader sense of literary
Language	01	tive		history and tradition
and		Literature	CO2	Would be familiar with the world literature
Communicat			CO3	Would understand the strategies and
10n Studies;				methodologies in the study of literatures in
Semester 6				comparison
			CO4	Would be familiar with the famous writers

BSc Mathematics;	MM6C BT01	Operations Research	CO1	Formulate and solve LPP using graphical and Simplex method.
Semester 6			CO2	Study duality in LPP.
			CO3	Study transportation and assignment problems.
			CO4	Study about two person zero sum games.
BSc Dhysics:	PH6CB T03	Computati	CO1	Derive computational methods and error analysis techniques for various mathematical
Physics; Semester 6	105	Physics		operations and tasks
Semester 0		1 1195105	$CO^{2}$	Understand and apply methods of constructing
			002	solutions of system of linear equations
			CO3	familiarize numerical integration and
			005	differentiation of functions
BSc	CH6CB	Polymer	CO1	To understand the basics polymer science,
Chemistry;	T01	Chemistry		various reactions of polymerization and
Semester 6				biodegradable polymers
			CO2	To understand the various processing
				techniques of plastic materials
BSc Botany;	BO6PE	Plant	CO1	To understand the history and evolution of
Semester 6	T02	genetic		crop plants.
		resource	CO2	To help the students to identify the crop plants
		manageme		and their wild relatives.
		nt	CO3	To familiarize the students with the available
			<u> </u>	plant genetic wealth.
			CO4	To understand the significance of modern
				technology to analyse the distribution of
DC			<u>CO1</u>	endangered species.
BSC Zaalaaw	ZY6BI	Economic	COI	To develop critical thinking skill and research
Zoology;	50	Zoology		frontiar arous of the biological solution
Semester 0			$CO^{2}$	To amphasize the central role that biological
			02	sciences plays in the life of all organisms
BCom	CO3OC	Finance	CO1	Eamiliarizing the concepts of Goods and
(Finance &	T01	and	001	service Tax and its technical terms.
Taxation) ;	101	Taxation-	CO2	Students are able to understand the calculation
Semester 3		Goods and		in the goods and service tax.
		Services	CO3	
			COS	A positive mind can be developed among the
BCom		Tax	005	A positive mind can be developed among the students on GST.
	CO4OC	Tax Financial	CO3	A positive mind can be developed among the students on GST. Students are able to understand the financial
(Finance &	CO4OC T01	Tax Financial Services	CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way.
(Finance & Taxation);	CO4OC T01	Tax Financial Services	CO1 CO2	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments.
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail.
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms
(Finance & Taxation) ; Semester 4	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4 CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms Familiarise the students with Income Tax Act
(Finance & Taxation) ; Semester 4 BCom (Finance & Taxation) ;	CO4OC T01 CO5OC T01	Tax Financial Services Income Tax- I	CO1 CO2 CO3 CO4 CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms Familiarise the students with Income Tax Act 1961 and to enable the students to compute
(Finance & Taxation) ; Semester 4 BCom (Finance & Taxation) ; Semester 5	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4 CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms Familiarise the students with Income Tax Act 1961 and to enable the students to compute Income taxable under the first three heads of Income
(Finance & Taxation) ; Semester 4 BCom (Finance & Taxation) ; Semester 5	CO4OC T01 CO5OC T01	Tax Financial Services	CO1 CO2 CO3 CO4 CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms Familiarise the students with Income Tax Act 1961 and to enable the students to compute Income taxable under the first three heads of Income
(Finance & Taxation) ; Semester 4 BCom (Finance & Taxation) ; Semester 5	CO4OC T01	Tax Financial Services	CO1 CO2 CO3 CO4 CO1	A positive mind can be developed among the students on GST. Students are able to understand the financial dealing of the market in a formal way. Developed the courage to handle different financial instruments. Students are able to identify the need of financial support of the institutions and make it avail. Students are made in such a way to take over middle level management activities in the financial dealings firms Familiarise the students with Income Tax Act 1961 and to enable the students to compute Income taxable under the first three heads of Income Equip students to determine the taxable salary of various categories of assesses

			CO3	Make the students aware of latest rates of taxes and amendments in the latest Finance Act
BCom (Finance & Taxation) ; Semester 6	CO6OC T01	Income Tax- II	CO1	Provide understanding on the determination of Total Income and tax payable and to get an overview regarding returns to be filed by an individual and also assessment procedure.
			CO2	Make the students aware of assessment procedure.
			CO3	Familiarise students with procedure of preparation and submission of various types of returns.
			CO4	Familiarise students with e-filing and ITR forms.
BCom (Computer	CO3OC T02	Information Technology	CO1	Make students to know the applications of computer.
Applications);		for	CO2	Ensure students to explore IT implications
Semester 3		Business	CO3	Nurturing students to expertise in web page designing
BCom	CO4OC	IT for	CO1	Familiarize students with MS office tools
(Computer Applications);	T02	Office	CO2	Ensure students to do works through computer soft wares
Semester 4			CO3	Making them to explore the IT enabled implications
BCom (Computer Applications); Semester 5	CO5OC T02	Computeriz ed Accounting	CO1	Students are equipped to meet the demands of the industry by mastering them with industry sought after computerised accounting packages.
			CO2	Students are exposed to computer applications in the field of accounting
			CO3	Developing practical skills in the students for application of Tally Accounting package.
BCom (Computer	CO6OC T02	Software for	CO1	Enhance students for research oriented activities
Applications); Semester 6		business and	CO2	Familiarize students with software developments and working
		research	CO3	Making students focused on research tools and aspects
BCA; Semester 6	CA6PE T	Data Mining	CO1	Students should able to understand and implement classical algorithms in data mining and data warehousing
			CO2	Students should able to assess the strengths and weaknesses of the algorithms, identify the application area of algorithms, and
			CO3	apply them. Students should able to learn data mining
				techniques as well as methods in integrating and interpreting the data sets and improving effectiveness, efficiency
				and quality for data analysis
			CO4	Students should able to Compare different approaches of data warehousing and data mining with various technologies
				mining with various itemiologies

## **COMPLEMENTARY COURSES**

Name of the Programme: BA English Literature						
Course Code	Course Title	Course Outcomes				
SEMESTER 1						
PS1CM T01	An Introduction to Political	CO1	It will help the student to understand the relevance of the discipline and also to acquire the practical knowledge of the subject			
	Science	CO2	Inculcate awareness about the principles of Political Science in general and political process in particular. For that, various approaches, ideologies and related theories are dealt in an interdisciplinary manner.			
SEMESTER 2						
PS4CM Indian T05 Constitution : Social Issues in	CO1	The course helps to develop among students the ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes.				
	India	CO2	Integral to the course is the understanding that ideas of democracy, freedom and corresponding social political and institutional practices shaped the discipline in a more meaningful way.			
			SEMESTER 3			
EN3CM 03	The Evolution	CO1	To make the learner aware of the way in which history shapes the life and literature of a people.			
	of Literary Movements:	CO2	To give the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world.			
	of Destiny	CO3	To enable him to understand English literature in the light of historical events.			
			SEMESTER 4			
EN4CM 04	The Evolution of Literary	CO1	To enable students to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature			
	Movements: The Cross	CO2	Students will be competent to understand literature against the backdrop of history.			
	Change	CO3	Students will be inspired to contribute dynamically to historical and literary processes.			

Name of the Programme: BA Malayalam				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
ML1CM	Methodolog	CO1	Familiarize the new methodology in Malayalam literature	
T01	y in Malayalam Literature	CO2	Familiarizing different methodologies	
ML1C	Nadakavum	CO1	To have on in-depth knowledge of film and theatre	
MT02	Cinemayum	CO2	To sensitize aspects in Ancient Malayalam drama	
			SEMESTER 2	
ML2CM T03	Adhunika Loka	CO1	Recognize the influence of world poetry in Malayalam poems	
	Kavitha	CO2	Realizing aesthetics of colonialism	
ML2CM	Folk Lore	CO1	Introduce folklore studies	
T04		CO2	Making awareness of ancient knowledge	
	-		SEMESTER 3	
ML3CM	Oru	CO1	Liberate women hood and creativity in Madhavikutty	
T05	Ezhuthu- karan / Ezhuthukari- Madhavi- kutty	CO2	Romanticism through Madhavikutty- A Feminine Writer	
SC3CM T01	Sanskrit	CO1	Introducing Basics of Sanskrit and Grammar.	
	•		SEMESTER 4	
ML4CM	Adhunika	CO1	Rising the evolution of Malayalam as a modern language.	
T06	Malayala Bhasha	CO2	Identify the pros and cons of new Malayalam language.	
SC3CM	Sanskrit	CO1	Introduce Alankara and Vratha of Sanskrit.	
T02		CO2	Introducing theories of poetics and grammar.	

Name of the Programme: BA Economics					
Course	Course	Cours	se Outcomes		
Code	Title				
			SEMESTER 1		
HYCP03	Social	CO1	Students will be able to examine institutional basis of		
	Formation		Ancient India.		
	in pre	CO2	Students will be able to illustrate the development of empire.		
	modern	CO3	Understand the salient features of Indus valley civilization		
	India.				

	SEMESTER 2				
HYCP02	Transition	CO1	Students have understood the relation between Modernity		
	to the		and Nationalism and its implications.		
	contempor-	CO2	Realize the cause and results of French Revolution and the		
	arv world		achievements of Napolean Bonaparte.		
	ury worrd	CO3	Understand the causes and results of Second World War and		
			the establishment of UNO.		
		CO4	Students have understood the necessity of Universal-		
			Brotherhood.		
SEMESTER 3					
PS3CMT	An	CO1	It will help the student to understand the relevance of the		
01	Introduction		discipline and also to acquire the practical knowledge of the		
	to Political		subject		
	Science	CO2	Inculcate awareness about the principles of Political Science		
			in general and political process in particular. For that,		
			various approaches, ideologies and related theories are dealt		
			in an interdisciplinary manner.		
			SEMESTER 4		
PS4CMT	Indian	CO1	The course helps to develop among students the ability to		
05	Constitution		comprehend contemporary politics as a relationship between		
	: Social		institutional structures and historically constituted political		
	Issues in		processes.		
	India	CO2	Integral to the course is the understanding that ideas of		
			democracy, freedom and corresponding social political and		
			institutional practices shaped the discipline in a more		
			meaningful way.		

Name of the Programme: BA History					
Course	Course	Cours	se Outcomes		
Code	Title				
			SEMESTER 1		
EC1CM T01	Principles of	CO1	It helps the students to learn to apply the basic principles and concepts of economics to everyday issues.		
	Economics	CO2	It enriches the students with rational thinking.		
		CO3	It also helps the students to imbibe the relationship among the members of the society.		
			SEMESTER 2		
EC2CM T02	Basic Economic Studies	CO1	It intends to make the students equipped with essential understanding the basic economic issues.		
		CO2	This course addresses issues like in public finance, international economic issues, and Kerala economy so that they shall be capable of realizing and solving common economic issues in the society.		
		CO3	Students also get acquainted with policy requirements.		

	SEMESTER 3			
PS3CMT An 01 Introduction to Political Science	An Introduction to Political	CO1	It will help the student to understand the relevance of the discipline and also to acquire the practical knowledge of the subject	
	Science	CO2	Inculcate awareness about the principles of Political Science in general and political process in particular. For that, various approaches, ideologies and related theories are dealt in an interdisciplinary manner.	
			SEMESTER 4	
PS4CMT 05	Indian ConstitutionCC Constitution: Social Issues in IndiaCC	CO1	The course helps to develop among students the ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes.	
		CO2	Integral to the course is the understanding that ideas of democracy, freedom and corresponding social political and institutional practices shaped the discipline in a more meaningful way.	

Name of	Name of the Programme: BA Political Science				
Course Code	Course Title	Course Outcomes			
			SEMESTER 1		
НҮСР03	Social Formation	CO1	Students will be able to examine institutional basis of Ancient India.		
	in pre	CO2	Students will be able to illustrate		
	modern		the development of empire.		
	maia.	CO3	Understand the salient features of Indus valley civilization		
SEMESTER 2					
HYCP02	Transition to the	CO1	Students have understood the relation between Modernity and Nationalism and its implications.		
	contempora rv world	CO2	Realize the cause and results of French Revolution and the achievements of Napolean Bonaparte.		
		CO3	Understand the causes and results of Second World War and the establishment of UNO.		
		CO4	Students have understood the necessity of Universal-Brotherhood.		
			SEMESTER 3		
EC3CM T01	Principles of	CO1	It helps the students to learn to apply the basic principles and concepts of economics to everyday issues.		
	Economics	CO2	It also helps the students to imbibe the relationship among the members of the society.		
		CO3	It enriches the students with rational thinking.		

	SEMESTER 4				
EC4CM T02	Basic Economic Studies	CO1	It intends to make the students equipped with essential understanding the basic economic issues.		
		CO2	This course addresses issues like in public finance, international economic issues, and Kerala economy so that they shall be capable of realizing and solving common economic issues in the society.		
		CO3	Students also get acquainted with policy requirements.		

## Name of the Programme: BA English Language and Communication Studies

Course	Course	Cours	Course Outcomes		
Code	Title				
	·		SEMESTER 1		
EN1CM	Sociology	CO1	Would be aware of society and social hierarchical structures		
T01			of society.		
		CO2	Would recognize the values of common living and sharing.		
		CO3	Would Assimilate social and ethical behaviour.		
		CO4	Would imbibe the values of marriage, family etc.		
	·		SEMESTER 2		
EN2CST	Sociological	CO1	Would understand the factors that triggered the development		
03	theories		of sociological theories		
		CO2	Would be develop an epistemological know how of various		
			social philosophies.		
		CO3	Would assimilate the responsibilities of a social being.		
			SEMESTER 3		
EN3CM	Shapers of	CO1	Would have a thorough knowledge of British history.		
T03	destiny	CO2	Would have a knowledge of major geographical and		
			scientific innovations.		
		CO3	Would be familiar with the literary movements.		
		CO4	Would be familiar with the different periods of English		
			literature writers and their roles.		
		CO5	Would be aware of how history moulds society and people.		
	-		SEMESTER 4		
EN4CM	Cross	CO1	Students would be aware of alternatively defined traditions		
T04	currents		and genres, such as women's literature, postcolonial		
			literature, third literature etc.		
		CO2	Would have notion of the literature and perceive the		
			interplay of social processes and literature.		
		CO3	Would understand literature against the backdrop of history		
			and gyring them to contribute to historical and literary		
			processes.		
		CO4	Would understand the significance of literature influencing		
			the mass.		

Name of the Programme: BSc Mathematics				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
ST1CM	Descriptive	CO1	Statistical skills to collect empirical data.	
T01	Statistics	CO2	Statistical skills to calculate descriptive statistics of empirical data.	
		CO3	Statistical skills to visually interpret empirical data.	
PH1CM T01	Properties of matter &	CO1	Learn the basics concepts of elasticity, surface tension, gravitation, viscosity and sound.	
	error analysis	CO2	Understand the concepts of properties of matter and to recognize their applications in various problems.	
		CO3	Identify/classify the usual experimental errors and study different calculation methods.	
	• •		SEMESTER 2	
ST2CM	Probability	CO1	Basic knowledge in probability theory	
T02	Theory	CO2	Problem solving skill	
		CO3	Different methods to find probability	
PH2CM	Mechanics	CO1	Understand and define the laws involved in mechanics.	
T01	and Astro-	CO2	Explain the notion of degrees of freedom and identify them	
	physics	CO3	for a given mechanical system.	
		05	SEMESTER 3	
ST3CM	Probability	CO1	Acquaint the students familiar with basic probability	
T03	Distribu-		distributions	
	tions	CO2	Acquaint the students familiar with their properties of	
		CO3	Problem solving skill	
PH3CM T01	Modern Physics and	C01	Study the basics of dual nature of matter and radiation and introduce the new branch of Physics 'Quantum Mechanics'	
101	Electronics	CO2	Impart knowledge related to the concepts of spectroscopy.	
		CO3	Familiarize with the basic concepts of construction and	
			working of electronic devices such as diodes and transistors.	
		a a t	SEMESTER 4	
ST4CM	Statistical	CO1	Expected to learn the basics of estimation theory	
104	Interence	CO2	Make the student understand the concepts of testing of hypothesis	
		CO3	Decision making skill	
PH4CM T01	Optics and electricity	CO1	Understand the central concepts and basic formalisms of interference, diffraction and polarization.	
		CO2	Gain Fundamental knowledge in lasers and holography.	
		CO3	Build up fundamental understanding of electricity and achieve strong problem solving skills by effectively formulating a circuit.	

Name of the Programme: BSc Physics				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
MM1C MT01	Partial Differen-	CO1	Understand the concept of partial differentiation of functions of several variables.	
	tiation,	CO2	Solve systems of linear equations using different methods.	
	Matrices,	CO3	Understand trigonometric and hyperbolic functions in detail.	
	metry and Numerical Methods	CO4	Learn how to solve equations using numerical methods.	
	Basic Theoretical	CO1	This part of the syllabus will impart an interest in studying chemistry.	
CH1CM	and Analytical	CO2	Students are getting more ideas about theoretical and experimental Chemistry.	
T01	Chemistry	CO3	Students can apply these skills in the analysis of experimental data in chemistry practical and further for jobs.	
			SEMESTER 2	
MM2C MT01	Integral Calculus	CO1	Use integral calculus to find area and volume of various geometrical objects.	
	and	CO2	Master the concepts of double integrals and triple integrals	
	Equations	CO3	Recognize and solve separable, exact, homogeneous and non-homogeneous ordinary differential equations	
		CO4	Solve partial differential equations.	
CH2CM T02	Basic Organic Chemistry	CO1	By studying this part of the syllabus students are getting basic ideas of organic chemistry, which enables them to build a better foundation	
		CO2	The course aims to study the mechanism of organic reactions	
		CO3	It also develops an interest in various branches of organic chemistry.	
CH2CM	Volumetric	CO1	Plan and Conduct different estimation technique.	
P01	Analysis-	CO2	To study the effect of various indicators	
	Practical	CO3	To estimate and check the accuracy of the given sample	
		•	SEMESTER 3	
MM3C MT01	Vector Calculus,	CO1	Acquaint with the concept of vector valued functions and its curvature, directional derivatives	
	Analytic Geometry	CO2	Extend the tools of integral calculus to vector valued functions	
	and Abstract	CO3	Understand various properties of conic sections in Cartesian	
	Algebra	CO4	Understand basic algebraic concepts like binary operations,	
CH4CM	Physical	CO1	The objective of this academic plan is to make the concepts	
T03	Chemistry - 1		and methods of physical chemistry clear and interesting to students, who have basic ideas in mathematics and physics	

		CO2	The underlying theory of chemical phenomena is completed, and so it is a challenge to make the most important concepts and methods understandable to undergraduate students
			SEMESTER 4
MM4C	Fourier	CO1	Learn Fourier series and Legendre Polynomials
MT01	Series,	CO2	Solve differential equations using power series method
	Laplace	CO3	Understand Laplace transforms
	Transforms	CO4	Learn about Complex valued functions and determine
	and Complex		whether a given function is differentiable
	Analysis		
CH4CM	Physical	CO1	The objective of this academic plan is to make the concepts
T05	Chemistry -		and methods of physical chemistry clear and interesting to
	1I		students, who have basic ideas in mathematics and physics
		CO2	The understand theory of modern branches like
			spectroscopy
CH4CM	Physical	CO1	Explain the principle behind the experiments performed in
P02	Chemistry		the laboratory
	Practical	CO2	Plan and Perform experiments and Interpret experimental
			results.

Name of the Programme: BSc Chemistry					
Course	Course	Cours	se Outcomes		
Code	Title				
			SEMESTER 1		
PH1CM T02	Properties of matter	CO1	Explore the fundamental concepts of mechanical properties of solids and fluids.		
	and thermodyna	CO2	Understand the central concepts and basic formalisms of specific heat, entropy, quantum theory of radiation.		
	mics	CO3	Acquire knowledge on heat transfer, entropy and quantum theory of radiation.		
	SEMESTER 2				
PH2CM T02	Mechanics and	CO1	Learn Relative motion, Inertial and non-inertial reference frames and Centre of mass of mechanical systems.		
	supercondu ctivity	CO2	Study the interaction of forces between solids in mechanical systems and parameters defining the motion of mechanical systems.		
		CO3	Understanding the basic principles of superconducting transitions.		
	·		SEMESTER 3		
PH3CM T02	Modern physics and magnetism	CO1 CO2 CO3	Study the basics of dual properties of matter and radiation. Introduce the modern branch of Physics 'Quantum Mechanics' Define the concepts of magnetic field , magnetic flux etc. and solve technical problems.		
	·		SEMESTER 4		
PH4CM T02	Optics and solid state physics	CO1	Understand the central concepts and basic formalisms of interference, diffraction and polarization based on wave theory.		
		CO2 CO3	Gain Fundamental knowledge in lasers and applications. Understand the basic properties of solids, their structure, properties and various technological applications.		

Name of the Programme: BSc Botany				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
ZY1CM	Non	CO1	To study the scientific classification of invertebrate fauna.	
T01	Chordate	CO2	To learn the physiological and anatomical peculiarities of	
	Diversity		some invertebrate phyla through type study.	
		CO3	To learn the unity of life with rich diversity of organisms & evolutionary significance of certain invertebrate fauna	
		CO4	To stimulate the curiosity of students' in the biota living	
			around them.	
CH1CM	Basic	CO1	This part of the syllabus will impart an interest in studying	
T01	theoretical		chemistry	
	and	CO2	students are getting more ideas about theoretical and	
	analytical		experimental Chemistry	
	chemistry	CO3	Students can apply these skills in the analysis of	
			experimental data in chemistry practical and further for jobs.	
	Γ	I	SEMESTER 2	
ZY2CM	Chordate	CO1	To make the student observe the diversity in chordates and	
TO2	Diversity		their systematic position.	
		CO2	To make the student ware of the economic importance of some chordates.	
		CO3	To learn the physiological and anatomical peculiarities of some vertebrate species through type study.	
		CO4	To stimulate the students' curiosity in vertebrates living	
CH2CM	Basic	CO1	By studying this part of the syllabus students are getting	
T02	Organic	001	basic ideas of organic chemistry, which enables them to	
	Chemistry		build a better foundation	
	Chemisuy	CO2	The course aims to study the mechanism of organic reactions	
		CO3	It also develops an interest in various branches of organic	
			chemistry.	
CH2CM	Volumetric	CO1	Plan and Conduct different estimation technique.	
P01	Analysis-	CO2	To study the effect of various indicators	
	Practical	CO3	To estimate and check the accuracy of the given sample	
			SEMESTER 3	
ZY3CM	Physiology	CO1	To appreciate the correlation between structure and	
T03	and		function of organisms	
	Immunolog	CO2	To make the student aware of the health related problems,	
	У		their origin and treatment.	
		CO3	To understand how efficiently our immune system works in	
			our body.	
		CO4	To acquire knowledge about preventing common diseases	
			rather than curing.	
CH4CM T04	Inorganic and Organic	C01	Develops an interest in various branches of organic chemistry.	
	Chemistry	C02	An inorganic chemistry student is expected to be conversant with the chemistry of all the elements and has been closely allied with analytical chemistry, with physical chemistry and even with organic chemistry.	

	SEMESTER 4				
ZY4CM	Applied	CO1	To acquire basic knowledge and skills in applied branches of		
T04	Zoology		zoology.		
		CO2	To understand the technology for utilising eco-friendly		
			organisms around them for beneficial purpose.		
		CO3	To equip the students for self employment opportunities		
			with scientific knowledge to perform profitably &		
			confidently.		
CH4CM	Advanced	C01	This part of the curriculum deals with biological aspects of		
T06	Bioorganic		chemistry, which help students to understand medicinal		
	Chemistry		chemistry, useful in daily life		
		C02	To study the details of Natural products		
CH4CM	Organic	CO1	To analyse the functional group		
P03	Chemistry	CO2	To determine the physical constants of solids and liquids		
	Practical	CO3	To prepare a solid derivatives of the detected organic		
			compounds		

Name of	Name of the Programme: BSc Zoology				
Course Code	Course Title	Course Outcomes			
SEMESTER I					
BO1CMT	Cryptogams,	CO1	To acquire the knowledge in plant science.		
01	gymnosperms and plant	CO2	To encourage the aptitude of curiosity, appreciation and enquiry of various forms of plants.		
	pathology	CO3	To understand the identifying characters of various groups of plants.		
		CO4	To understand the diversity of plants.		
CULCM	Basic theoretical	CO1	This part of the syllabus will impart an interest in studying chemistry		
T01 and analytical chemistry	and analytical chemistry	CO2	students are getting more ideas about theoretical and experimental Chemistry		
		CO3	Students can apply these skills in the analysis of experimental data in chemistry practical and further for jobs.		
SEMESTER 2					
BO2CM T02	Plant physiology	CO1	To make the students realize the importance of physiological process.		
		CO2	To understand the mechanisms of various physiological processes related to plant life.		
		CO3	Understand the mechanism of physiological functioning of plant cells.		
		CO4	To equip the students to conduct experiments in plant physiology.		
CH2CM	Volumetric	CO1	Plan and Conduct different estimation technique.		
P01	Analysis-	CO2	To study the effect of various indicators		
	Practical	CO3	To estimate and check the accuracy of the given sample		
CH2CM	Basic	CO1	By studying this part of the syllabus students are getting		
T02	Organic		basic ideas of organic chemistry, which enables them to		
	Chemistry		build a better foundation		
		CO2	The course aims to study the mechanism of organic reactions		

		CO3	It also develops an interest in various branches of organic	
SEMESTER 3				
BO3CM	Ang.	CO1	To understand the objectives and components of Taxonomy.	
T03	Taxonomy	CO2	To help the students to understand the systems of	
	& Eco.		classification.	
	Botany	CO3	To help the students to identify the common angiosperms in	
			Kerala.	
		CO4	To familiarize the students with plants of eco.importance of	
			plants.	
CH4CM	Inorganic	CO1	Develops an interest in various branches of organic	
T04	and Organic		chemistry.	
	Chemistry	CO2	An inorganic chemistry student is expected to be conversant	
			with the chemistry of all the elements and has been closely	
			allied with analytical chemistry, with physical chemistry and	
			even with organic chemistry.	
		GO1	SEMESTER 4	
BO4CM	Anatomy	CO1	SEMESTER 4 Understand the different types of plant tissues.	
BO4CM T04	Anatomy and applied	CO1 CO2	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.	
BO4CM T04	Anatomy and applied Botany	CO1 CO2 CO3	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of	
BO4CM T04	Anatomy and applied Botany	CO1 CO2 CO3	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.	
BO4CM T04	Anatomy and applied Botany	CO1 CO2 CO3 CO4	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop	
BO4CM T04	Anatomy and applied Botany	CO1 CO2 CO3 CO4	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.	
BO4CM T04 CH4CM	Anatomy and applied Botany Advanced	CO1 CO2 CO3 CO4	SEMESTER 4   Understand the different types of plant tissues.   To understand the internal structure of different plant organs.   To know the morphological and anatomical adaptations of plants.   To understand how botanical knowledge applied for crop improvement.   This part of the curriculum deals with biological aspects of	
BO4CM T04 CH4CM T06	Anatomy and applied Botany Advanced Bioorganic	CO1 CO2 CO3 CO4 CO1	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal	
BO4CM T04 CH4CM T06	Anatomy and applied Botany Advanced Bioorganic Chemistry	CO1 CO2 CO3 CO4 CO1	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal chemistry, useful in daily life	
BO4CM T04 CH4CM T06	Anatomy and applied Botany Advanced Bioorganic Chemistry	CO1 CO2 CO3 CO4 CO1	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal chemistry, useful in daily lifeTo study the details of Natural products	
BO4CM T04 CH4CM T06 CH4CM	Anatomy and applied Botany Advanced Bioorganic Chemistry Organic	CO1 CO2 CO3 CO4 CO1 CO2 CO1	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal chemistry, useful in daily lifeTo study the details of Natural productsTo analyse the functional group	
BO4CM T04 CH4CM T06 CH4CM P03	Anatomy and applied Botany Advanced Bioorganic Chemistry Organic Chemistry	CO1 CO2 CO3 CO4 CO1 CO2 CO1 CO2	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal chemistry, useful in daily lifeTo study the details of Natural productsTo analyse the functional groupTo determine the physical constants of solids and liquids	
BO4CM T04 CH4CM T06 CH4CM P03	Anatomy and applied Botany Advanced Bioorganic Chemistry Organic Chemistry Practical	CO1 CO2 CO3 CO4 CO1 CO2 CO1 CO2 CO3	SEMESTER 4Understand the different types of plant tissues.To understand the internal structure of different plant organs.To know the morphological and anatomical adaptations of plants.To understand how botanical knowledge applied for crop improvement.This part of the curriculum deals with biological aspects of chemistry, which help students to understand medicinal chemistry, useful in daily lifeTo study the details of Natural productsTo analyse the functional groupTo determine the physical constants of solids and liquidsTo prepare a solid derivatives of the detected organic	

#### Name of the Programme: BSc Recreation, Leisure & Sports Studies

Course	Course	Course Outcomes	
Code	Title		
			SEMESTER 1
PE1CM	Managemen	CO1	To appraise the meaning and concept of management
T01	t concept in	CO2	To understanding different type and levels of management,
	recreation		making the different type of managerial activity in sports
	and sports		related with real concept of management principle
		CO3	Relating management concept in sports planning and
			organizing, staffing, directing, motivating, leadership
		CO4	To understanding management concept in sports deferent
			hotels, hospitals, organizations are promoting sports

	SEMESTER 2				
PE2CM	Introduction	CO1	To appraise the meaning and concept of sports tourism and		
T02	to sports		its importance in sports		
	tourism	CO2	To create a deep knowledge about sports tourism and its		
			wide scope in tourism		
		CO3	To understand different agencies are working under sports		
			tourism and development of agencies under sports tourism		
		CO4	To study national and international concept of sports tourism		
			and the scope and importance of new innovations in sports		
			tourism, the future of sports tourism		
SEMESTER 3					
PE3CM	Sports	CO1	To understand the concept of massage in sports		
T03	Massage &	CO2	To acquire the skills required for Spa Therapy		
	Spa	CO3	To develop and apply various techniques for Sports recovery		
	Therapy		and performance enhancement.		
SEMESTER 4					
PE4CM	Sports	C01	To develop concepts related to sports nutrition		
T04	Nutrition	CO2	To construct a strong basis in the evaluation techniques		
			through the various test and measurements method used in		
			sports nutrition.		
		CO3	To analyze the nutritional status and performance of an		
			individual in various sports.		
		CO4	To provide scientific techniques in selection and talent		
			identification through various evaluation and grading		
			process applicable in physical education and sports.		

Name of the Programme: BCom (Common to BCom with Finance &					
Taxatio	Taxation and BCom with Computer Applications)				
Course	Course	Course Outcomes			
Code	The				
			SEMESTER 1		
CO1CM	Banking and	CO1	To introduce to students the basic concepts of banking and		
T01	Insurance		insurance		
		CO2	To equip the students with knowledge in practical banking		
		CO3	To familiarize the students with knowledge on different		
			types of insurance and various insurance schemes		
		-	SEMESTER 2		
CO2CM	Principles	CO1	To familiarize the students with the economic concepts and		
T02	of Business		principles underlying business decision making		
	Decisions	CO2	To enable the students to conduct cost analysis of business		
			firms		
		CO3	To equip the students with knowledge on business decision		
			making		

Name of the Programme: BCA					
Course	Course	Cours	Course Outcomes		
Code	Title		CEMESTED 1		
		001			
MMIC MT03	matics	COI	mathematics.		
		CO2	Students would be able to read and understand middle-level proofs.		
		CO3	Students would be able to develop and maintain problem- solving skills.		
		CO4	Students would be able to use mathematical ideas to model real-world problems.		
ST1CM T31	Basic Statistics	CO1	Students would be able to organize, manage and present data.		
		CO2	Students would be able to analyze statistical data graphically using frequency distributions and cumulative frequency distributions		
		CO3	Students would be able to use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.		
		CO4	Students would be able to derive the probability density function of transformation of random variables.		
			SEMESTER 2		
MM2C MT03	Discrete Mathematic s	CO1	Students should able to understand the basics of discrete probability and number theory, and be able to apply the methods from these subjects in problem solving.		
		CO2	Students should able to use effectively algebraic techniques to analyze basic discrete structures and algorithms.		
		CO3	Students should able to understand some basic properties of graphs and related discrete structures, and be able to relate these to practical examples.		
		CO4	Students should able to understand asymptotic notation, its significance, and be able to use it to analyze asymptotic performance for some basic algorithmic examples.		
			SEMESTER 3		
ST3CM T32	Advanced Statistical	CO1	Students should able to apply discrete and continuous probability distributions to various business problems		
	Methods	CO2	Students should able to perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases. Understand the concept of p-values		
		CO3	Students should able to learn non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit		
		CO4	Students should able to calculate and apply measures of location and measures of dispersiongrouped and ungrouped data cases.		

			SEMESTER 4
MM4C MT03	Operational Research	CO1	Students should able to understand the meaning of Operations Research and how to use it. How to write linear program in the event of minimum cost or maximum profit.
		CO2	Students should able to choose rational options in practical decision-making problems using standard mathematical models of operations research
		CO3	Students should able to develop skills in analysis of operations research objectives, mathematical methods and computer systems.
		CO4	Students should able to get knowledge of the varied applications of operations research

#### **GENERAL COMPONENT**

Name of the Programme: BVoc Sustainable Agriculture			
Course Code	Course Title	Course Outcomes	
			SEMESTER 1
ENCN1	Communicati on Skills in English	CO1	To introduce the students to the speech sounds of English in order to enable them to listen to English and speak with global intelligibility.
		CO2	To enable the students to speak English confidently and effectively in a wide variety of situations.
		CO3	To help the students to improve their reading efficiency by refining their reading strategies.
FPR1G1T	Basic Principles Of	CO1	To provide a basic sequence of steps to produce an acceptable and quality food product from raw materials.
	Food Processing	CO2	Study of scientific and technological advancements in food processing.
EES1G1T	Renewable	CO1	To explain concept of various forms of renewable energy
	Energy	CO2	To outline division aspects and utilization of renewable
	Sources		energy sources for both domestics and industrial
			applications
		CO3	To get an idea of Indian energy sector
	Γ	1	SEMESTER 2
ENCN2	Critical	CO1	To make the students aware of the fundamental concepts of
	Thinking,		critical reasoning and to enable them to read and respond
	Academic		critically, drawing conclusions, generalizing, differentiating
	Writing and	000	fact from opinion and creating their own arguments.
	Presentation	02	To assist the students in developing appropriate and
		CO2	To help students restify structural imperfections and to
		COS	edit what they have written
		CO4	To equip students for making academic presentations
		04	effectively and impressively
FPR2G1T	Fruit And Vegetable	CO1	To provide a basic understanding of processing of fruits.
	Processing Technology	CO2	To provide a basic understanding of processing of vegetables.
FPR2G1P	Fruit And Vegetable	CO1	To familiarize the students with processing of vegetables
	Processing Technology- Practical	CO2	To familiarize the students with processing of fruits

EES2G1T	Introductory Environment al Studies	CO1	To create awareness about the importance of environment, its ecological balance and make him/her sensitive to the environment issues in every endeavor that he/she participates.
		CO2	To create awareness about ecological balance and make him/her sensitive to the environment issues in every endeavour that he/she participates.
			SEMESTER 3
FPR3G1T	Cereals and Pulses Processing	CO1	To give a general outline about the principles, structure and composition, economic importance of different cereals, pulses and their products.
	Technology	CO2	To give a general outline about the different cereals, pulses and their products.
FPR3G1T	Cereals and Pulses Processing of Cereal Products	CO1	To give a general outline of the processing of different cereals, pulses and their products.
EES3G1T	Environment al Impact	CO1	To have an assessment of the impacts of manmade activities on the environment.
	Assessment	CO2	To have an understanding of the possible remedies in this regard.
			SEMESTER 4
FPR4G1T	Fats and Oil Processing Technology	CO1	To give a general outline about the principles, structure and composition, economic importance
		CO2	To give a general outline about the storage and processing of fats and oils and their products.
FPR4G1P	Fat Analysis- Practical	CO1	To give foundation to fat analysis.
EES4G1T	Energy and	CO1	To understand the methodology of energy management.
Environment Management	CO2	To understand the methodology of environment management.	
		CO3	To understand energy and environment audit.
			SEMESTER 5
SAG5G1T	Principles of Agribusiness	CO1	To familiarise with the fundamentals of information and communication management.
	Management	CO2	To understand entrepreneurship strategies.
SAG5G2T	Tissue	CO1	To get practiced with various aspects of tissue culture.
-	Culture	CO2	To learn applications of tissue culture in crop improvement.
SAG5G2P	Tissue Culture-	CO1	To understand about Plant Tissue Culture
	Practical	CO2	To Preparation and sterilization of media
FPT5G3T	Eco-Tourism	CO1	Make the students to opt various ecotourism programmes as a self employment stream
		CO2	Make the students to aware about the usefulness of ecotourism in the conservation of natural resources.
		CO3	Help the students to assess various ecotourism programmes.

			SEMESTER 6
SAG6G1T	Government	CO1	To acquaint with various Government Policies related to
	Policies and		Agriculture in Kerala and India.
	Programmes	CO2	To familiarise with five year plans and Panchayathiraj
	related to		system in India.
	agriculture		
SAG6G2T	Computer	CO1	Understand the hardware components of a system.
	Hardware		
	and	CO2	Understand basic issues in installing and using software.
	Networking	CO3	Understand how a network functions and the issues of
			network security.

Name of the Programme: BVoc Food Processing Technology				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
ENCN1	Communicati on Skills in English	CO1	To introduce the students to the speech sounds of English in order to enable them to listen to English and speak with global intelligibility	
		CO2	To enable the students to speak English confidently and effectively in a wide variety of situations.	
		CO3	To help the students to improve their reading efficiency by refining their reading strategies	
HOR1G1T	Fundamentals of Horticulture	CO1	To acquaint with importance, division and classification of horticultural crops	
		CO2	To understand the basic principles and types of plant propagation	
HOR1G1P	Fundamentals of Horticulture -Practical	CO1	To develop skill in propagation and cultivation aspects of horticultural crop	
EES1G1T	Renewable	CO1	To explain concept of various forms of renewable energy.	
	Energy Sources	CO2	To outline division aspects and utilization of renewable energy sources for both domestics and industrial applications	
			SEMESTER 2	
ENCN2	Critical Thinking, Academic Writing and Presentation	CO1	To make the students aware of the fundamental concepts of critical reasoning and to enable them to read and respond critically, drawing conclusions, generalizing, differentiating fact from opinion and creating their own arguments.	
		CO2	To assist the students in developing appropriate and impressive writing styles for various contexts	
		CO3	To help students rectify structural imperfections and to edit what they have written.	
		CO4	To equip students for making academic presentations effectively and impressively.	

HOR2G1T	Plantation Crops, Spices	CO1	To acquaint with the cultivation aspects of Plantation crops spices and fruit crops
	and Fruits		crops, spices and mait crops.
HOR2G1P	Plantation Crops, Spices and Fruits- Practical	CO1	To acquire skill on cultivation aspects of Plantation crops, spices and fruit crops
EES2G1T	Introductory	CO1	To create awareness about the importance of
	Environment		environment, its ecological balance and make him/her
	al Studies		that he/she participates.
			SEMESTER 3
HOR3G1T	Protected	CO1	To familiarize with protected cultivation structures and
	cultivation of		cultivation practices.
	Horticultural crops		
HOR3G1P	Protected	CO1	To practice with protected cultivation practices of
	cultivation of		important crops.
	Horticultural		
	crops- Practical		
EES3G1T	Environment-	CO1	To have an assessment of the impacts of manmade
	al Impact		activities on the environment.
	Assessment		
	Tandaaana	CO1	SEMESTER 4
HUK4011	designing and	COI	landscape
	indoor		
	gardening		
HOR4G1P	Landscape designing and	CO1	To develop skill in planning and planting of garden lawn.
	indoor	CO2	To develop skill in preparation of different types of
	gardening- Practical		gardens.
EES4G1T	Energy And	CO1	To understand the methodology of energy management.
	Environment	CO2	To understand the methodology of environment
	Management	<u> </u>	management.
		05	SEMESTER 5
FPT5G1T	Sensorv	CO1	To understand different aspects of sensory science and its
	Evaluation		application.
FPT5G1P	Sensory	CO1	To understand different aspects of various sensory
	Evaluation- Practical		parameters and its application in food quality analysis.
FPT5G2T	Sanitation	CO1	To know the principles and applications of sanitation in
	and Hygiene		food industry.
FPT5G3T	Eco-Tourism	CO1	Make the students to opt various ecotourism programmes as a self employment stream.
		CO2	Make the students to aware about the usefulness of ecotourism in the conservation of natural resources.
		CO3	Help the students to assess various ecotourism programmes

	SEMESTER 6				
FPT6G1T	Food Toxicology	CO1	Provide students with a basic understanding of the principles of toxicology.		
		CO2	Provide students an in depth understanding of how the science of toxicology is applied to chemical food and feed safety, including food regulation and risk assessment		
FPT6G2T	T6G2T Computer Hardware and Networking	CO1	Understand the hardware components of a system.		
		CO2	Understand basic issues in installing and using software.		
		CO3	Understand how a network functions and the issues of network security.		

Name of the Programme: BVoc Printing Technology				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
BOCG101	Listening and Speaking Skills in	CO1	To introduce the students to the speech sounds of English in order to enable them to listen to English and speak with global intelligibility.	
	English	CO2	To enable the students to speak English confidently and effectively in a wide variety of situations.	
		CO3	To help the students to improve their reading efficiency by refining their reading strategies.	
BOCG102	IT for Business (AOC)	CO1	To familiarize with computer peripherals and fundamentals	
		CO2	To make a thorough knowledge in Office word, Excel, power point etc.	
CA1G1T	Computer Fundamentals	CO1	To facilitate the student with applied working knowledge of computers.	
		CO2	To understand and make a knowledge in Office word, Excel, Power Point.	
EE1G1T	Renewable	CO1	To explain concept of various forms of energy resources.	
	Energy Resources	CO2	To outline division aspects and utilization of renewable energy sources for both domestics and industrial applications.	
			SEMESTER 2	
BOCG201	Writing and Presentation Skills in English	CO1	To make the students aware of the fundamental concepts of critical reasoning and to enable them to read and respond critically, drawing conclusions, generalizing, differentiating fact from opinion and creating their own arguments.	
		CO2	To assist the students in developing appropriate and impressive writing styles for various contexts.	
		CO3	To help students rectify structural imperfections and to edit what they have written.	
		CO4	To equip students for making academic presentations effectively and impressively.	

CA2G1T	Digital	CO1	To facilitate the student with the knowledge of Logic		
	Electronics&		Systems, Circuits and Microprocessor		
	Microprocess	CO2	Enabling the student to obtain the platform for studying		
	or		Digital System, Microprocessor Architecture.		
EE2G1T	Environment	CO1	To create awareness about the importance of		
	al Studies &		environment, its ecological balance.		
	Human	CO2	To make him/her sensitive to the environment issues in		
	Rights		CEMECTED 2		
		CO1			
CA3GIT	Desk Top	COI	To make a better understanding of desktop publishing		
	(AOC)	$CO^2$	To have better understanding in image editing		
EE3G1T	Environment	CO1	To have an idea of the impacts of manmade activities on		
LLCOIT	al Impact	001	the environment.		
	Studies	CO2	To have an understanding of the possible remedies in this		
			regard.		
		<u> </u>	SEMESTER 4		
CA4G1T	Computer	CO1	To create knowledge of computer hardware and ways of		
	Hardware &		maintaining.		
	Maintenance	CO2	To explain the working of computers		
	(AOC)	CO3	To identify different components of computers and		
			explain their uses.		
EE4G1T	Industrial	CO1	To understand the importance of Energy Conservation.		
	Energy	CO2	To understand the methodology of energy management		
	Management	CO3	To understand energy audit and conservation techniques		
		005	SEMESTED 5		
DEVIESTER 5					
F15011	and Quality	COI	materials		
	Management	CO2	To understand the use of biochemical based material		
	in Graphic	CO3	To ancouraging greener production with limiting pollution		
	Arts	005	To encouraging greener production with mining ponution.		
PT5G2T	Fundamental	CO1	To learn about fundamentals of advertising		
	s of	CO2	To get knowledge about advertising types, design and		
	Advertising		corporate advertising etc.		
PT5GMS1	Minor	CO1	To train the students in preparing project reports		
	project/Semi	CO2	To train the students to face reviews and viva voce		
	nar		examination.		
DOCCO		001	SEMESTER 6		
BOCG60	Entrepreneur	CO1	<b>SEMESTER 6</b> To have a practical insight for becoming an entrepreneur.		
BOCG60 1	Entrepreneur ship	CO1 CO2	<b>SEMESTER 6</b> To have a practical insight for becoming an entrepreneur. To familiarize with the latest programs of the government authorities in promoting small and madium industries		
BOCG60 1	Entrepreneur ship Development	CO1 CO2	<b>SEMESTER 6</b> To have a practical insight for becoming an entrepreneur. To familiarize with the latest programs of the government authorities in promoting small and medium industries.		
BOCG60 1	Entrepreneur ship Development (AOC)	CO1 CO2 CO3	<b>SEMESTER 6</b> To have a practical insight for becoming an entrepreneur. To familiarize with the latest programs of the government authorities in promoting small and medium industries. To impart knowledge regarding how to start new ventures.		
BOCG60 1 PT6G1T	Entrepreneur ship Development (AOC) Print plant	CO1 CO2 CO3 CO1	SEMESTER 6To have a practical insight for becoming an entrepreneur.To familiarize with the latest programs of the governmentauthorities in promoting small and medium industries.To impart knowledge regarding how to start new ventures.To get a clear idea about Printing plant layout.To be able to make costing & astimation in printing		
BOCG60 1 PT6G1T	Entrepreneur ship Development (AOC) Print plant layout, Costing &	CO1 CO2 CO3 CO1 CO2	SEMESTER 6 To have a practical insight for becoming an entrepreneur. To familiarize with the latest programs of the government authorities in promoting small and medium industries. To impart knowledge regarding how to start new ventures. To get a clear idea about Printing plant layout. To be able to make costing & estimation in printing materials		
BOCG60 1 PT6G1T	Entrepreneur ship Development (AOC) Print plant layout, Costing & Estimation	CO1 CO2 CO3 CO1 CO2	SEMESTER 6 To have a practical insight for becoming an entrepreneur. To familiarize with the latest programs of the government authorities in promoting small and medium industries. To impart knowledge regarding how to start new ventures. To get a clear idea about Printing plant layout. To be able to make costing & estimation in printing materials		
BOCG60 1 PT6G1T PT6G2T	Entrepreneur ship Development (AOC) Print plant layout, Costing & Estimation Print	CO1 CO2 CO3 CO1 CO2	SEMESTER 6To have a practical insight for becoming an entrepreneur.To familiarize with the latest programs of the governmentauthorities in promoting small and medium industries.To impart knowledge regarding how to start new ventures.To get a clear idea about Printing plant layout.To be able to make costing & estimation in printingmaterialsTo understand the concepts of scheduling and its		
BOCG60 1 PT6G1T PT6G2T	Entrepreneur ship Development (AOC) Print plant layout, Costing & Estimation Print Production	CO1 CO2 CO3 CO1 CO2 CO1	SEMESTER 6To have a practical insight for becoming an entrepreneur.To familiarize with the latest programs of the governmentauthorities in promoting small and medium industries.To impart knowledge regarding how to start new ventures.To get a clear idea about Printing plant layout.To be able to make costing & estimation in printingmaterialsTo understand the concepts of scheduling and its importance in the printing Industry.		
BOCG60 1 PT6G1T PT6G2T	Entrepreneur ship Development (AOC) Print plant layout, Costing & Estimation Print Production Management	CO1 CO2 CO3 CO1 CO2 CO1 CO1	SEMESTER 6To have a practical insight for becoming an entrepreneur.To familiarize with the latest programs of the governmentauthorities in promoting small and medium industries.To impart knowledge regarding how to start new ventures.To get a clear idea about Printing plant layout.To be able to make costing & estimation in printingmaterialsTo understand the concepts of scheduling and itsimportance in the printing Industry.To attain complete knowledge of the various applications		
BOCG60 1 PT6G1T PT6G2T	Entrepreneur ship Development (AOC) Print plant layout, Costing & Estimation Print Production Management	CO1 CO2 CO3 CO1 CO2 CO1	SEMESTER 6To have a practical insight for becoming an entrepreneur.To familiarize with the latest programs of the governmentauthorities in promoting small and medium industries.To impart knowledge regarding how to start new ventures.To get a clear idea about Printing plant layout.To be able to make costing & estimation in printingmaterialsTo understand the concepts of scheduling and itsimportance in the printing Industry.To attain complete knowledge of the various applicationsof inventory and project, management with respect to the		

## **SKILL COMPONENT**

Name of the Programme: BVoc Sustainable Agriculture				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
SAG1S1T	Fundamentals of Agronomy	CO1	To enable the students to acquire knowledge on importance of agriculture.	
		CO2	To acquire knowledge on various types of farming.	
		CO3	To study the fundamentals of agronomy and classification of field crops.	
SAG1S1P	Fundamentals	CO1	To familiarize with cultivation aspects of cereals and millets.	
	of Agronomy - Practical	CO2	To familiarize with cultivation of pulses and tuber crops	
SAG1S2T	Fundamentals	CO1	To acquaint with importance of horticultural crops.	
	of Horticulture	CO2	To understand the basic principles and types of plant propagation.	
		CO3	To understand the division of and classification of crops	
SAG1S2P	Fundamentals	CO1	To develop skill in propagation of horticultural crops	
	of Horticulture - Practical	CO2	To develop skill in aspects of horticultural crops	
SAG1S3T	Fundamentals of Entomology and Insect	CO1	To familiarize with insect pests	
	ecology	CO2	To understand about the Insect ecology	
SAG1S3P	Fundamentals of Entomology	CO1	To develop skill in different IPM practices in insect pest management	
	and Insect ecology- Practical	CO2	To familiarize with insect morphology	
SAG1S11	Setting up of crop museum	CO1	To develop skill in setting up of a crop museum for major field crops	
	-		SEMESTER 2	
SAG2S1T	Plantation Crops,	CO1	To acquaint with the cultivation aspects of Plantation crops, spices and fruit crops.	
	Spices and Fruits	CO2	Management practices of crops gaining importance	
AG2S1P	Plantation Crops, Spices and Fruits- Practical	CO1	To acquire skill on cultivation aspects of Plantation crops, spices and fruit crops	
SAG2S2 T	Fundament- als of Plant	C01	To familiarize with the fundamentals of plant breeding.	
	and Seed technology	CO2	To familiarize with the basics of seed technology.	

SAG2S2P	Fundament- als of Plant Breeding	CO1	To familiarize with the botanical aspects of field crops.
	and Seed technology- Practical	CO2	To develop skill in various aspects of seed production.
SAG2S3T	Fundament- als of	CO1	To familiarize with fundamentals of water management.
	Agricultural Engineering	CO2	To acquaint with various soil conservation methods.
SAG2S3P	Fundament- als of	CO1	To familiarize with fundamentals of water management measures
	Agricultural Engineering -Practical	CO2	To acquaint with various soil conservation methods
SAG2S11	Cultivation of coconut	CO1	To develop skill and to get experience in the cultivation practices of banana.
	and banana	CO2	To develop skill and to get experience in the cultivation
		l	SEMESTED 2
SAC281T	Englamonta	COL	SEWIESTER 3
SAG3511	Is of Plant	COI	pathogens.
	Pathology	CO2	To acquaint with principles of crop disease management.
SAG3S1P	Fundamenta	CO1	To familiarize with the symptomatology of plant diseases.
	ls of Plant	CO2	To develop skill in preparing and using plant protection
	Pathology – Practical		chemicals and usage of plant protection equipments.
SAG3S2T	Protected cultivation of	CO1	To familiarize with protected cultivation
	Horticultural crops	CO2	To familiarize with structures and cultivation practices
SAG3S2P -	Protected cultivation of Horticultural crops- Practical	CO1	To practice with protected cultivation practices of important crops
SAG3S3T	Integrated Pest	CO1	To get aware about Important groups of microorganisms- bacteria
	management in crops	CO2	To get aware importance, hazards and limitations
SAG3S3P	Integrated Pest	CO1	To familiarize with groups of microorganisms-bacteria
	management in crops- Practical	CO2	To get familiarize with hazards and limitations
SAG3S4T	Plant	CO1	To familiarise with the physiological processes in plants.
	Physiology	CO2	To learn about plant nutrients and use of growth regulators.
SAG3S4P	Plant Physiology- Practical	CO1	To practise with the estimation of physiological parameters in plants
SAG3GI1	Cultivation of rice	CO1	To understand the sustainable cultivation aspects of rice under low land condition

SEMESTER 4				
Weed	CO1	To understand the general characters of weeds and their		
Management		management		
and Fodder	CO2	To acquaint with cultivation of rice, fibre crops, fodder		
crop		crops, etc.		
production	001			
Weed	COI	To familiarize with the general characters of weeds and their		
Management	CO2	management.		
and Fouder	02	rops ato		
production-		crops etc.		
Practical				
Livestock	CO1	To familiarize with fundamentals of livestock farming.		
Farming	CO2	To acquaint with the management of various farms.		
Livestock	CO1	To familiarize with practices in livestock farming.		
Farming-	CO2	To acquaint with the management of important farm		
Practical		animals and birds		
Farm Power	CO1	To acquaint with principles of farm machineries and their		
and		working		
Earm Douver	COL	To acquaint with principles of form machineries and their		
railli rowei	COI	working		
Machinery-		working		
Practical				
Commercial	CO1	To understand about Types of vegetable farming		
vegetable	CO2	To get a knowledge in Importance and scope of vegetable		
production		crops of India		
Commercial	CO1	To Familiarize with different vegetable crops		
Vegetable	CO2	To understand Main field preparation and planting of		
Practical		transplanted tropical vegetable crops		
Agricultural	CO1	To acquaint with use of farm machineries in field.		
Engineering	CO2	Main field preparation, transplanting, nutrient management,		
- Farm Machinery		weed management etc.		
widenmery	<u> </u>	SEMESTER 5		
Landscape	CO1	To get awareness on designing and laving out of a		
designing		landscape.		
and indoor	CO2	To familiarise with different types and features of garden.		
gardening				
Landscape	CO1	To develop skill in planning and planting of garden lawn.		
designing				
and indoor	CO2	To develop skill in preparation of different types of gardens		
gardening -				
Practical	CO1	To understand various commercial externizes in activational		
Enterprises		ro understand various commercial enterprises in agricultural		
Enterprises	$CO^{2}$	To know about agricultural field visits and presentation		
Commercial	C02	To develop awareness on bee keeping sericulture and lac		
Enterprises-		culture through observation, field visit and reporting		
Practical	CO2	To develop skill in cultivation of edible mushrooms and to		
		develop skill in dry flower production and bouquet making.		
	WeedManagementand FoddercropproductionWeedManagementand Foddercropproduction-PracticalLivestockFarming-PracticalFarming-PracticalFarm PowerandMachinery-PracticalCommercialvegetableproduction -PracticalCommercialvegetableProduction -PracticalCommercialvegetableProduction -PracticalLandscapedesigningand indoorgardening -FarmMachinery-Practical	WeedCO1ManagementCO2and FodderCO3productionIManagementIand FodderCO1ManagementIand FodderCO2cropIproduction-PracticalPracticalCO1FarmingCO1Farming-CO2PracticalCO1Farming-CO2PracticalCO1andCO2PracticalCO1andCO1andCO1andCO1andCO1andCO1Machinery-CO1PracticalCO1andCO1Nachinery-CO1PracticalCO1PracticalCO1PracticalCO1PracticalCO1Agricultural Agricultural EngineeringCO1Agricultural and indoorCO1Gommercial 		

SAG5S3T	Fundamenta ls of organic	CO1	To familiarize with the concept of sustainability and sustainable development.
	farming	CO2	To acquaint with the fundamentals of organic farming.
		CO3	To have the knowledge about the organic certification
			procedures.
SAG5S3P	Fundamenta	CO1	To familiarize with the production and utilization of
	ls of organic		biofertilizers and biocontrol agents.
	farming-		
	Practical		
			SEMESTER 6
SAG6S1T	Agro	CO1	To study various meteorological aspects in relation with crop
	Meteorology		production
SAG6S1P	Agro	CO1	To study the practical meteorological aspects in relation with
	Meteorology		crop production
	-Practical		
SAG6S3T	Disease	CO1	To understand the sustainable disease management strategies
	Management		in plantation crops and spices.
	in Crops	CO2	To understand the sustainable disease management strategies
	_		in vegetables, fruits and field crops.
AG6S3P	Disease	CO1	To familiarize with the major diseases in plantation crops,
	Management		spices,
	in Crops –	CO2	To familiarize with the major diseases in vegetables, fruits
	Practical		and field crops.
SAG6S11	Agricultural	CO1	Setting up a polyhouse for seedling production with drip
	engineering		irrigation facility
		CO2	Setup a hardening unit with mist propagation in farmers field
			as a part of earn while you learn programme.
SAG6GP1	Project/Diss	CO1	To train students to improve agricultural productivity.
	ertation	CO2	To find jobs in both public and private sectors

Name of the Programme: BVoc Food Processing Technology				
Course Code	Course Title	Course Outcomes		
	L		SEMESTER 1	
FPT1S1T Basic Principle of Food Processin	Basic Principles	CO1	To deliver a sequence of steps to produce an acceptable and quality food product from raw materials	
	of Food Processing	CO2	Study of scientific and technological advancements in food processing	
FPT1S2T	Basic Principles of Food Preservation	CO1	To enable the students to acquire knowledge on different preservation techniques used to enhance the shelf span of food product	
		CO2	To study the different mode of spoilage in foods and minimize the contamination by different preservation technology	
FPT1S3T	Food	CO1	To acquaint various functional chemical constituents of food	
	Chemistry	CO2	To build a relationship between the dynamic forces of food and the dynamic forces of digestion and growth	

FPT1S3P Food Chemistry	CO1	To test the presence of carbohydrates and proteins in food samples	
	Practical	CO2	To estimate the nutrients in different food samples
FPT1S1I	Internship/	CO1	To develop basic skills of food processing.
	field work	CO2	To expose to a particular job, profession or an industry.
		CO3	To gain skills that can be applied to future jobs
	I	005	SEMESTER 2
FPT2S1T	Food	CO1	To attain knowledge regarding the use of additives in the
	Additives	001	food industry, laws related to food additives and to prevent the involuntary infringement of analytical procedures
FPT2S2T	Basic	CO1	Students will be able to apply material balances and energy
	Principles		balances to the field of food engineering.
	Of Food Engineering	CO2	Students will be able to understand equipment used in the food industry
FPT2S3T	Basic	CO1	Acquire an elementary knowledge about micro organisms.
	Micro- biology	CO2	Develop an understanding of industry and in maintenance of health
FPT2S3P	Basic Micro- biology -	CO1	To study the basic rules and requirements of a microbiology laboratory
	Practical	CO2	Give emphasis towards the preparation of biological stains, reagents, media and their composition.
		CO3	To get thorough different methods for staining of microorganisms.
FPT2S1I	Internship/	CO1	To develop basic skills of food processing
	field work	CO2	To expose to a particular job, profession or an industry.
		CO3	To gain skills that can be applied to future jobs
	P	1	SEMESTER 3
FPT3S1T	Food	CO1	To study the design of food process and food plant design,
	Processing	$CO^{2}$	based on the established chemical process designed.
	Widemineries		unit operations of mechanical processes.
FPT3S2T	Bakery And Confection-	CO1	To highlight the processing methods used in confectionary and culinary industries.
	Technology		
FPT3S3T	Food	CO1	To understand different sampling techniques employed in
	Analysis		chemical analysis of foods.
	and	CO2	To learn various chemical methods of food analysis.
	Adulter-	CO2	To be familiar with adultaration test used for quality control
	Testing	05	To be familiar with additeration test used for quality control.
FPT3S4P	Food	CO1	To learn various processing aspects of food products having
	Product		economic importance.
	Developme		
FPT3S5T	Fats and Oil	CO1	To understand various aspects of oil processing technology
1115651	Processing		employed in food industry.
	Technology	CO2	To learn various chemical and packaging of oils.
FPT3S6T	Cereals and	CO1	To give a general outline about the principles, structure and
	Pulses		composition, economic importance and storage of different
	Technology		cereals, pulses and their products.

FPT3S1I	Internship/	CO1	To develop basic skills of food processing
	field work	CO2	To expose to a particular job, profession or an industry.
		CO3	To gain skills that can be applied to future jobs.
			SEMESTER 4
FPT4S1T	Dairy	CO1	To know the importance of milk as an agricultural
	Technology		commodity.
		CO2	To be innovative in exploring various traditional and
			nontraditional milk products.
FPT4S1P	Dairy	CO1	To analyze the chemical constituents of milk as an
	Technology	<b>G</b> 00	agricultural commodity.
	-Practical	CO ₂	To be innovative in exploring various traditional and
	Mast Eich	CO1	nontraditional milk products.
FP14521	meat Fish	COI	To provide an extensive description of meat, fish and
	Processing	$CO^{2}$	To introduce the latest technologies manufacturing
	Technology	02	processes and tools for effective control of safety and quality
	reennology		during processing
FPT4S3T	Fruit and	CO1	To acquire knowledge about the selection of fruits for
	Vegetable		processing and value addition.
	Processing	CO2	To introduce the latest technologies, manufacturing
	Technology		processes and tools for effective control of safety and quality
			during processing.
FPT4S3P	Fruit and	CO1	To be innovative in exploring various processed and value
	Vegetable		added from agricultural commodities.
	Processing		
	Technology		
	-Practical	CO1	To an instant the basics of martine and internal for dianal
FP14541	Functional Foods And	COI	foods
	Neutraceuti	$CO^2$	To study the significance of neutraceuticals and their role in
	cals	002	disease prevention
	Cuis	CO3	To identify new strategies for marketing of traditionally
			known neutraceuticals.
FPT4S1I	Internship/	CO1	To develop basic skills of food processing
	field work	CO2	To expose to a particular job, profession or an industry.
		CO3	To gain skills that can be applied to future jobs
			SEMESTER 5
FPT5S1T	Food	CO1	To be familiar with different methods and materials used for
	Packaging		packaging.
		CO2	To understand the technology behind packaging.
FPT5S2T	Technology	CO1	To enable the students to get an up to date knowledge about
	of Beverages		fermented foods and beverages.
FPT5S3T	Drying	CO1	To be familiar with different methods of drying.
	Technology	CO2	To understand the technology behind drying.
FPT5S11	Internship/	C01	To develop basic skills of food processing
	field work	$CO_2$	To expose to a particular job, profession or an industry.
		03	To gain skills that can be applied to future jobs.
		COL	SEIVIESTER O
FPT6SIT	Analytical	COI	10 know the principles and applications of different
	Food	CO2	To gain knowledge about different instruments used in feed
	Processing	02	10 gain knowledge about different instruments used in food
	r rocessing.		anarysis.
FPT6SIP	Analytical Methods in	CO1	To gain knowledge about different instruments used in food analysis.
---------	--------------------------	-----	----------------------------------------------------------------------
	Food		
	Processing-		
	Practical		
FPT6S3	Entrepreneu	CO1	Understand the significance of entrepreneurs in the
Т	rship		development of a country.
	Developme	CO2	Familiarise with procedures and legal issues involved in
	nt		setting up an enterprise.
		CO3	Get motivated to become an entrepreneur.
FPT6S1I	Internship/	CO1	To develop basic skills of food processing
	Field work	CO2	To expose to a particular job, profession or an industry.
		CO3	To gain skills that can be applied to future jobs.
FPT6SP1	Project/Diss	CO1	To train students to develop new products and to familiarize
	ertation		with physical, chemical and biological analysis.
		CO2	To find jobs in public and private sectors
		CO3	To get an on job training in various food industries.

Name of	Name of the Programme: BVoc Printing Technology				
Course	Course	Cours	se Outcomes		
Code	The				
	1		SEMESTER 1		
PT1S1T	Fundament-	CO1	To enable the students to acquire knowledge on importance		
	als of		of printing and various types of Printing Technologies.		
	Printing	CO2	To study the fundamentals of printing, machines, materials		
	Technology		and packing.		
PT1S2T	Graphic	CO1	To introduce the study of design as a decision making		
	Design and		discipline which controls all the production aspects of		
	Reproduction		printing techniques.		
		CO2	To acquire Knowledge of Typography, colours, optical		
			science like reflection, transmission, photographic concept,		
			optical density.		
		CO3	To acquire Knowledge in Printing processes and different		
			printing products.		
PT1S2P	Graphic	CO1	To gain skill to use the digital tools		
	Design and	CO2	To know communication for creation, modification &		
	Reproduction		presentation.		
	- Practical				
PT1SV1	Vocational	CO1	To improve vocational skills in students.		
	Workshop-I	CO2	To familiarize with principle of different systems, their		
	(Pre-Press		technology in printing industry.		
	Software				
	Lab)				
			SEMESTER 2		
PT2S1T	Printing	CO1	To acquire a good knowledge and skills of using printing		
	Material		materials like substrates-paper, polymer, foils etc. ink,		
	Science		consumables etc. These materials have different		
			characteristics and properties.		

		CO2	The subject deals with the materials and its science involved
DEAGAE	<b></b>	001	in testing and application.
PT2S2T	Printing	COI	To develop a deep knowledge in sheet fed offset machine.
DTAGAD	Machineries	CO2	To understand Web Offset Press
P12S2P	Printing	COI	To develop a practical knowledge in Sheet fed
	– Practical	02	To know web offset machines
PT2SV1	Vocational	CO1	To impart a good knowledge and skills in web offset printing
	Workshop-		machines
	II (sheetfed		
	& webfed	CO2	To get knowledge in offset operational units.
	Offset Drinting)		
	Filling)		SEMESTER 3
PT3S1T	Digital	CO1	To be able to describe various process of digital printing
113511	Technology	$\frac{cor}{cor}$	Describe shout consumplies required for the process
DT201D	Distal	C02	To familiarize with various gradess of digital minting
P1551P	Digital	COI	To familiarize with various process of digital printing.
	- Practical	CO2	To familiarize printing consumables.
PT3S2T	Printing	CO1	To be able to describe various process of Printing Image
	Image		Generation
	Generation	CO2	To have an idea in Flexographic plate preparation
PT3SI1	Industrial	CO1	To expose the students to actual working environment.
	Training-I/	CO2	To enhance knowledge and skill from what learned in the
	Apprentices	002	college.
	hip		
	-		SEMESTER 4
PT4S1T	Print	CO1	To know various finishing operations, equipments.
	Finishing		
	and	CO2	To have good knowledge in Quality control and use of
	Converting	~ ~ .	consumables.
PT4S1P	Print Finishing	CO1	To familiarize with various finishing equipments, Quality
	and	CO2	To have experience in the use of consumables.
	Converting	001	
	– Practical		
PT4S2T	Gravure &	CO1	A better understanding of different gravure printing
	Non Impact	<b>~</b> ~~	machines, their operational units.
	Printing	CO ₂	To develop awareness about various digital work flows and
	Technology	CO2	To import on idea about the various scope and Developments
		COS	of printing technology
PT4S3T	Flexography	CO1	To create an understanding of features & application of
	and Screen		Flexography
	Printing	CO2	To explain Screen printing technologies.
PT4S3P	Screen	CO1	To familiarize with features of Screen printing equipments
11001	Printing	CO2	To familiarize with application of Screen printing
	Technology		equipments.
	- Practical		

PT4SI1	Industrial	CO1	To expose the students to actual working environment.
	Apprentice	CO2	To enhance knowledge and skill from what learned in the
	ship		college.
			SEMESTER 5
PT5S1T	Specialty	CO1	Students will be able to know specialty items special
	and		equipments and adjustment of machineries.
	Security	CO2	To understand Security printing in packaging
	Printing		
PT5S2T	Printing	CO1	To make the students understand about mechanism,
	Machine		maintenance and relevant technical specification of various
	Maintenance		machines in the printing industry.
		CO2	To provide necessary information about various machines
			along with repair and maintenance of these machines.
PT5S2P	Printing	CO1	To provide necessary practical exercises with print
	Machine		machineries
	Maintenanc	CO2	To provide print machineries repair and maintenance.
DTTCOLL	e- Practical	001	
PT5SII	Industrial	COI	To expose the students to actual working environment.
	Training-III/	CO2	To enhance knowledge and skill from what learned in the
	Apprentice-		college.
	snip		
DECOM	<b>D</b> 1 ·	<b>G</b> 01	SENIESTER 6
PI6SIT	Packaging	COI	To impart basic knowledge of packaging technology to
	Technology		enable the student to apply the same in his professional
		<u> </u>	career.
	D 1 '	$CO_2$	To know the basics of Modern Food Packaging
PI6SIP	Packaging	COI	To Know about designing and preparation of package
	Dreatical	CO2	designs.
	- Practical	02	To Study the operation of various packaging machines.
PT6SMP1	Major	CO1	To develop the ability to solve a specific problem right from
	Project		its identification and literature review till the successful
	5		solution of the same.
		CO2	To have a training in preparing project reports and to face
			reviews and viva voce examination.
		CO3	To have deepen comprehension of principles by applying
			them to a new problem which may be the design and
			fabrication of a device for a specific application, a research
			project with a focus on an application needed by the
			industry/ society, a computer project, a management project
			or a design project.

Name of the Programme: MA English				
Course Code	Course Title	Course Outcomes		
			SEMESTER 1	
PC 1	Chaucer and the Roots of	CO1	To provide the student with knowledge of the growth of English language and literature up to the age of Chaucer.	
	English	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	CO1	To introduce the English Renaissance and the texts that shaped it/were shaped by it.	
Renaissance	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		
	Enlightenment	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	Literary Criticism and	CO1	To familiarize the students with the key concepts and texts of literary criticism ever since its emergence	
	Academic Writing	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	CO1	To introduce the student to the developments in literature
100	the	COI	written in English since the 1060s
	uie Destra derm	CO2	To have an invisit into the approximental and matronalitan
	Posunouem	02	To have an insight into the experimental and metropolitan
DC 0	T	CO1	The investories the new iteration and the basis
PC 9	Language and	COI	To inculcate in the pupils awareness about the basic
	Linguistics	000	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	CO1	To introduce literary theory and its latest developments to
	Knowledge		students.
			SEMESTER 3
PC 11	American	CO1	To introduce the most important branch of English
	Literature		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	CO1	To introduce students to the terms, analytical
	Studies		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	CO1	To make the student familiar with the emergence and
	Studies		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
		001	creative works that define and redefine the concept
			as it is understood in contemporary society.
PC 14	Modes of	CO1	To familiarise the student with the various modes of
1011	Fiction	001	narrative fiction attempted across centuries continents
	i ietion		and languages
		$CO^2$	To introduce the various schools, influences and narrative
		002	devices that shaped parrative fiction in its present form
PC 15	Texts and	CO1	To facilitate an understanding of the basic structural and
1015	Performance	COI	thematic patterns that governs the poetic process
	renormance		especially in its relation to the performative or the
			theatrical
		$CO^2$	To introduce Marginalized theatres issues like gender
		02	ethnicity etc
		CO3	To discuss the development of theatre from classical
		005	times Anti Aristotalian notions like Alianation Effect
			the Indian notion of Pass atc
DC 16	T iterate 1	CO1	SEIVIESTER 4
PC 10	Literature and	COI	10 introduce the students to the discursive nature of
	the Empire		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	CO1	To familiarize the student with modern European Drama
	European		in terms of topics, perspectives, and dramatic literature.
	Drama	CO2	To revisit the ideological foundations of modernism.
PE02	Shakespeare	CO1	To situate the timeless genius of Shakespeare across
	across		cultures, literatures and authors.
	Cultures	CO2	To address the impact of Shakespeare at the theoretical
			and textual levels.
PE08	The Indian	CO1	To familiarize the students with the major texts of the
	Poetic		Indian tradition in the light of Indian poetic principles.
	Tradition	CO2	To introduce the eight major schools of Indian Aesthetics.
PE 09	Modern	CO1	To introduce the student to a selection of European
	European		fiction spanning the second half of the nineteenth century
	Fiction		and the twentieth century.

Name of the Programme: MA Malayalam				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
ML010101	Kavitha	CO1	To identify developments of poetry from medieval	
	Pracheenam	CO2	Realize aesthetics of oral poetry	
	Madhyakala			
	m			
ML010102	Malayala	CO1	Recognize history of Malayalam through critical attitude	
	Bhasha	CO2	Recognize the relation of social development and mother	
	Charithra-		tongue	
	vum Vartha-			
NI 010102	manavum	001		
ML010103	Malayala	COI	Realize evolution and development of Malayalam short	
	Cherukatha	CO2	Story as a narralive	
		02	stories	
ML010104	Sahithya	CO1	Introducing Stylistics in world narratives	
	Rachana	CO2	Recognize different meters in Malayalam poetry	
	Sanketha-			
	ngal			
MI010105	Sanskrit	CO1	Create an opportunity to study aesthetics of Sanskrit in	
			the same	
		CO2	Recognize many aesthetic attitudes of Sanskrit	
			SEMESTER 2	
ML010201	Adhunika	CO1	To identify the changes of Malayalam poetry in the half	
	Malayala		of nineteen century	
	kavitha	CO2	Realize the influence of renaissance in Malayalam	
	onnam		literature	
	gattam			

ML010202	Bhasha	CO1	Analyze Malayalam language on the basis of linguistic
	Sasthram	<u> </u>	discourse Dealing drawedian Longwage on the basis of disharmetic
		02	age
ML010203	Kerala	CO1	Realizing different movements in ages
	Culture	CO2	Enquiring about marginalized studies
ML010204	Malayalam	CO1	Realizing the process of evolution of prose in Malayalam
	Novel	CO2	Realizing growth of theoretical devices n Malayalam
			prose
M1010205	Bharatheeya	CO1	Make an evaluation about analyzing aesthetic theories of
	Sahithya		ancient India
	Sidnanthang	CO2	Promote an interest in interdisciplinary theoretical
	ai	<u> </u>	CEMESTED 2
ML 010201	A 11 '1	CO1	SEMIESTER 3
ML010301	Adhunika	COI	Realize modernity in Malayalam poetry
	Kavitha	02	Realize cultural difference in post modern poetry
	Randam		
	gattom		
ML010302	Malavala	CO1	Acquiring knowledge of critical thinking in Malayalam
	Bhasha		Grammar
	vyakaranam	CO2	Compare and identify the problems of mile stones in
	Malayala		Malayalam grammar
	Cherukatha		
ML010303	Malayala	CO1	Realize evolution and development of Malayalam
	Niroopanam		criticism
		CO2	Inculcate creativity in criticism
ML010304	Drishyakala	CO1	Evaluate different visual arts such s folklore and
	Sanitnyam	CO2	classical arts
M1010305	Deschathya	C02	Make an awareness ancient western philosophy from
MI010303	Sahithya	COI	Greek
	Sidhanthang	CO2	Realize historical events in the development of new
	al	002	philosophical thoughts
		1	SEMESTER 4
ML010401	Nadakayum	CO1	Make an enquiry about human aspects and social reality
	cinimayum		narrated in visual arts
	-	CO2	Make a detailed study of history and aesthetics of visual
			arts
ML010402	Sahithya	CO1	Make an evaluation of the ideology of historical
	charithra		Narrations
	and	CO2	Make a critical thinking about narration of history in
	methodology		Malayalam
ML800401	Vivarthana	CO1	Make a general awareness of translations in Malayalam
	Sahithyam	CO2	Inculcate an attitude towards translations
ML800402	Dalit stree	CO1	Realize post modernism as a diversity of dalit and so on
	paristhithi	CO2	Make an invention about marginalized literature
	sahithya		
	vicharam		
ML800403	Cyber	<u>CO1</u>	Recognize the importance of cyber aesthetics
	samskaravum	CO2	Appreciate different faces of cyber literature
	sanithyavum		

Name of the Programme: MA Hindi				
Course Code	Course Title	Cours	se 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.	
		03	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	CO1	To develop an outlook about the ancient history of Hindi literature.	
	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 Poety –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	Fiction up to	CO1	To make students familiar with novel and stories	
07	1950.	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	History of	CO1	To make the students familiar with ancient and modern
PC08	Litoroturo	<u> </u>	To develop an authentic knowledge about the
	Literature	02	development of literature
		CO3	To familiarize with great writers and their thoughts and
		005	nhilosophy
HN2	History and	CO1	To understand the principles and assumptions governing
PC09	Structure of	COI	modern linguistics
1009	Hindi	$CO^2$	Student will be able to understand the process of language
	Language.	002	change and variation the role of languages in reflecting
	88		and constructing social identities.
		CO3	To understand the classification of language and the
			development of Hindi language and lipi.
HN2	Bharatheeya	CO1	To create an ability in the students to analyse and
PC10	Kavya Sastra		understand Kavya and its definition.
	aur Hindi	CO2	Students will learn many notable works of criticism
	Alochana.		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	Aadunik	CO1	To make aware of the Hindi poets through analyzing their
11	Kavitha -I		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
		<b>2</b> 01	major texts in a formal academical way.
HN3 PC	Katha	COI	To make students familiar with novels and stories.
12	Sahitya-II	CO2	The study of significant writers like Premchand ,Agneya
		002	strengthens the moral and human values of the students.
LINI2	Dhanathaarra	C03	To understand and appreciate Hindi prose
PC13	Sahithya	COI	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	Translation	CO1	To understand the principles and assumptions governing
PC14	Studies	<b><i><i>त</i></i></b>	modern linguistic.
		CO2	To use new technology like internet and computer in
		<u> </u>	learning language and acquiring skills
		003	of translation
HN3	Paschathya	CO1	To study the development of western poetics
PC15.	Kavya Sastra	CO2	Students will be able to understand western theoreticians
1 0 101		002	from Plato to Deride.
		CO3	Students will be able to understand the development of
			western poetics.
			SEMESTER 4
HN4 PC	Aadunik	C01	To experience the various dimensions in the content and
16	Kavitha–II		form of the poetry of this period
		CO2	The students could familiarize and enjoy the aesthetic and
			sociological scenario of Post-Independent Hindi poetry.
		1	

		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-	CO1	To make the students familiar with the famous author Nirmal Varma and his works.
	Nirmal Varma	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-	CO1	To make the students familiar with Bhishma Sahnee and his novel and drama.
	Bhishma Sahnee	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-	CO1	The students will have clear idea about the multi- dimensional literary works Agneyaa.
	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	Course Title	Cours	e Outcomes
Code			
		SE	CMESTER 1
ECOPGS1	Micro Economics	CO1	IT enables the student in taking rational buying
1	Theory of Consumer		decisions and also helps a firm to design suitable
	Behavoiur & Firm		marketing strategies
ECOPGS1 2	Macro Economic	CO1	integrating theoretical knowledge to evaluate policy
	Theory and Policy		measures and analyze the trade off in the
			deployment of resources to alternative ends
ECOPGS1 3	Indian Economy:	Co1	It provides the students with a critical thinking of the
	<b>Issues and Policies</b>		Indian economy so that they may be able to engage
	- I		meaningfully in debates regarding the country's
			economy
ECOPGS1 4	Economics of	CO1	It aims to develop conceptual clarity on the issues on
	Development and		the dimensions of development and to identify the
	Growth –I		strategic factors in the development of the less
			developed countries.

		SE	CMESTER 2
ECOPGS2 6	Microeconomics Markets, Information and	CO1	It helps the students to develop skill in formulating business strategy in the context of market imperfections.
	Welfare	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.
		SE	MESTER 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.
		02	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	analysis and interpretation of data.
ECOPGS3 14	Economics of Environment and	CO1	It provides the theoretical foundations of environmental economics.
	Social Sector	CO2	It makes the students to understand the theory and practice of sustainable development

		1	
		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	Monetary Theory	CO1	It enables the students to understand the basic
15	and Policy		concepts regarding money and the functioning of a
			pecuniary economy and capacitates the students to
			have a thorough understanding of the various
			theoretical approaches.
		SI	EMESTER 4
ECOPGS4	Global Trading	CO	The course provides a deep understanding about the
16	and Monetary		broad principles and theories which tend to govern
	System		the free flow of trade in goods, services and capital
			–both short term and long term at the global level.
ECOPGS4	Indian Public	CO1	It makes the students aware of the emerging trends
17	Finance		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	Management	CO1	It makes the students to acquaint with management
18	Theories and		techniques that prevail in the corporate world.
	Practice	~ ~ ~ ~	
		CO2	This exposes the students to a variety of skills and
FGODGGA		001	concepts in management.
ECOPGS4	Capital Market	COI	It enables the students to understand the basics of
19			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
FRODERA		<b>G</b> 01	various investment instruments.
ECOPGS4	Economics of	COI	This course intends to provide the students a
20	Agriculture		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	CO1	The students will be able to demonstrate knowledge of significant political ideas since the time of the Greek City-states to Renaissance Europe.	
	Medieval Traditions	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 Adminis : Theory Concept	Public Administration	CO1	Students will understand the major theories and concepts of public administration.	
	: Theory and Concepts	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	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.	
	Relations	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:	CO1	Students will be able to demonstrate the ability to identify the dominant political discourses on
	Modern Traditions		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
			SEMESTER 3
PSS3CO11	Political	CO1	The study of Indian traditions in political thought will
	Thought:		enable students to acquire insights useful for
	Indian		understanding contemporary Indian society and
	Tradition	CO2	They will be equipped with the tools of analysis to
		002	comprehend the wide spectrum of Indian traditions in
			political thought from ancient times.
PSS3CO12	State and	CO1	At the end of the course students will develop a
	Politics of		comprehensive knowledge about Kerala society, polity
	Kerala	~ ~ ~ ~	and economy.
		CO ₂	The course will equip students with the necessary
			society.
PSS3CO13	Human Rights	CO1	On completion of the course students will be able to
	in India		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	Decentralisatio	CO1	Students will be equipped to understand and
	n and Local		demonstrate knowledge about the processes of
	Governance		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
Dagagois	<b>D</b>	001	grassroots level.
PSS3C015	Research	COI	Students will gain an understanding of major methods
	Methodology		quantitative and qualitative research techniques.
	I	1	SEMESTER 4
PSS4CO16	India's Foreign	CO1	At the end of the course students will be able to
	Policy		critically evaluate India's foreign policy and its
		$CO^{2}$	They will be aquipped 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
			instory and development of mula's foreign policy.
PSS3CO15 PSS4CO16	Research Methodology India's Foreign Policy	CO2 CO1 CO2 CO3	<ul> <li>They will be able to analyse decentralised planning and development, and explain contemporary issues and challenges in the implementation of decentralised governance and development.</li> <li>They will also be able to think critically about the Panchayat raj system and its operations at the grassroots level.</li> <li>Students will gain an understanding of major methods of Political Science research and be able to utilise both quantitative and qualitative research techniques.</li> <li>SEMESTER 4</li> <li>At the end of the course students will be able to critically evaluate India's foreign policy and its engagements with the international system.</li> <li>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.</li> <li>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.</li> </ul>

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 Postmodernis m	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	Course Title	Course Outcome		
Code				
	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	CO1	The students to be knowledgeable about the processes of social transition from one formation to another and the characteristic features of each formation.
	Societies in Indian History	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	CO1	To enabling conceptualization of society in terms of formations or systems.
	Kerala till the End of Perumal Rule	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.
	1000	CO2	It is intended to be an 'in-depth study of the various aspects revenue extraction
HISPGC 5	History of Social	CO1	To provide good awareness about the major social revolutions of the modern world.
	Revolutions in the World	CO2	The focus is on the linkage between the socio- economic revolutions of the modern world
			SEMESTER 2
HISPGC 6	History of Social	CO1	To focus on the history of institutions and structures of early societies in the subcontinent.
	Institutions and Structures of Early India	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.	CO1	To enable the students to grasp the interconnectedness of social aspects and develop holistic perspective.
	A.D.1200 – 1800	CO2	To learn about the vaious social conditions prevailed in medieval Kerala
HISPGC 8	Agriculture, Crafts Production and	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.
	Exchange in India from c. AD 1000 to 1800	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	10 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	CO1	Through this course the students put emphasis on the
	Indian Nation:	<u> </u>	study of the historical process of the nation building.
	Historical	CO2	The purport is to gain knowledge about the Historical
	Antecedents		CEMESTED 2
		do1	SEMESTER 3
HISPGC 11	History and	COI	To emphasise students the fact that theory is indignonable for reading history seriously.
	Social Theory	$CO^{2}$	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	CO1	This course provides an indepth study that seeks to
	Revolts and		keep the student knowledgeable in the history of the
	Protest	<u> </u>	major Social revolts of modern Kerala.
	Movements in	CO2	The focus is on the linkage between the Socio
	Kerala		that engendered revolts and protects
	ixerata	CO3	To provide the students insights into the condition that
		005	makes dissents, protest and reforms possible
HISPGC 13	State and	CO1	To learn about the structure, composition and pattern
	Society in		of power relations that the state under the Sultanate of
	India c.AD		Delhi and Mughal Empire presented.
	1000 -1800	CO2	To enable the students to learn the correspondence as
			well as interface between the social relations of power and the state's neuron structure
HISPGC 14	Methods or	CO1	To provide the students the methods of research is the
	Techniques of	001	basic tools and techniques of research as distinguished
	Research		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
HISPGC 15	Knowledge	CO1	To enable the students to gain preliminary access to
	Systems in	COI	the indigenous knowledge systems of India.
	Pre-modern	CO2	To acquaint the students with the traditional
	India		knowledge form of Indian subcontinent in the most
			demystified manner.
		CO3	To analyse pre modern and present knowledge systems
		GOA	of India
		CO4	Identify the ancient semantic tradition
		COS	students will be able to examine the philosophical and religious tradition
	l		SEMESTER 4
HISPGELE	Ancient	CO1	To enable the students to gain in depth knowledge
16	Society		about very ancient societies in terms of their
	Society		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	Economic	CO1	To seek provide the students a fairly good
17	History of		understanding about the historical roots of Indian
	Modern India		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	Landmarks in	CO1	To investigate and make the student to look into the
18	Environmental		historical perspective of environmentalism and its
	History of		influence in the global and Indian scenario.
	India	CO2	It also tries to address various issues related to
			environment.
HISPGELE	History of	CO1	To provide a better understanding of the various
19	Human Rights		concepts, ideas and history of human rights.
	Movements in	CO2	To provide an insight into different human rights
	India		movements in India.
HISPGELE	Contemporary	CO1	To keep the students knowledge about the
20	India, Society		contemporary socioeconomic processes. It addresses
	and Economy		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	Course	Cours	se Outcomes	
Code	Title			
			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	CO1	Introducing measure as generalization of length
	Theory and	CO2	To introduce measure theoretic integration.
Integ	Integration	CO3	To introduce signed measures and its applications.
		CO4	To introduce product measures.
MT01C04	Graph	CO1	Logical, systematic framework within which ordinary
	Theory		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	CO1	To introduce complex numbers as points on a sphere.
	Analysis	CO2	To study power series of complex functions.
		CO3	Introduce complex integration to understand analytic
			functions in a better way.
	1	T	SEMESTER 2
MT02C06	Abstract Algebra	CO1	To acquire knowledge about algebraic structures like groups, rings, integral domains and fields.
	U	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	CO1	To introduce products in arbitrary space.
	Topology	CO2	To make familiar with embedding and metrisation and
	1 00	002	different types of compactness.
		CO3	Introducing nets as a generalization of sequences.
MT02C08	Advanced	CO1	To study harmonic functions and its applications.
	Complex	CO2	To study Gamma functions and entire functions in detail.
	Analysis	CO3	To introduce the product development and normal
	-	000	families.
		CO4	To introduce elliptic functions
MT02C09	Partial	C01	To introduce Partial differential equations for solving
11102009	Differential	COI	real life situations.
	Equations	CO2	To study different methods of solution of PDE
	1	CO3	To study non linear equations and families of equi-
			potential surfaces.
MT02C10	Real	CO1	Learn the theory of Riemann-Stielties integrals, to be
	Analysis		aquainted with the ideas of the total variation and to be
	2		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	Multivari-	CO1	Impart basic knowledge of differentiation and integration
	ate Calculus		in n-dimensional Euclidean space.
	and Integral	CO2	To discuss different types of integral transforms.
	Transforms	CO3	Applications in Mathematics and also bring the
		~ ~ .	confidence to handle real life problems.
MT03C12	Functional	CO1	On successful completion of this course, the students
	Analysis		will be able to appreciate how functional analysis uses
		<u> </u>	and unifies ideas from vector spaces and metric spaces.
		02	The learner will be able to identify various types of
			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
		005	functional analysis.
		COS	in functional analysis and related areas
MT03C13	Differential	CO1	To get an idea of application of real analysis in
	Geometry		geometry.
		CO2	To study geodesics and parallel transport.
		CO3	To introduce parametrized surface and study its basic
			properties
MT03C14	Number Theory and	CO1	Familiarize the concept of Finite Fields and Quadratic Residues
	Cryptograp-	CO2	Gets an idea of public key cryptography
	hy	CO3	To introduce the concept of Primality and Factoring in
			Number Theory
MT03C15	Optimiza-	CO1	To introduce programming to handle real life situations.
	tion	CO2	To introduce Goal programming and potentials in
	Techniques		networks.
		CO3	To introduce non-linear programming.
		CO4	Familiarize zero - sum games and strategies.
			SEMESTER 4
MT04C16	Spectral	CO1	The learners will be able to appreciate how functional
	Theory		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
			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	CO1	To introduce arithmetic functions and its application.
	Number	CO2	To study prime number theorem and distribution of
	Theory		primes.
		CO3	To study the application of congruence and quadratic residues and primitive roots for solving numerical problems.
MT04E02	Combinato- rics	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	Mathemati-	CO1	Understand the theory of consumer behaviour
	cal	CO2	Understand the role of production functions
	Economics	CO3	Study input-output analysis
MT04E07	Operations	CO1	Study Inventory Models
	Research	CO2	Understand the main topics in queuing systems
		CO3	Understand network sequencing problems and simulation modeling

Name of the Programme: MSc Statistics				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
ST0101101	Probability	CO1	Basic knowledge in measure theory and probability.	
	and	CO2	Problem solving skill	
	Measure Theory	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	CO1	Students are expected to well conversant with basics of linear Algebra	
	Statistics	CO2	Students are expected to well conversant with basics of linear Algebra Matrix theory.	
		CO3	Problem solving skill	
ST500103	Sampling	CO1	Course students are expected to be able to apply and use	
	Theory		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	CO1	Learn the basics in R programming		
	Computing	CO2	Programming skill		
	I-Using R	CO3	Complete the practical by the R software		
SEMESTER 2					
ST500201	Estimation	CO1	Expected to learn the basics of estimation theory		
	Theory	CO2	Problem solving skill		
		CO3	Decision making skill		
ST500202	Stochastic	CO1	Impart basic knowledge in Stochastic Models		
	Processes	CO2	Impart basic skills in Stochastic Models		
		CO3	Applications of Stochastic Models in Statistics.		
ST500203	Multi-	CO1	General knowledge of bivariate distributions in Statistics		
	variate	CO ₂	General knowledge of multivariate distributions in		
	Distri-	<u> </u>	Statistics		
	butions	003	Applications of multivariate distributions		
ST010201	Advanced	CO1	Ensure that the students are familiar with modern		
	Probability	<u> </u>	probability theory		
	Theory	CO2	Ensure that the students are familiar with related		
		$CO_{2}$	applications. Broblem solving skill		
ST010202	Statistical	C01	Make the student canable to do practical problems in more		
51010202	Computing	COI	advanced area of Statistics using R software		
	II Using R	CO2	Problem solving skill		
		CO3	Programming skill		
			SEMESTER 3		
ST500301	Testing of	CO1	Make the student understand the concepts of testing of		
	Hypotheses	001	hypothesis		
		CO2	Develop appropriate tests for testing certain Statistical		
			hypotheses.		
		CO3	Formulation of hypothesis		
ST500302	Design and	CO1	Students will be able to conduct experiment by using		
	Analysis of		appropriate design,		
	Experi-	CO2	To test related hypotheses and estimate the parameters		
	ments	CO3	Compare different designs and will be capable to use the		
			Analysis Covariance technique for data analysis		
ST500303	Multi-	CO1	Impart basic knowledge to the students in applied		
	variate		Multivariate Analysis		
	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	CO1	The student will be able to analyse time series data		
Ar	Analysis	CO2	Identify various types of behaviour of the time series.		
		CO3	Interpret various types of behaviour of the time series.		
ST010301	Statistical	CO1	Make the students able to handle practical problems in		
	Computing		testing of hypotheses		
	III–Using	CO2	Make the students able to handle practical problems in		
	R/SPSS/M		design and analysis of experiments		
	ATLAB	CO3	Make the students able to handle practical problems in the		
			multivariate techniques		

	SEMESTER 4				
ST500401	Econo-	CO1	handle models of econometrics and Mathematical		
	metric		Economics.		
	Methods	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	CO1	impart the practical skills in the students in the theories of		
	Computing		Econometrics		
	IV- Using	CO2	make them familiar with the software packages		
	R/SAS/MA	CO3	impart the practical skills in the students in the theories of		
	TLAB		other elective papers.		
ST800401	Operations	CO1	make the students able to deal with optimization problems		
	Research		and the mathematical theorey involved in them.		
		CO2	Problem solving skill		
		CO3	Decision making skill		
ST800402	Statistical	CO1	make the students aware of the modern quality assurance		
	Quality		techniques.		
	Control	CO2	make the students aware of the modern quality assurance		
			methods.		
		CO3	Decision making skill		
ST800403	Advanced	CO1	the basic Bayesian Inference methods		
	Bayesian	CO2	the basic Bayesian Inference computations using computer		
	Computing		packages.		
	with R	CO3	Decision making skill		

Name of the Programme: MSc Physics				
Course	Course	Cours	se Outcomes	
Code	Title			
			SEMESTER 1	
PH1CO1	Mathemati- cal methods	CO1	Implement essential mathematical skills to solve problems in Physics.	
	in physics – I	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.	
PH1C02 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	

PH1C03	Electro- dynamics	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
PH1C04	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	Mathematic al 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	Thermodyn amics and	CO1	Understand how statistics of the microscopic world can be used to explain the thermal features of the macroscopic world.
	statistical mechanics	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	CO1	Create a clear picture of crystal structures, x-ray diffraction, defects, magnetic and dielectric properties of solids etc.
	Physics	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	Computatio	CO1	Incorporate modern computation and visualization into the
1115010	nal physics		scientific problem-solving paradigm
	in projetes	$CO^2$	Learn how to interpret and analyze data visually both during
		02	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
		05	the use of modern scientific computing skills and tools
DU2EC1	Colid state	CO1	Transfer the knowledge level from theoretical physics
PHSECI	Physics	COI	subjects solid state matter.
	1 Hysics	CO2	Understand the behaviour of electrons in solids including the
		002	concepts of energy bands and effect of the same on material
			properties.
		CO3	familiarize the design considerations of various solid state
		000	and gas lasers, modes of their operations and areas of
			applications
PH3EC2	Crystal	CO1	Provide an extended knowledge on advanced condensed
1110202	growth		matter topic like crystal growth methods.
	techniques	CO2	Understanding of theories involves in crystal growth
	1		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	CO1	Explain the origin of the atomic spectra and behaviour of
	molecular		atoms in external electric and magnetic field.
	Physics	CO2	Become familiar with molecular spectroscopy and gain basic
			ideas regarding microwave, infrared and Raman
			Ideas regarding microwave, infrared and Raman Spectroscopy.
		CO3	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of
		CO3	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.
PH4C12	Nuclear and	CO3 CO1	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.Know the properties of nucleus likes binding energy,
PH4C12	Nuclear and particle	CO3 CO1	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc.
PH4C12	Nuclear and particle Physics	CO3 CO1	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivityAnalyse Various aspects of nuclear reactions to give an idea
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2	ideas regarding microwave, infrared and Raman         Spectroscopy.         Understanding the working principle and instrumentation of         microwave, IR,Raman and UV-VIS spectrometers.         Know the properties of nucleus likes binding energy,         magnetic dipole moment, electric quadruple moment etc.         and understand the concept of radioactivity         Analyse Various aspects of nuclear reactions to give an idea         of nuclear power generation.
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2 CO3	Ideas regarding microwave, infrared and RamanSpectroscopy.Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivityAnalyse Various aspects of nuclear reactions to give an idea of nuclear power generation.Familiarize different nuclear Models, elementary particles
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2 CO3	<ul> <li>Ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> </ul>
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2 CO3 CO4	<ul> <li>Ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>Analyse how nuclear and particle physics phenomena play a rule in the description of the evolution of the universe for</li> </ul>
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2 CO3 CO4	<ul> <li>Ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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 sters.</li> </ul>
PH4C12	Nuclear and particle Physics	CO3 CO1 CO2 CO3 CO4	<ul> <li>ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the surthesis and characterization methods of</li> </ul>
PH4C12 PH4EC3	Nuclear and particle Physics Nanostructu	CO3 CO1 CO2 CO3 CO4 CO1	<ul> <li>Ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the synthesis and characterization methods of various nanostructured materials</li> </ul>
PH4C12 PH4EC3	Nuclear and particle Physics Nanostructu res and characteriza	CO3 CO1 CO2 CO3 CO4 CO1	<ul> <li>ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the synthesis and characterization methods of various nanostructured materials.</li> </ul>
PH4C12 PH4EC3	Nuclear and particle Physics Nanostructu res and characteriza tion	CO3 CO1 CO2 CO3 CO4 CO1 CO2	<ul> <li>ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the synthesis and characterization methods of various nanostructured materials.</li> <li>Study on quantum dots, wells and wires and the transport of charge carriers in them</li> </ul>
PH4C12 PH4EC3	Nuclear and particle Physics Nanostructu res and characteriza tion	CO3 CO1 CO2 CO3 CO4 CO1 CO2	<ul> <li>ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the synthesis and characterization methods of various nanostructured materials.</li> <li>Study on quantum dots, wells and wires and the transport of charge carriers in them.</li> </ul>
PH4C12 PH4EC3	Nuclear and particle Physics Nanostructu res and characteriza tion	CO3 CO1 CO2 CO3 CO4 CO1 CO2 CO3	<ul> <li>Ideas regarding microwave, infrared and Raman Spectroscopy.</li> <li>Understanding the working principle and instrumentation of microwave, IR,Raman and UV-VIS spectrometers.</li> <li>Know the properties of nucleus likes binding energy, magnetic dipole moment, electric quadruple moment etc. and understand the concept of radioactivity</li> <li>Analyse Various aspects of nuclear reactions to give an idea of nuclear power generation.</li> <li>Familiarize different nuclear Models, elementary particles and their interactions.</li> <li>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.</li> <li>Understand the synthesis and characterization methods of various nanostructured materials.</li> <li>Study on quantum dots, wells and wires and the transport of charge carriers in them.</li> <li>Acquire basic skill in conducting research on fundamental and application aspects of nanotechnology</li> </ul>

PH4OE1	PH4OE1 Optoelectro nics	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	Cours	se Outcomes	
			SEMESTER 1	
CH1C01 C i N C	Organometall ics and	CO1	Identify the structure and bonding aspects of simple organometallic compounds	
	Nuclear Chemistry	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	CO1	Comprehend and Predict the role of temperature, solvents, and catalysts in organic reactions	
	Molecular	CO2	Elucidate reaction mechanisms using isotope effects	
	Organic Chemistry	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	CO1	Calculate change in thermodynamic properties, equilibrium
	Statistical		constants, partial molar quantities, chemical potential.
	Thermodyna		Identify factors affecting equilibrium constant.
	mics	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	CO1	Identify the principles, structure and reactivity of selected
	Chemistry		coordination complexes. Interpret their electronic spectra
	5		and magnetic properties.
		CO2	Utilize the principles of transition metal coordination
			complexes in understanding functions of biological system
CH2C02	Organic	CO1	Comprehend the structure-reactivity pattern of reactive
	Reaction		intermediates involved in organic reactions
	Mechanism	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	CO1	Apply time independent perturbation theory to complex
	Bonding and		problems of molecular energy levels in the presence of
	Computation		external electric and magnetic fields
	al Chemistry	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	CO1	Apply NMR, IR, MS, UV-Vis spectroscopic techniques in
	Spectro-		solving structure of organic molecules and in determination
	scopy		of their stereochemistry.
		CO2	Interpret the above spectroscopic data of unknown
			compounds.

		CO3	Use these spectroscopic techniques in their research
CH2P01	Inorganic	CO1	Plan and Conduct experiments for identifying and
	Chemistry		characterizing inorganic compounds
	Practical-1		
CH2P02	Organic	CO1	Separate and purify products in organic reactions
	Chemistry	CO2	Characterize organic compounds using spectroscopic and
	Practical-1		spectrometric techniques
		CO3	Apply the concepts of nanotechnology and polymer chemistry in to research
CH2P03	Physical	CO1	Explain the principle behind the experiments performed in
	Chemistry		the laboratory
	Practical-1	CO2	Plan and Perform experiments and Interpret experimental results
			SEMESTER 3
CH3C01	Structural	C01	Arrive at the chemical compositions based on unit cell
	Inorganic		contents and fractional coordinates.
	Chemistry	CO2	Calculate densities from powder XRD data
		CO3	Identify and apply a suitable strategy for synthesizing
			inorganic crystalline solids in polycrystalline and single
		<u>CO4</u>	Crystal forms
		04	(magnetic electrical and ontical) in inorganic crystalline
			solids
CH3C02	Organic	CO1	Use various reagents and organic reactions in organic
	Synthesis		synthesis
	-	CO2	Use retrosynthetic method for the logical dissection of
			complex organic molecules and devise synthetic methods
CH3C03	Chemical	CO1	Calculate transport properties of gases, liquids and solids
	Kinetics,	CO2	Solve problems on rate/rate constants/efficiency for (i)
	Chemistry		complex reactions (ii) unimolecular and bimolecular
	and		reactions, and (iii) electronically excited state dynamics.
	Photochemist	CO3	Plot equations and functions representing kinetic behaviour
	ry		of chemical systems in ground and electronically excited
	Constant and a second	CO1	And NMD ID MC UNV
CH3C04	spectroscopi	COI	Apply NMR, IR, MS, UV-VIS spectroscopic techniques in solving structure of organic molecules and in determination
	Chemistry		of their stereochemistry
	Chemistry	$CO^2$	Interpret the above spectroscopic data of unknown
			compounds.
		CO3	Use these spectroscopic techniques in their research
		005	SEMESTED A
	Advanced	CO1	Selve problems based on various analytical concepts
СП4С01	Inorganic		Solve problems based on various anarytical concepts
	chemistry	CO2	Design experiments with improved sample preparation,
	·j		new measurement procedures and tools
		CO3	Quantify analytes with proper data handling and analysis
CH4C02	Advanced	CO1	Comprehend the structure-reactivity pattern of
	Organic		supramolecules involved in organic reactions
Chemistry	Chemistry	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	Course	Cours	se Outcomes			
Code	Title					
			SEMESTER 1			
PC1	Microbiology	CO1	To understand the world of microbes.			
	and	CO2	To familiarize the algal diversity.			
	Phycology	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	CO1	To acquire the knowledge to understand various groups of fungi.			
	and crop	CO2	To impart an in depth knowledge in the pathophysiological			
	pathology		mechanisms in plants.			
		CO3	To familiarize the common diseases affecting plants.			
		CO4	To understand the basics of plant quarantine measures.			
PC3	Bryology and	CO1	To study the external morphology of Bryophytes.			
	Pteridology	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	Environ-	CO1	To understand the significance of environmental science.
	mental	CO2	To make the students aware about total biodiversity
	Biology		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	Gymnosper	CO1	To understand the evolutionary trends in gymnosperms.
	ms, paleo-	CO2	To understand anatomical variations in vascular plants.
	botany and evolution	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	CO1	To understand the ultrastructure and functioning of cells.
	molecular	CO2	Familiarisation of life processes.
	Biology	CO3	To understand the basic and scientific aspects of diversity.
		CO4	To understand DNA as the basis of heredity and variation.
PC7	Plant	CO1	To understand the internal structure of evolved group of plants.
	anatomy	CO2	To understand the individual cells and tissues.
	and	CO3	To understand structural adaptations in plants growing in
	angiosperm		different environments.
	systematics	CO4	To familiarize the students with modern trends in plant
			systematics.
PC8	Genetics	CO1	To understand the principles of heredity.
	and Bio-	CO2	To understand the patterns of inheritance in different organisms.
	chemistry	CO3	To understand the role of biomolecules in plant life.
		CO4	To understand structure and importance of biomolecules
			associated with plant life.
DCO		001	SEMESTER 3
PC9	Research	COI	To equip the students with deep knowledge in the methodology of research
	Biophysics	$CO^2$	To make the students understand various biophysical
	Biostatistics	02	instrumentation.
	and	CO3	To develop statistical skills and techniques.
	Microtech-	CO4	To familiarize the students with various micro-technique
	nique	001	skills.
PC10	Plant	CO1	To understand the physiological processes of plant life.
	physiology	CO2	To understand the methods of crop improvement.
	breeding	CO3	To make the students skilled to carry out various physiological experiments.
		CO4	To enable the students to understand the different methods
DC11	D'	001	used in plant breeding.
PCII	Biotechno-	COI	Understand the current developments in the field of Biotechnology
	logy	$CO^{2}$	Fauin the students to carry out plant tissue culture
		$CO_2$	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	CO1	To make the students understand the classification, naming and identification of higher plants.
	angiosperms	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	CO1	To understand the tissue culture techniques.
	culture and	CO2	To equip the students with knowledge of the microbial world
	microbial		and their role in commercial production of various products.
	biotechno-	CO3	To enable the students to carry out micro propagation of
logy	logy		various plant species.
	logy	CO4	To develop an in depth understanding of the applications of
			microbial biotechnology in medical and agricultural fields.
PE2	Genetic	CO1	To understand the recombinant DNA technology.
	Engineering	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, C Proteomics	CO1	To familiarize the students with the modern arena of genomics
			and proteomics.
	and	CO2	Understand the current developments in the field of
	Bioinform-		Biotechnology.
	atics	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	CO1	Able to summarize, visualize and analyze data			
	Statistics, Probability and distributions	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	CO1	Able to conduct sample surveys using various sampling techniques			
	Methods	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	CO1	Become experts in using various operating systems
	Programming	CO2	Able to write computer programs using $C++$ and SAS
	in C++ and	CO3	Able to develop algorithms and flowcharts
	SAS	CO4	Exposed to logical thinking and analysis
		CO5	Able to solve problems and make optimum decisions
BSTA 104	Statistical	CO1	Able to understand basics of statistical genetics and
	Genetics and		ecology
	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
DCTA 105	Docio	CO1	Lest them
<b>DSTA 105</b>	Statistical	COI	interpretation
	Computing	CO2	Able to test goodness of fit
	B	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	CO1	Able to find the correlation between variables
	Algebra,	CO2	Able to develop regression equation for prediction
	Regression	CO3	Able to understand and conduct Poison and logistic
	Techniques		regression
	and	<u>CO4</u>	Able to understand bioassays and estimation of safe doses
	Dibassays	C05	Able to understand non-linear and non-parametric regression
BSTA 202	Statistical	CO1	Able to understand different estimation methods and
	Estimation,		estimate the parameters
	Theory and	CO2	Able to study about performance of estimators
	Practice	CO3	Able to develop estimators having minimum variance,
		CO4	Able to develop Confidence intervals
		C04	Able to apply the techniques to data from various
		005	application fields
BSTA 203	Basic	CO1	Able to study and plan different epidemiological studies
	Epidemiology	CO2	Able to measure disease frequency using different
	and Vital		measures
	Statistics	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	CO1	Able to develop hypothesis and understand P-value
	Testing of	CO2	Able to test hypotheses regarding mean and various
	Hypothesis	CO3	Able to understand different techniques in parametric and
		CO4	non-parametric testing
		C04	Able to understand sequential testing
1			Able to understand sequential testing

BSTA 205	Basic Statistical	CO1	Able to understand different techniques in parametric testing using SPSS
	Computing	CO2	Able to understand different techniques in non-parametric
		CO2	Lesting using SPSS
		COS	methods
		CO4	Able to find the correlation between variables using SPSS
		CO5	Able to develop regression equation for prediction using
			SEMESTER 3
BSTA 301	Design of	CO1	Able to understand different design of experiments
<b>D</b> 5111501	Experiments	CO2	Able to do the analysis of different designs using SPSS
	and Quality		and SAS
	Control	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
BSTA 302	Stochastic	CO1	Able to understand basics concepts on Stochastic process
22111002	Modeling and	001	and modelling
	Time series	CO2	Able to understand birth/death process and their special
	analysis		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	CO1	Able to understand multivariate data analysis
	Statistical Methods	CO2	Able to understand applications in tests on mean vector for one and more multivariate normal populations
	Wiethous	CO3	Able to understand applications in equality of mean
		005	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
	1 05	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	CO1	Able to apply multivariate data analysis using SPSS and
	Statistical		R programming
	Computing	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 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	CO1	Able to write programs on R programming and Able to apply statistical methods by R program
	, Bayesian	CO2	Able to simulate samples from different populations
	Inference and	CO3	Able to visualize data by graphs and diagrams using R
	MCMC		program
	Methods	CO4	Able to understand the concepts of Bayesian Inference
		CO5	Able to understand the concepts of simulation techniques
BSTA 402	Survival	CO1	Able to distinguish the lifetime distributions
	Analysis and Demography	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	CO1	Able to plan a clinical trial
	Clinical	CO2	Able to understand drug development process
	Trials and	CO3	Able to analyze continuous, categorical, binary data
	Operations	CO4	Able to writing protocol, statistical analysis plan and
	Research		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	Bioinformatic s and	CO1	Able to understand the basics of bioinformatics and biological data analysis
	Computationa l Biology	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	CO1	Able to solve the linear programming problems, transportation problems and assignment problems
	Computing	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
	1	1	

Name of the Programme: MSc Biotechnology						
Course Code	Course Title	Course Outcomes				
			SEMESTER 1			
BTPG01	Biochem- istry	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	Biophy- sics and Bioinfor-	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			
	matics	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	Instrumen- tation and Biostati-	CO1	Course is designed to train the students bioinstrumentation techniques essential for the understanding of life science and biotechnology.			
	stics	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	Micro-	CO1	Student will understand the diversified branches of			
	biology		microbiology			
		CO2	Student will know the theoretical and practical aspects of			
		CO2	microbial growth and physiology			
		COS	characteristics of different groups of microorganisms			
		CO4	This course will make the students to understand virus			
			cultivation, phages and bacterial/yeast genetics			
BTPG07	Immuno-	CO1	Students will understand the basic concept of innate and			
	logy		acquired immunity.			
		CO2	Students will gain knowledge about immunoglobulin			
			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			
		004	associations with different diseases.			
		CO4	The main goal of the course is to provide basic understanding of immunology and immuno responses in			
			response to various infectious and non infectious diseases			
BTPG08	Molecular	CO1	Students will learn DNA replication, recombination and			
	Biology		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	Metabolis	CO1	Basic knowledge of structure and functions of major bio-			
	m and		molecules will make the students to understand and			
	Enzymolo	CO2	Implement the acquired knowledge in future.			
	gy	02	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			
		004	in advanced research programs			
		04	SEMESTER 3			
BTPG11	Bioprocess	CO1	Students will gain knowledge of bioreactor			
	Technolog	$CO^{1}$	Students will understand the application and functioning of			
	y		bioreactors			
		CO3	This course will make the students to understand the			
		_	downstream procedure and fermenter waste treatment			
BTPG12	Recombi-	CO1	Students will become familiar with the tools and techniques			
	nant DNA		of genetic engineering- DNA manipulation enzymes,			
	Technolog		genome and transcriptome analysis and manipulation tools,			
	У		gene expression regulation, production and characterization of recombinant proteins			
		$CO^{2}$	This course exposes students to the applications of genetic			
			engineering in biological research.			

		CO3	Students will be able to perform basic genetic engineering
		CO4	Students will acquire knowledge of advances in biotechnology- healthcare, agriculture and environment cleanup via recombinant DNA technology.
BTPG13	Plant and Animal Biotech-	CO1	Students will learn the principals and technical advances behind the in vitro culture of plant cells and rDNA techniques
	nology	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	Environ- ment Biotech- nology	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
		ļ	SEMESTER 4
BTPG25	Cancer	CO1	Knowledge gained from studying cancer cell biology not
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
BTPG25 E	Cancer Biology	CO1 CO2	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 Discussed about how we can make greater strides in prevention and early detection.
BTPG25 E	Cancer Biology	CO1 CO2 CO3	<ul> <li>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</li> <li>Discussed about how we can make greater strides in prevention and early detection.</li> <li>Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases.</li> </ul>
BTPG25 E BTPG24 E	Cancer Biology Molecular Markers in Cancer	CO1 CO2 CO3 CO1	<ul> <li>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</li> <li>Discussed about how we can make greater strides in prevention and early detection.</li> <li>Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases.</li> <li>Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors.</li> </ul>
BTPG25 E BTPG24 E	Cancer Biology Molecular Markers in Cancer	CO1 CO2 CO3 CO1 CO2	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 Discussed about how we can make greater strides in prevention and early detection. Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases. Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors. It introduces advanced diagnosis and prognosis methods for effective cancer treatment
BTPG25 E BTPG24 E	Cancer Biology Molecular Markers in Cancer	CO1 CO2 CO3 CO1 CO2 CO3	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 Discussed about how we can make greater strides in prevention and early detection. Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases. Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors. It introduces advanced diagnosis and prognosis methods for effective cancer treatment 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
BTPG25 E BTPG24 E BTPG30	Cancer Biology Molecular Markers in Cancer Microbial	CO1 CO2 CO3 CO1 CO2 CO3	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 Discussed about how we can make greater strides in prevention and early detection. Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases. Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors. It introduces advanced diagnosis and prognosis methods for effective cancer treatment 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 Learn about biosafety guidelines.
BTPG25 E BTPG24 E BTPG30 E	Cancer Biology Molecular Markers in Cancer Microbial biotechnol ogy	CO1 CO2 CO3 CO1 CO2 CO3 CO1 CO2	<ul> <li>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</li> <li>Discussed about how we can make greater strides in prevention and early detection.</li> <li>Studying cancer is to develop safe and effective methods to prevent, detect, diagnose, treat and ultimately cure many diseases.</li> <li>Introduction of a number of cancer therapies with the aim of restricting the growth and spread of primary and metastatic tumors.</li> <li>It introduces advanced diagnosis and prognosis methods for effective cancer treatment</li> <li>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</li> <li>Learn about biosafety guidelines.</li> <li>Discuss about bioremediation, biodegradation and other environmental hazardous effect from microbes and treatment by using itself</li> </ul>

Name of the Programme: MSc Applied Microbiology				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
PG1AMBC01	Biochemistry	CO1	Explain the fundamental biochemical principles, such	
	and		as the structure/function of biomolecules.	
	Microbial	CO2	Explain metabolic pathways, fermentation reactions,	
	metabolism		and the regulation of biological/biochemical processes.	
		CO3	Know the reactions of the major catabolic and anabolic	
		<u>CO4</u>	pathways of carbonydrate, lipid, and nucleotides	
		04	microorganisms	
		CO5	Explain the general properties of Enzymes and its	
		000	regulation	
PG1AMBC02	Biophysics	CO1	Explain the installation and operation of various	
	and		instruments.	
	Instrumentati	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	
	X7' 1	001	worth in the biological systems	
PGIAMBC03	Virology	COI	Describe elements of the viral life cycle, explain viral	
			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	
		COF	infections.	
		COS	Acquire knowledge about epidemiology and	
			prophylaxis of viruses that are significant as numan pathogens	
PG1AMBC04	Fundamentals	CO1	Demonstrate theory and practical skills in microscopy	
	of	001	and their handling techniques and staining procedures	
	Microbiology	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	
		900	bacteria.	
		CO3	Know the various culture media and their applications	
			and also understand various physical and chemical	
		$CO^{4}$	Independent of Sterifization	
		C05	Know the various Physical and Chemical growth	
		205	requirements of bacteria and fungi	

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       Bioinformati cs         CO2       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				SEMESTER 2
genetics and Molecular biologylearning the fundamental biological and chemical 'facts' of molecular biology.CO2Gain skills required to effectively do scientific research.CO3Explain the mechanisms of DNA replication and repair, RNA synthesis and processing, and protein synthesis.CO4Describe how gene expression is regulated at the transcriptional and post-transcriptional level.CO5Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathwaysPG2AMBC08Bioinformati csCO1To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysisCO2The collection, classification, storage and analysis of biochemicalCO2	PG2AMBC07	Microbial	CO1	Understand the scientific process, in the context of
biologyCO2Gain skills required to effectively do scientific research.CO3Explain the mechanisms of DNA replication and repair, RNA synthesis and processing, and protein synthesis.CO4Describe how gene expression is regulated at the transcriptional and post-transcriptional level.CO5Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathwaysPG2AMBC08Bioinformati csCO1CO2To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysisCO2The collection, classification, storage and analysis of biochemical and biological information using		genetics and Molecular		learning the fundamental biological and chemical 'facts' of molecular biology.
CO3Explain the mechanisms of DNA replication and repair, RNA synthesis and processing, and protein synthesis.CO4Describe how gene expression is regulated at the transcriptional and post-transcriptional level.CO5Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathwaysPG2AMBC08Bioinformati csCO1CO2To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysisCO2The collection, classification, storage and analysis of biochemical and biological information using		biology	CO2	Gain skills required to effectively do scientific research.
repair, RNA synthesis and processing, and protein synthesis.CO4Describe how gene expression is regulated at the transcriptional and post-transcriptional level.CO5Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathwaysPG2AMBC08Bioinformati csCO1CO2To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysisCO2The collection, classification, storage and analysis of biochemical and biological information using			CO3	Explain the mechanisms of DNA replication and
CO4Describe how gene expression is regulated at the transcriptional and post-transcriptional level.CO5Discuss the mechanisms of cell to cell signalling, including intracellular second-messenger pathwaysPG2AMBC08Bioinformati csCO1To get introduced to the basic concept of bioinformatics, scope, career and its significance in biological data analysisCO2The collection, classification, storage and analysis of biochemical and biological information using				synthesis.
PG2AMBC08BioinformatiCO1TogetintroducedtototoPG2AMBC08BioinformatiCO1TogetintroducedtothebasicconceptofbioinformaticscsCO2Thecollection, classification, storage and analysiscollection, using			CO4	Describe how gene expression is regulated at the transcriptional and post-transcriptional level
PG2AMBC08       Bioinformati       CO1       To       get       introduced       to       the       basic       concept       of         bioinformatics       cs       CO1       To       get       introduced       to       the       basic       concept       of         bioinformatics       cs       CO2       The collection, classification, storage and analysis of       biochemical       and       biological       information       using			CO5	Discuss the mechanisms of cell to cell signalling,
cs CO2 The collection, classification, storage and analysis of biochemical and biological information using	PG2AMBC08	Bioinformati	CO1	To get introduced to the basic concept of
CO2 The collection, classification, storage and analysis of biochemical and biological information using		cs	01	bioinformatics, scope, career and its significance in biological data analysis
highering and highering information using			CO2	The collection, classification, storage and analysis of
computers				biochemical and biological information using computers
CO3 Introduction to the basics of macromolecular sequences alignment and analysis			CO3	Introduction to the basics of macromolecular sequences alignment and analysis
CO4 Knowledge about the concept of molecular modeling			CO4	Knowledge about the concept of molecular modeling
and various approaches in phylogenetic analysis				and various approaches in phylogenetic analysis
CO5 Analysis and handling of various bioinformatics online			CO5	Analysis and handling of various bioinformatics online
tools and servers				tools and servers
PG2AMBC09 Immunology CO1 Describe the basic mechanisms, distinctions and	PG2AMBC09	Immunology	CO1	Describe the basic mechanisms, distinctions and
functional interplay of innate and adaptive immunity				functional interplay of innate and adaptive immunity
CO2 Define the cellular/molecular pathways of humoral			CO2	Define the cellular/molecular pathways of humoral
CO3 Define the basic mechanisms that regulate immune			CO3	Define the basic mechanisms that regulate immune
responses and maintain tolerance			005	responses and maintain tolerance
CO4 Explain the cellular and molecular aspects of			CO4	Explain the cellular and molecular aspects of
lymphocyte activation, homeostasis, differentiation, and memory.				lymphocyte activation, homeostasis, differentiation, and memory.
CO5 Understand the molecular basis of complex, cellular			CO5	Understand the molecular basis of complex, cellular
processes involved in inflammation and immunity, in				processes involved in inflammation and immunity, in
states of health and disease.			<b>2</b> 01	states of health and disease.
PG2AMBC10 Biostatistics CO1 Understand the principle concept of biostatistics,	PG2AMBC10	Biostatistics	CO1	Understand the principle concept of biostatistics,
recognize the definition of statistics, its subject and its				recognize the definition of statistics, its subject and its
$CO^2$ Analyse data and statistics on living things collected			$CO^2$	Analyse data and statistics on living things collected
and contribute to the design and execution of research			002	and contribute to the design and execution of research
studies				studies
CO3 Enable the students to disentangle the data received			CO3	Enable the students to disentangle the data received
and make valid inferences that can be used to solve				and make valid inferences that can be used to solve
problems in public health				problems in public health
CO4 Knowledge about the application of statistical methods			CO4	Knowledge about the application of statistical methods
to conduct research in the areas of biology, public				to conduct research in the areas of biology, public
SEMESTED 2		<u> </u>		SEMESTER 3
PG3AMBC13 Bioprocess CO1 Students will goin knowledge of biographic	PG3AMRC13	Bioprocess	CO1	Students will gain knowledge of hisrageter
Technology CO2 Students will understand the application and		Technology	$CO^{1}$	Students will understand the application and
functioning of bioreactors		1.1.1.1.0.0.5		functioning of bioreactors

		CO3	This course will make the students to understand the
			downstream procedure and fermenter waste treatment
PG3AMBC14	Recombi-	CO1	Technically know- how on versatile techniques in
	nant DNA		recombinant DNA technology.
	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
			SEMESTER 4
PG4AMBE02	Microbial	CO1	Demonstrate insight into quantitative assessments of
	Ecotechno	1	
	Leoteenno-		microbial biodiversity, microbial biomass, growth and
	logy and Soil		microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant
	logy and Soil Microbiology		microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions
	logy and Soil Microbiology	CO2	microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions Demonstrate an insight to central methods in plant
	logy and Soil Microbiology	CO2	microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions Demonstrate an insight to central methods in plant disease microbiology
	logy and Soil Microbiology	CO2 CO3	microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions Demonstrate an insight to central methods in plant disease microbiology Devise experimental strategies for analysing microbial populations, and their activity in environment.
	logy and Soil Microbiology	CO2 CO3 CO4	microbial biodiversity, microbial biomass, growth and metabolic activity of microbes, and relevant environmental parameters in plant – microbe interactions Demonstrate an insight to central methods in plant disease microbiology Devise experimental strategies for analysing microbial populations, and their activity in environment. Critically read, analyse, discuss and present topics

		CO5	Know various culturing technique for microbes from agricultural field and other environmental niche.
PG4AMBE01	Pharmace- utical	CO1	The study of microorganisms associated with the manufacture of pharmaceuticals.
	microbiology	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

Name of the Programme: M.Com.				
Course Code	Course Title	Cours	se Outcomes	
			SEMESTER 1	
AF01C01	Advanced Financial	CO1	To know the methods of valuation of goodwill and share	
	Accounting-II	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	CO1	Help the students to understand the conceptual framework of management and organizational behaviour	
	Organisational Behaviour	CO2	Understand the managerial applicability of the concepts.	
		CO3	To understand Modern techniques in management	
FM01C03	Financial	CO1	Introduce the various aspects of financial management	
	Management	CO2	Acquaint the student with the knowledge of time value	
	Principles		of money	
		CO3	To learn various methods and techniques of financial management.	
RM01C04	Research	CO1	Help the students to understand how to do research in	
	Methodology		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	CO1	Understand statistical tools for quantitative analysis
	Techniques	CO2	Understand the statistical tools for research and
	-		business decision making.
		CO3	Equip the students for analysing data
			SEMESTER 2
AF02C06	Advanced	CO1	Understand the proceedings of the preparation of
	Financial		consolidated balance sheet
	Accounting-	CO2	Get an idea about Green accounting, Double accounts,
	Paper II		Farm accounts, voyage accounts
	1	CO3	Acquaint the student with liquidation proceedings of
			companies.
HR02C07	Human	CO1	Understand the human resource functions in an
	Resource		organization.
	Management	CO2	Learn various aspects of Human Resource
			Development
		CO3	Understand the various leadership styles
FM02C08	Financial	CO1	Acquaint students with the advanced concept of
	Management		financial management
	Strategies	CO2	Learn the working and current asset management of an
			organisation
		CO3	Equip the students to formulate financial strategies for
			the organization.
SM02C09	Strategic	CO1	Understand the framework across strategic analysis,
	Management		strategy formulation, and strategic implementation
		CO2	Learn about various methods of Environmental
			analysis
		CO3	Equip the students to formulate strategies for the
0000010		001	organization.
OR02C10	Operations	COI	Enable the students to understand various techniques
	Research	<u> </u>	Used in operation management decisions.
		$CO_2$	Learn about linear programming methods
		05	Develop skill in problem solving mechanisms
		1	SEMESTER 3
MA02C11	Management	CO1	Understand accounting methods and techniques used
	Accounting		for decision making.
		CO2	Equip students for Financial Statement Analysis of
			companies and take investment decisions.
		CO3	Apply the marginal costing principles in
		GOA	Decision making situations of businesses.
		CO4	Deal with practical issues related to Management
			Keporting.
D102C12	Direct Taxes-		which the source is the source of the source
	Law and Drootice		The country.
	Practice		Equip students to compute the income from salary and
			nouse property.
		03	Acquire knowledge regarding the basic concepts of
			income 1 ax and Determine taxable profit of a business
			or profession.

CO4 Learner shall be able to determine eligit	ble deductions
and compute Taxable Income and tax	liability of an
individual	
CO5 Able to compute capital gain and incor	ne from other
sources and also calculate Gross Total	Income of an
individual.	1
CO6 To give advanced level of knowledge	on direct tax
laws and computation and assessment.	
IB03C13         International         CO1         Understand different aspects of international	onal business.
Business CO2 Familiarisation with globalisation, inter	nationalisation
of business and the International business	s environment.
CO3 Understanding about theories of Interr	national trade,
CO4 Importing idea about various accord	ia Institutions
related to international trade.	ic institutions
CO5 Develop an understanding about the investment environment.	international
CO6 Achieve high level knowledge about vari	ous aspects of
international monetary system.	
CG03C14 Corporate CO1 Understand the importance of corporate	governance
Governance CO2 Help students to find new ways to j	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 CO1 Understand the impact of environment in	business
Environment CO2 Understand Economic Environment and	its features
CO3 To study the role played by legal environment in Business	and political
CO4 To familiarize socio-cultural environme	nt 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	or sustainable
development.	
SEMESTER 4	
AC 04C16   Advanced Cost   CO1   Learn about the higher application of co	ost accounting
Accounting techniques and methods.	· ·
CO2 Know the application of cost control tech	iniques.
CO3   Apply the marginal costing principles in	
decision making situations of businesses.	-4
CU4 Understand the concepts of standard co	sting, and the
CO5 Deal with reconciliation of cost and finan	cial accounting
DT 04C17 Direct Taxes. CO1 Make the students familiar with the av	ssessment and
Assessment & procedures of direct taxes in the country	soosmon and
Procedures CO2 Compute the total income and tax liabilit	
Association of Persons	v of firms and
	y of firms and
CO3 Carry out assessment of companies and	y of firms and

		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	CO1	Give a detailed idea about macro environment on
	Finance		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	CO1	Make the students familiar with the financial system of
	Markets &		the country in general and capital market operations in
	Derivatives		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
		007	futures
		C07	Understand the concepts and methodology of option
			trading and apply the models of pricing the option
			contracts and develop an idea of exchanges through
	Consta	COL	Swaps Students are able size a datailed idea above to the
SA 04E03	A polygic and		of Security analysis
	Portfolio	CO^2	Able to understand the concents of investments
	Management	02	Able to understand the concepts of investments,
	Wianagement		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.
1	1		
