VTM NSS College, Dhanuvachapuram
Neyyattinkara, Thiruvananthapuram
Affiliated to the University of Kerala
Accredited by NAAC at B+ Level

POs, PSOs, Cos

Sl No.	Programme Code	Name of the Programme
First Degree Programmes – CBCS System		
1.	115	FDP in Malayalam
2.	130	FDP in English
3.	140	FDP in History
4.	145	FDP in Political Science
5.	150	FDP in Economics
6.	159	FDP in Commerce
7.	220	FDP in Mathematics
8.	230	FDP in Physics
9.	235	FDP in Chemistry
10.	245	FDP in Botany
11.	250	FDP in Zoology
12.	Additional Language	Hindi
13.	Additional Language	Tamil
14.	Open Course	Physical Education
Postgraduate Programmes		
12.	530	MA in English
13.	540	MA in History
14.	550	MA in Economics
15.	590	MCom

VTM NSS College, Dhanuvachapuram

First Degree Programme in Malayalam Language Culture and Literature

Programme Code: ML-115

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: CORE-1. To achieve basic knowledge in Malayalam language and literature. 2. familiarize various genre in literature. 3. achieve basic awareness in aesthetics 4. achieve basic knowledge in linguistics 5. acknowledge the heritage of Malayalam language 6. all the more students become the cream of the society by studying literature 7.achieve basics of research methodology 8.achieve basic knowledge in translation theory 9.achieve basics in vrithasasthram 10. achieve basics in alankara shasthra. 11.achieve basics in poetics.
PO2: COMPLI- 1.To achieve basic knowledge in the concept of culture 2. familiarize the definitions of culture & its vast areas 3. familiarize the branch of cultural history. 4. acknowledge the relevance of cultural history. 5. acknowledge the cultural history of keralam. 6. acknowledge the renaissance in keralam. 7. acknowledge the social reforms in keralam. 8 acknowledge the role of kerala in nationalmovement. 9.acknowledge the great personalities in kerala history. 10.acknowledge the colonial dominance in kerala COMPLI-2-1 To achive basic knowledge in sanskrit' 2. achieve sansktit alphabets and words in popular usage. 3. achieve basic grammar & sentence making. 4. familiarize some popular genre in Sanskrit. 5.familiarize kavya in sanscrit 6.familiarize nataka in Sanskrit. 7familiarize prose in Sanskrit 8. familiarize namavali in Sanskrit. 9.acknowledge roopavali in Sanskrit 10.acknowledge mahakavya in sanskrit Compli-3-1.To achive basic of eco easthetics. 2. acknowledge the relevance of eco aesthetics. 3. its significance& political value 4. to achieve the universal value of nature centric views.

5.acnowledge eco criticism 6 achieve ability to read literature in eco critical view 7. achieve ability to analyze films in eco critical view 8 achieve ability to analyze poems in eco critical view 9. achieve ability to write in an eco aesthetic sence. 10 .widen the vision in a nature centric pattern. Compli-4-1.To understand the word feminism in right way 2. to understand the history of feminism 3. to understand the various branches of feminism 4. to understand the feminist politics &its relevance 5. to understand the feminist aesthetics &its reflections in literature 6. to achieve the meaning of dalitism in proper way 7.understand dalitism in present scenario 8. understand dalit aesthetics and its political value 9. acknowledge dalit reflections in literature through decades 10. to achieve the ground realities of identity politics&identity crisis.
PO4: LANGUAGE COURSE-2-Malayalam-1.Become familiar to different genre in Malayalam. 2. to achieve aesthetic sence to enjoy literature. 3. enhance ebility to writing. 4.familiarize novel 5 familiarize natakam 6. familiarize travelogue as literature 7. familiarize romantic poetry 8. familiarize modern poetry 9.familiarize postmodern poetry 10.familiarize subaltern poetry
PO5: PROJECT-1. To achieve self study . 2. ability to write in a special subject. 3. to achieve basics of research methodology. 4. to acknowledge the difference in surveytype study& indepth study 5. develop various approaches to study literature. 6. to achieve discussions on cross cutting issues 7achieve ability to address identity crisis 8. achieve ability to address identity politics. 9. achieve ability to address an issue. 10. achive ability to introduce remedies.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1:1. to achieve basic knowledge in the land of literature. 2. acknowledge the difference between normal language& literal language. 3. to achieve the basics of origin of languages.

4. history of languages' 5. history of Malayalam literature. 6. various genre of Malayalam literature 7.acknowledge the basic aesthetics of Malayalam literature.
PSO2: To achieve basic knowledge in the term culture, 2.cultural history and its relevance in life. 3. acknowledge history as the root of mankind. 4. acknowledge the great cultural heritage of kerala. 5. to achive the basics of Sanskrit language. 6.to achive the basic grammar of Sanskrit. 7. to achieve the ability to make sentence in Sanskrit. 8. to acknowledge some famous genres in Sanskrit literature.
PSO4: 1.Various forms in usage of Language ,which is their mothertongue 2. familiarize different genres in Malayalam literature. 3. enhance the ability to write in Malayalam. 4. enhance the ability to use Malayalam as an official language. 5. ability to identify cross cutting issues 6. enhance ability to address cross cutting issues

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes
	Second Language (for Malayalam or Hindi or Tamil dept only)	CO1: ML1111.1. for B.A/BSc. Students 1.To familiarize malayalam poetry in chronological order. from romanticism to post modernism.-
		2.acknowledge romanticism in Malayalam poetry
		3. acknowledge modernism in Malayalam poetry
		4. acknowledge postmodernism in Malayalam poetry
		CO2: ML1211.1 For B.Com students 1. to familiarize various forms of Malayalam prose .
		2. familiarize novel as a popular genre in Malayalam.
		3. familiarize theatre& drama in malayalam
		4. acknowledge travelogue as a genre in Malayalam prose.
	Core Course	CO1 ML.1141: a. to achieve the basics of Novel as a popular genre in literature.
		b. history of the evolution of novel .
		c. groth of novel as a popular genre in the world of literature .
		d.entry of novel in Malayalam literature .
		e.growth of Malayalam novel in decades .
		f. realistic novels .

		g. modernism in Malayalam novel .
		h. post modernism in Malayalam novels.
		i.novel in post truth age .
		j.novel in current scenario .
	Complementary Course	CO1: ML 1131.1 a. Achieve basic knowledge in kerala culture.
		b. achieve indepth knowledge in the term culture and its vast area of mankind.
		c. acknowledge the relevance of cultural history in a society.
		d. to understand the heritage and cultural history are the roots of a society .
		CO2: ML1131.2 a.To achieve Basics in Sanskrit language.
		b. achieve the alphabet, common words &pronounciation
		c. to achieve the basic grammar &ability to make simple sentences in sanskrit
		d. familiarize some famous genres in Sanskrit literature
		e. to achieve the basic concept of literary asthetics in sanskrit
		f. to achieve the basics of poetics in sanskrit
	Second Language (for Malayalam or Hindi or Tamil dept only)	
		CO2- ML1211.1 a.:familiarize modern Malayalam prose
		b. familiarize novel.
		c. familiarize short stories
		d. familiarize Malayalam essays as a genre.
		CO3:ML1211.2 B.Com a. familiarize modern Malayalam poetry
		b. familiarize modern Malayalam short stories
		c. familiarize Malayalam essays.
		d. achieve the ability to use Malayalam as an official language and in various commercial letters.
	Core Course	
		CO2 : ML 1241 a. To achieve to recognize different theatre artforms,its origin and evolution.
		b. Basics of Indian theatre
		c. Basic theories of Greek theatre.
		D . origin of Indian theatre
		d. Origin of malayala natakam.
		e. Growth of malayala nataka vedi
		f. Experiments in theatre.
		g. Recognize theatre as a passion ,profession ,compassion& social commitment.

	Complementary Course	
		CO1: ML1231.1 a.familiarize the relevance of cultural history-
		b. familiarize the social reforms in kerala
		c. acknowledge the political evolution in kerala
		d. cultural scenario of kerala in post truth age.
		CO2 ML1231.2: A.achieve a bit of Sanskrit grammar.
	Second Language (for Malayalam or Hindi or Tami dept only)	CO1 ML.1311.1:Familiarise creativity and produce basic language ability.
		CO2:achive ability to use Malayalam as official language
		CO3: achive ability to write blogg
		CO4: achieve ability to write official letters
	Core Course: ML1341	CO1- a. to achieve the basics of eastern aesthetics
		b. achieve the basics of western aesthetics. c. achieve the basics of Dravidian aesthetics
		CO2: a. to achieve basics of alankara sasthram. b. to achieve charecterestics of famous alankarams
		CO4: to achieve basics of vritha shasthram
		CO5: to achieve charecterestics of famous vritham
		CO6: to achieve basics of Dravidian thala padhhathy.
		ML-1331- COMPLIMENTARY COURSE
		CO-1 To achieve bsics of eco aesthetics
		CO-2 to achieve relevance of eco criticism.
		CO-3 eco critical approach in novel, cherukadha &poetry
		CO-4 eco critical approach in drama, cinema& documentary
	Core Course: ML.1441 in 2018 syllabus &ML1643 in 2021 syllabus	CO1: to achive the knowledge of origin and evolution of Malayalam poetry
		CO2: to aware of the importance ramacharitham, kannasa ramayanam, chambu, attakkadha.
		CO3: to acknowledge importance and contribution of cherusherry, ezhuthacchan &kunchan nampiyar.
		CO4 : to acknowledge navamadhyakala Kavitha, mukthakam,pachamalayala Kavitha,etc
		ML-1442 in 2021 syllabus& 2018 syllabus. CORE COURSE V
		CO1: to achieve the history of Malayalam literary criticism
		CO2: acknowledge the great contributors in Malayalam literary criticism at its primitive age
		CO3: to acknowledge the Malayalam literary criticism at its second stage and the contributors at this age
		CO4: to acknowledge the third stage and its contributors

		CO5: to acknowledge groth of Malayalam criticism to its present scenario ,its strength and weaknessin a critical view
	Complementary Course ML1431in both syllabus- 2018& 2021	CO1: to achieve the definition, origin, evolution & relevance of feminism
		CO2:to acknowledge feminist criticism , its vast areas& political approach.
		CO3: to achieve femist reading on novel, poetry,short story ,natakam &cinema
		CO4:to achieve the definition ,origin,evolution&relevance of dalitism
		CO5:to acknowledge dalit aesthetics, its relevance in literature& political approach
		CO6: to achieve dalit approach on reading literature like novel, poem, stories,&life writing.
		SK-1431-sanskrit-4
	Second Language (for Malayalam or Hindi or Tamil dept only)	.ML.1411.1
		CO1- familiarize attakkadha:
		CO2 familiarize thullal:
		CO3- familiarize natakam
		CO4:- familiarize thirakkadha
	Core Course: (ML 1441. in 2021 syllabus) ML1643 in 2018 syllabus)	CO1:recognize modern Malayalam poetry
		CO2: recognize romantic Malayalam poetry,its groth in 5 decades
		CO3: recognize modernism in Malayalam poetry,its charecterestics and poetic value
		CO4:recognize the change in poetic approach from 90s onwards
		CO5: post modern poetry in malayalam
		CO6: post truth age ,cyber poetry&current scenario . critical approach
	Core Course: ML1541	CO1:to achieve basics of linguistics
		CO2:to achieve theories of linguistics
		CO3: to achieve history of Malayalam language
		CO4: history of printing technology
		CO3:familiarize Sanskrit kavya
		CO4:familiarize Sanskrit nataka
		CO5: familiarize Sanskrit mahakavya
		CO6:to achieve right form of namavali
\5	Core Course ML.1542	
		CO1: familiarize the origin and evolution of Malayalam short story
		CO2:to achieve the second face of Malayalam short story.
		CO3:to familiarize the realism in Malayalam short stories
		CO4: to familiarize the modernism in Malayalam short stories

		CO5: to familiarize the postmodernism in Malayalam short stories
	Core Course ML1543	CO1:to achieve the basic terms in translations
		CO2:to achieve the history of translation
		CO3:to achiev the basic theories of translation
		CO4: poetic translation with example
		CO5: novel translation with example
		CO6: prose translation with example
	Core Course ML1544	CO1:to recognize autobiography&its relevance
		CO2:to recognize biography and difference of biography&autobiography
		CO3: to recognize travelogue as a genre
		CO4: to recognize life writing&its politics
	Core Course ML1545	CO1:to achieve the theories on the origin of Malayalam language
		CO2: contribution of Caldwell,A.R, L.V.R, kovunni nedungadi,godavarma,c.l antony,
		CO3: to recognize the 6 tact by a r on the evolution of Malayalam from tamil
		CO4: development of prose in malayalam
		CO5: development of printing technology in malayalam
		CO6:modern malayalm
	Open Course ML1551.3& M.L1551.4 in 2018 syllabus	CO1: familiarize terms and techniques in filmstudy and how to approach the visual language in cinema.
		CO2:history of cinema
		CO3:theories on screen play
		CO4: screen play writing
6	Core Course ML1641	CO1:to achive history of Malayalam literature
		CO2:development of various genre in malayalam
		CO3:to familiarize history early Malayalam poetry
		CO4:familiarize folklore in Malayalam
	Core Course ML1644 in 2021 syllabus &2018 syllabus	CO1:to achieve definition of folklore
		CO2:to know the theories of folklore
		CO3:to study folkloristics
		CO4: recognize folklorism in current scenario
	Core Course ML 1642	CO1:to achieve basic terms in Malayalam grammar
		CO2:theories of grammar
		CO3:various parts of grammar
		CO4:kerala panineeyam as a basic text for grammar
	Core Course ML 1641in 2018 syllabus	CO1: To achieve the history of medias in malayalam
		CO2:development of medias
		CO3: media language
		CO4:media criticism
		CO5:media politics
		CO6: urrent scenario. Cyber world

	Core Course1643	CO1:recognize modern Malayalam poetry
		CO2: recognize romantic Malayalam poetry,its groth in 5 decades
		CO3: recognize modernism in Malayalam poetry,its charecterestics and poetic value
		CO4:recognize the change in poetic approach from 90s onwards
		CO5:
		CO5: post modern poetry in malayalam
		CO6: post truth age ,cyber poetry&current scenario . critical approach
	Core Course (Project)	
		CO1To achieve self study . CO2. ability to write in a special subject. CO3. to achieve basics of research methodology. CO4. to acknowledge the difference in surveytype study& indepth study CO5. develop various approaches to study literature. CO6. to achieve discussions on cross cutting issues

First Degree Programme in ENGLISH

Programme Code: 130

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: A comprehensive understanding of the discipline of literary studies
PO2: Realize the divergent and plural voices that come in to the making of the corpus of literary studies
PO3: Imbibe the importance of multidisciplinary approach to understand the nuances of literary expressions.
PO4: Understand the specific socio-cultural backdrop of the formation of literary representations.
PO5: Form an awareness of the multiplicities of such socio-cultural realities that shape literary representations and to critique the inherent hegemony.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: Comprehended the current modes of writings – that which encompasses the issues related to race, gender, ethnicity, climate change etc. and realize the role of literature in inculcating social sensitiveness
PSO2: The competence to identify the literary voices of dissent from diverse parts of the globe and to reflect on the popular culture and literature.
PSO3: Imbibe a research-oriented approach to the study of humanities in connection with the basic understanding of social sciences to initiate a multidisciplinary approach of study.
PSO4: Contribute to the realm of knowledge production with an increased intellectual, creative, critical and multidisciplinary capability.

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes
1	General English (for English Department only)	CO1: To sensitize students to the major issues in the society and the world.
		CO2: To encourage them to read literary pieces critically.
		CO3: have an overall understanding of some of the major issues in the contemporary world.
		CO4: respond empathetically to the issues of the society.
		CO5: read literary texts critically
	Core Course	CO1: Introduce varied literary representations. CO 5:

		CO2: Familiarize students with the nature and characteristics of literature.
		CO3: Discuss the nature and characteristics of literature
		CO4: Introduce two key genres of literature, poetry and drama.
		CO5: Possess a foundational understanding of poetry and drama.
	Complementary Course	CO1: Encourage the student to think critically about popular literature.
		CO2: Understand the categories of the ―popular‖ and the ―canonical‖
		CO3: Identify the conventions, formulas, themes and styles of popular genres such as detective fiction, the science fiction and fantasy, and children‘s literature.
		CO4: An assessment of the literary and cultural value of popular texts
		CO5: Sensitize students to the ways in which popular fiction reflects and engages with questions of gender, identity, ethics and education.
2	General English (for English Department only)	CO1: To help students have a good understanding of modern English grammar.
		CO2: To enable them produce grammatically and idiomatically correct language.
		CO3: To help them improve their verbal communication skills.
		CO4: To help them minimise mother tongue influence.
		CO5: have an appreciable understanding of English grammar.
		CO6: produce grammatically and idiomatically correct spoken and written discourse.
	Core Course	CO1: Cherish a taste for the literary among students
		CO2: Comprehend the nature and characteristics of different genres of literature.
		CO3: Detailed awareness of the two key genres of literature-fiction and non-fiction.
		CO4: Imbibe the representational possibilities of the respective genres.
		CO5: Instill a creative and critical aptitude
	Complementary Course	CO1: The student will be able to engage with literature in a broader, educated perspective.
		CO2: The student will be able to think with greater originality and independence about the complex interrelationship between different art forms.
		CO3: The student will be trained to engage sensitively and intelligently in new readings of literature.
		CO4: The course develops an understanding of the co-relation between literature, film, music and painting and encourages ways of reading and seeing which deliver insights into literary texts.

		CO5: Initiate students to implement the multidisciplinary scope of art and literary studies.
3	General English (for English Department only)	CO1: To familiarize students with different modes of general and academic writing.
		CO2: To help them master writing techniques to meet academic and professional needs.
		CO3: To introduce them to the basics of academic presentation
		CO4: To sharpen their accuracy in writing.
		CO5: understand the mechanism of general and academic writing.
		CO6: improve their reference skills, take notes, refer and document data and materials.
	Core Course:	CO1: Comprehend the origins of English literature
		CO2: Understand the specific features of the particular periods
		CO3: Understand themes, structure and style adopted by early British writers
		CO4: Gain knowledge of growth and development of British Literature in relation to the historical developments
		CO5: Understand how writers use language and creativity to capture human experience through different literary forms
	Core Course:	CO1: Knowledge of the paradigm shifts in the development of English.
		CO2: Well aware of the historical paradigm shifts in the history of English Language
		CO3: Imbibe the plural socio cultural factors that went in to the shaping of the English Language.
		CO4: Place English language in a global context
		CO5: Recognize the politics of many Englishes’
	Complementary Course	CO1: Be able to identify themes of resistance in different forms and genres of literature.
		CO2: Have a sense of the various kinds of injustice related to race, ethnicity, gender etc. prevalent in society.
		CO3: Develop an idea of literature as a form of resistance to all forms of totalitarian authority.
		CO4: Understand the inter connection between various genres in manifesting resistance
		CO5: How resistance is an undeniable presence in the everyday narratives of literary and other artistic expressions
4	General English (for English Department only)	CO1: To sensitize students to the aesthetic, cultural and social aspects of literature.
		CO2: To help them analyze and appreciate literary texts.
		CO3: understand and appreciate literary discourse.
		CO4: look at the best pieces of literary writing critically.
		CO5: analyze literature as a cultural and interactive phenomenon.

	Core Course:	CO1: Sensitize students to the changing trends in English literature in the 18th and 19th centuries and connect it with the sociocultural and political developments.
		CO2: Develop the critical thinking necessary to discern literary merit
		CO3: Be able to recognize paradigm shifts in literature
		CO4: Be able to identify techniques, themes and concerns
		CO5: Connect literature to the historical developments that shaped the English history
	Core Course:	CO1: Understand social, political, aesthetic and cultural transformations of early twentieth century in relation to literary texts with their specific formal features.
		CO2: Know the stylistic features of Modernism and its various literary and aesthetic movements
		CO3: Critically engage the ideas that characterise the period, especially the crisis of modernity
		CO4: Understand contemporary responses to the historical incidents that mark the period
		CO5: Understand and use critical strategies that emerged in the early twentieth century.
	Complementary Course	CO1: Have a diachronic understanding of the evolution of philosophy from the time of Greek masters to 20th century
		CO2: Have an awareness of the major schools of thought in western philosophy.
		CO3: Have a healthy epistemological foundation at undergraduate level that ensures scholarship at advanced levels of learning.
		CO4: Talk about some of the key figures in Philosophy.
		CO5: Analyze and appreciate texts critically, from different philosophical perspectives
\5	Core Course	CO1: Identify the various socio-cultural changes that evolved in the late modernist period
		CO2: Relate to the diverse currents of postmodern literature and its reflections in the contemporary ethos
		CO3: Assimilate the inherent multiplicities and fluidity of societal perspectives
		CO4: Develop an innate sympathy for the tragedies of Holocaust and an awareness regarding the environmental impasses threatening the modern world
		CO5: Empathise with the marginalised and comprehend their predicament
	Core Course	CO1: Ability to critique colonial history
		CO2: Awareness of the socio-political contexts of colonialism and postcolonialism
		CO3: Understanding of the effects of colonialism in various nations

		CO4: Knowledge of the key terms in post-colonial thought
		CO5: Study of the race and gender dynamics in postcolonial literature
	Core Course	CO1: Generate knowledge about the varied milieu of the development and growth of Malayalam literature and be sensitive to its socio cultural and political implications.
		CO2: Get a basic knowledge of the literary and the non-literary works produced in Malayalam
		CO3: Discern the vibrancy of Malayalam literature
		CO4: Sense the distinctness of the socio-cultural arena in which Malayalam literature is produced
		CO5: Know the value of literature produced in regional languages and key role of translation in the growth of language and literature
	Core Course	CO1: Understand the phonological and grammatical structure of English Language
		CO2: Be able to analyse actual speech in terms of the principle of linguistics
		CO3: Improve the accent and pronunciation of the language
		CO4: Introduce the students to internationally accepted forms of speech and writing in English.
		CO5: Explore the ancient linguistic tradition of India
	Core Course	CO1: Analyze and appreciate texts critically, from different perspectives.
		CO2: Appreciate Indian Aesthetics and find linkages between Western thought and Indian critical tradition.
		CO3: Show an appreciation of the relevance and value of multidisciplinary theoretical models in literary study.
		CO4: Demonstrate an understanding of important theoretical methodologies and develop an aptitude for critical analysis of literary works.
		CO5: Gain a critical and pluralistic understanding and perspective of life
	Open Course	CO1: Learners majoring in some subject other than English will have a working knowledge of the type of English that is required in real life situations, especially the globalized workplace.
		CO2: Well trained to write clear, well-framed, polite but concise formal letters and e-mails for a variety of purposes
		CO3: Acquire some of the soft-skills that go hand in hand with English –namely, the ability to prepare for an interview and face it confidently
		CO4: the ability to participate boldly a group discussion and contribute meaningfully to it, the ability to make a simple and interesting presentation of 5-10 minutes before a mixed

		audience on anything that they have learnt in the previous semesters of the UG programme
6	Core Course	CO1: Recognize the patriarchal bias in the formation of history and knowledge.
		CO2: Analyse the ways in which gender, race, ethnicity class, caste and sexuality construct the social, cultural and biological experience of both men and women in all societies.
		CO3: Recognize and use the major theoretical frames of analysis in gender studies
		CO4: Interrogate the social constructions of gender and the limiting of the same in to the male-female binary in its intersections with culture, power, sexualities and nationalities
		CO5: Examine gender issues in relation to the sustainable goals of development
	Core Course	CO1: Make students aware of different aspects of colonization like cultural colonization.
		CO2: Trace the historical and literary genesis and development of Indian Writing in English
		CO3: Acquaint them with the major movements in Indian Writing in English across varied period and genres
		CO4: Address the plurality of literary and socio-cultural representations within Indian life as well as letters.
		CO5: Enhance the literary and linguistic competence of students by making them aware of how language works through literature written in the subcontinent.
	Core Course	CO1: Recognize the language of films and use it creatively.
		CO2: Analyze films from both technical and non-technical perspectives
		CO3: Engage questions of social justice and gender justice by critiquing representations of culture.
		CO4: Use film as a medium of communication
		CO5: Derive an interest in various careers related to film
	Core Course	CO1: Understand the study of Classics as a means of discovery and enquiry into the formations of great literary works and how the rich imagery of these classical works continues beyond the twentieth century.
		CO2: Recognize the diversity of cultures and the commonalities of human experience reflected in the literature of the world.
		CO3: Imbibe a fair knowledge in the various Classical works from different parts of the world, at different time periods, across cultures.
		CO4: Examine oneself and one‘s culture through multiple frames of reference, including the perception of others from around the world.

		CO5: Develop and aesthetic sense to appreciate and understand the various literary works with a strong foundation in the World Classics.
	Core Course	CO1: Create a body of original creative works which exhibit basic elements of literary writing.
		CO2: Generate the ability to apply the creative as well as critical approaches to the reading and writing of literary genres.
		CO3: Critique and support the creative writing of peers in a guided workshop environment.
		CO4: Engage in literary output by identifying, analyzing and expressing socially sensitive and personally abstract themes and ideas.
		CO5: Gain expertize in providing critical readings of works of literary expressions.
	Core Course (Project)	CO1: Familiarize the students with the basics and nuances of researches
		CO2: Understand the theory and practice of project and get well versed in the uniqueness of language structures.
		CO3: Comprehend and practise the skills by project works
		CO4: Help learners recognize the art involved in creating a project
		CO5: undertake an independent project

BA Degree Program in HISTORY

Program Code: 140

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: Acquire, condense and critically evaluate scholarly arguments, the assumptions behind them, and their theoretical and empirical components.
PO2: Problem Solving: Acquire the ability to define a problem, generate alternate solution, evaluate and select an alternative and implement follow up on the solution
PO3: Effective Communication: Listen, read, comprehend, speak and write clearly and effectively in person and through electronic media in English/regional language/language of the discipline and exhibit sound domain knowledge including theories, concepts and terminologies
PO4: Self-directed and Life-long Learning: Acquire the ability to engage in independent and lifelong learning in the broadest context of socio-technological changes. Integrate academic knowledge with practical skills and transfer such knowledge/skills to other domains of one's life and work.
PO5: Responsible Citizenship: Demonstrate empathetic social concern, and the ability to act with an informed awareness of issues. Learners understand and respect diversity and difference, devoid of any prejudice by gender, age, caste, religion or nationality. Learners promote sustainable development practices

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: Students become familiar with the political processes and structures; society, economy and culture; political Ideas and institutions of past and historical thought and historiography evolved at both Indian and global contexts.
PSO2: To understand the methodologies and approaches used by modern historians, or on the ways in which history has been written in the past, and to acquire the required knowledge, awareness and skills for historical research.
PSO3: To understand events, concepts, ideologies and hegemonic relationships that evolved historically and to critically approach and introspect the unconsciously assumed power relations and identities.
PSO4: To understand the elements of the transition of the world from pre-modern to modern and to realise how this transition happened and how far it changed the world

COURSE OUTCOMES (COs)

Semester		Course Name and Course Code	Indented Outcome
1 **OLD** **NEW**	•	• **HY 1141:** Methodology and Perspectives of Social Sciences (Core) • **HY1131.1:** Complementary I- History of Modern India (1857-1900), (For Economics, Islamic History and Sociology.) • **HY1131.2:** Complementary II- History of Modern World, (1789-1900), (For English & Political Science)	• **CO-1** To understand the myriad disciplines of Social Sciences with particular reference to History and its methodology. • **CO-2** To understand the autonomy of the discipline of history and the pluri- multi character of the discipline. • **CO-3** To apply different theories in understanding past.
	•	• **HY 1141:** Core I: Discipline of History and Social Sciences: Methodology and Perspectives. • **HY1131.1:** Complementary I: History of National Movement in India Part I. (For Economics, Islamic History and Sociology) • **HY1131.2:** Complementary II: History of Modern World Part I (For English & Political Science)	• **CO-1** To analyze and evaluate the historical process in relation to power relations of the society. • **CO-2** To Evaluate the methodology and objectivity of the discipline of history. • **CO-3** To create critical history introspecting power relations.
2 **OLD**	•	• Core II-Cultural Formation of the Pre-Modern World	• **CO-1** To understand the theoretical and ideological background evolution

		• Complementary III- History of Modern India (1901-1920), For Economics, Islamic History and Sociology • Complementary 1V- History of Modern World, (1901-1920),for English & Political Science	of the world and human origin • **CO-2** To understand the social evolutions of the early world
NEW	•	• **HY 1241:** Core II: Global History: Socio-Cultural Formations in the Early World. • **HY1231.3:** Complementary III: History of National Movement in India Part II (For Economics, Islamic History and Sociology) • **HY 1231.4:**Complementary IV: History of Modern World Part II(For English & Political Science)	• **CO-1** To evaluate the genesis and growth of state and society early world • **CO-2** To analyze the process cultural formations of the early world
3 **OLD**	•	• **HY 1321** Foundation Course II Core-Informatics • **HY1341** Core 111-Evolution of the early Indian society &Culture • **HY 1331.5** Complementary V-History of Modern India (1921-1947), For Economics, Islamic History and Sociology • **HY 1331.6** Complementary V1-History of Modern World, (1921-1945),For English & Political Science	• **CO-1** To learn the theory and practice of historical research as practiced by professional • **CO-2** To understand the method of writing history. • **CO-3** To construct original historical arguments based on primary source material research

NEW	•	• **HY 1321** Core Specific Foundation: Reconstructing the Past • **HY1341** Core III: Understanding State and Society in Early India • **HY 1331.5** Complementary V: History National Movement in India Part III) For Economics, Islamic History and Sociology • **HY 1331.6** Complementary VI: History of Modern World Part III For English & Political Science	• **CO-1** To analyse the various tools pertaining to the writing of history • **CO-2** Locate major pre-historic settlements and evolution of early farming communities • **CO-3** To understand the national movement of India with the advent of Gandhi
4 **OLD** **NEW**	•	• **HY1441** Core 1V-Medieval India: Socio-Cultural Processes. • **HY 1442** Core V-History Modern World – Part 1 • **HY 1431.7** Complementary VII-History of Modern India (after1948), For Economics, Islamic History and Sociology • **HY 1431.8** Complementary VIII-History of Modern World, (after1946), For English & Political Science	• **CO-1** To get an overview of the political, cultural, social and economic life in Medieval India • **CO-2** To focus on the regional cultures during the period

	•	• **HY1441** Core IV: State and Society in Pre- Colonial India. • **HY 1442** Core V: Social Formations in Early South India • **HY 1431.7** Complementary VII: Contemporary India IV For Economics, Islamic History and Sociology • **HY 1431.8** Complementary VIII: Contemporary World For English & Political Science	• **CO-1** To appraise the linkage effect of the Medieval Period in subsequent centuries • **CO-2** Interpret the social cultural and administrative features during the Medieval Period • **CO-3** Develop practical skills helpful in the study and understanding of historical events.
5 **OLD** **NEW**	•	• **HY1541**-Core V1- Major trends in Historical thoughts and writings • **HY 1542 Core V11**- Colonialism and Resistance movements in India • **HY 1543** CoreV111- History of Modern World – Part II • **HY 1544** Core 1X- History of Pre-Modern Kerala • **HY 1545** Core X- Making of Indian Nation • **HY 1551.1** Open Course-History of Human Rights Movement. • Project/Dissertation	• **CO-1** To understand the theoretical and ideological background of colonialism and capitalism • **CO-2** To understand the socio-economic and cultural impingement of colonial intervention • To discuss the Human Rights movements in the world
	•	• **HY1541** Core VI: Major Trends in Historical Thoughts and Writings (Part I) • **HY 1542** Core VII: Capitalism and Colonialism: Forms of Resistance in India.	• **CO-1** To analyze the process of colonizing India against the backdrop of theoretical insights

		• **HY 1543** Core VII: Pre- Modern Kerala • **HY 1544** Core IX: Making of a Nation in India • **HY 1545** Core X: Transition to Modern World • **HY 1551.1** Open Courses: History of Human Rights Movement. • Project/Dissertation • Historical Method- Mechanics Project Writing • Study Tour	• **CO-2** To evaluate the genesis and growth of critical intervention of the colonial subjects towards the British Raj • **CO-3** To discuss the ideas of Human Rights and constitutional remedies
6 **OLD** **NEW**	•	• **HY1641** Core XI - Making of Modern Kerala • **HY1642** Core XII - Major trends in Indian Historical thought & writings • **HY1643** Core XIII - Contemporary India • **HY1644** Core X1V - Twentieth Century Revolutions • **HY 1651.6** Elective- History of Human Rights Movement. **HY 1641** Core XI: Major trends in Historical Thoughts and Writings (Part II) **HY 1642** Core XII: Modern Kerala **HY 1643** Core XIII: Contemporary India **HY 1644** Core XIV: Twentieth Century World	**CO1-** To understand the myriad developments in the historical thought and writing in the Modern West and Modern India . **CO2-** To analyse the colonial roots of Indian Historiography and evaluate the multiple Indian responses to it. **CO1**- To evaluate the critical responses from the subaltern and Women's history approaches. **CO4** - To evaluate the Total History

		HY 1661.1 Elective: Historical Tourism and Cultural Industry	approach and post-modern turn in historical thinking and writing. **CO-3** To create critical history.

First Degree Programme (Choice Based Credit and Semester System) in B A POLITICAL SCIENCE

GRADUATE ATTRIBUTES (GAs)

The Graduate Attributes (GAs) reflect qualities and abilities of individual learner including knowledge, application of knowledge, professional and life skills, attitudes and human values that are required to be acquired by the graduates of University of Kerala. The graduate attributes include capabilities to strengthen one's professional abilities for widening current knowledge and industry-ready skills, undertaking future studies for global and local application, performing creatively and professionally, in a chosen career and ultimately playing a constructive role as a socially responsible global citizen. The Graduate Attributes define the characteristics of learners and describe a set of competencies that are beyond the study of a particular area and programme.

The GAs of University of Kerala

- Continue life-long learning as an autonomous learner.
- Continuously strive for excellence in education
- Apply and nurture critical and creative thinking.
- Promote sustainable development practices.
- Promote co-operation over competition.
- Balance rights with responsibilities
- Understand and respect diversity & difference.
- Not be prejudiced by gender, age, caste, religion, or nationality.
- Use education as a tool for emancipation and empowerment of humanity.

PROGRAMME OUTCOMES FOR BACHELOR OF ARTS (B.A.)

PO1 Critical Thinking: Acquire, condense, and critically evaluate scholarly arguments, the assumptions behind them, and their theoretical and empirical components.

PO2 Problem Solving: Acquire the ability to define a problem, generate alternate solution, evaluate, and select an alternative and implement follow up on the solution.

PO3 Social Interaction: Social engagement creates a sense of belonging by encouraging connections between people. This peer-to-peer connection also creates a sense of working together to achieve common goals.

PO4 Effective Citizenship: Learn to participate in nation building by adhering to the principles of sovereignty of the nation, socialism, secularism, democracy. Learners understand and respect diversity and difference, devoid of any prejudice by gender, age, caste, religion or nationality. Develop and practice gender sensitive attitudes, environmental awareness, and empathetic social awareness about various kinds of marginalisation and the ability to understand and resist various kinds of discriminations.

PO5 Environment and sustainability: Acquire an understanding of the concept of sustainable development, and to preserve non-renewable cultural resources through policy, law and public education.

PO6 Analytical Thinking: Preparation of project is an inseparable part of UG Programme. Students must collect sources and analyse the data to draw conclusions. The qualitative and quantitative and analytical skills are enhanced.

PO7 Ethics: Understand different value systems including one's own, as also the moral dimensions of actions, and accept responsibility for it.

PO8 Effective Communication: Listen, read, comprehend, speak and write clearly and effectively in person and through electronic media in English/regional language/language of the discipline and exhibit sound domain knowledge including theories, concepts and terminologies.

PO9 Self-directed and Life-long Learning: Acquire the ability to engage in independent and lifelong learning in the broadest context of socio- technological changes. Integrate academic knowledge with practical skills and transfer such knowledge/skills to other domains of one's life and work.

PROGRAMME SPECIFIC OUTCOMES (PSO) FOR B. A. POLITICAL SCIENCE

PSO 1 Understand the place of Political Science within the broader spectrum of Social Sciences and allied interdisciplinary areas.

PSO 2 To improve understanding of basic facts and concepts about political system, including philosophical, constitutional and legal foundations, policy making processes etc.

PSO 3 Understand the diverse institutions, processes, constitutional and legal frameworks and public policies in one's own country and to compare it across the world

PSO 4 Students should be able to differentiate among multiple Political Science perspectives, theories and ideologies from a range of written or spoken genres. They should be able to explain, analyze and articulate contemporary issues and events using such perspectives, theories and ideologies.

PSO 5 Acquire specialized knowledge about the shaping of the global politics and the diverse theories and approaches that facilitate its explanation.

PSO 6 Demonstrate the ability to outline and defend a vision of politics for the present and future generations with the aid of democracy, justice, rights, freedom and secularism.

PSO 7 To promote acquisition of citizenship skills and the ability to understand and appreciate human diversity; and to engage in community life as active citizens.

PSO 8 To enable students to evaluate and analyze political processes and effectively apply theoretical and analytical skills to address significant issues in the political world by taking political and administrative responsibilities.

PSO 9 Analyze a phenomenon, an event or a construct with insight, knowledge, reasoning and technical skill by employing appropriate research methodology and draw original and logical conclusions.

PSO 10 Promote linkages with industry through internships and project works by involving in activities related to Local self-government institutions, Media, Parliamentary Procedures and practices and Survey research and data analysis.

SEMESTER I

Course Title: PERSPECTIVES OF SOCIAL AND POLITICAL SCIENCES

Core Course	Course Code	Instructional Hours	Credits
I	PS 1142	6	4

Course Learning Outcomes

CO1 – To understand the nature and relevance of Social and Political Sciences.

CO2 – To impart basic knowledge in the application of scientific method in social sciences and its limitations.

CO3 –To enable the students in placing political science in the wider domains of social sciences and their interrelations.

CO4 – To familiarize Students with emerging terrains of political science and its critical evaluation.

SEMESTER II

Course Title: INTRODUCTION TO POLITICAL THEORY

Core Course	Course Code	Instructional Hours	Credits
II	PS 1241	6	4

Course Learning Outcomes

CO1 – To understand the nature and social significance of political theory.

CO2 – To impart basic knowledge about various approaches to the study of Political theory

CO3 –To enable the students in the application of various theories and concepts of Political Theory

CO4 – To critically evaluate the different perspectives of key concepts of political theory.

SEMESTER III

Course Title: CYBER POLITICS

Core Course	Course Code	Instructional Hours	Credits
III	PS 1321	4	3

Course Learning Outcomes

CO_1 – To develop conceptual understanding on cyber politics

CO_2 – To understand the role of cyber space in deepening democracy

CO_3 – To evaluate the role of state in governing cyber space

CO_4 – To Analyse the impact of information revolution on the state- citizen interference

Course Title: INDIAN CONSTITUTION

Core Course	Course Code	Instructional Hours	Credits
III	PS 1341	5	4

Course Learning Outcomes

CO1 – To understand the major features and the essence of Indian constitution

CO2 – To create awareness about one's own rights and duties as well as a sense of respect and protection of others rights

CO3 – To familiarise the students about the composition and functions of various *Institutions of Union and federal Governments.*

CO4 – To critically evaluate Indian judicial system and recent developments

SEMESTER IV

Course Title: DYNAMICS OF INDIAN POLITICS

Core Course	Course Code	Instructional Hours	Credits
IV	PS 1441	5	4

Course Learning Outcomes

CO1 – Understand the peculiar features of Indian federal system and nature of Centre-state relations

CO2 – Critically examine the tendency of regionalism and secessionism in India

CO3 – Understand and evaluate emerging trends in Indian Democracy

CO4 – Critically analyse the major factors which pose threat to Indian Democracy and political System.

Course Title: INTRODUCTION TO COMPARATIVE POLITICS

Core Course	Course Code	Instructional Hours	Credits
V	PS 1442	4	3

Course Learning Outcomes

CO_1 – To understand the basic concepts and changing nature of comparative politics.

CO_2 – To understand and compare the basic features of constitutional development in major countries.

CO_3 – To familiarise the students about the Federal and Unitary systems of major Political systems and evaluate the changing dimensions.

CO_4 – To acquire ability to compare and analyse the political structures in different political systems in a comparative perspective.

SEMESTER V

Course Title: PUBLIC ADMINISTRATION

Core Course	Course Code	Instructional Hours	Credits
VI	PS 1541	4	4

Course Learning Outcomes:

CO_1 – Converse with meaning and nature of Public Administration and familiar with different approaches in public administration

CO_2 – Understand critically various principles of organisations and the role of Chief Executive and independent Regulatory Commissions

CO_3 – Comprehend the significance of Bureaucracy in Public Administration and familiarize the recruitment process and training

CO_4 – Understand the features of Financial Administration in India, focusing on the budgetary process and the role of the CAG.

CO_5– Understand the emerging trends in Public Administration in India.

Course Title: ANCIENT AND MEDIEVAL POLITICAL THOUGHT

Core Course	Course Code	Instructional Hours	Credits
VII	PS 1542	4	4

Course Learning Outcomes

CO1*:Acquire understanding on the ancient Greek ideas on state and society*

CO 2*: Understand and analyses the Roman Political ideas and compare it with Greek ideas*

CO3*:Understand ancient Indian wisdom and compare it with other ideas*

CO4*:Analyse and evaluate the Medieval political ideas critically*

Course Title: INTERNATIONAL RELATIONS

Core Course	Course Code	Instructional Hours	Credits
VIII	PS 1543	3	2

Course Learning Outcomes

CO1 – To understand the nature and the Scope of International Relations.

CO2 – To impart basic knowledge about basic concepts and theories of International Relations.

CO3 –To enable the students to evaluate foreign policy decisions and its implications on Diplomatic relations.

CO4 – To critically evaluate the various issues of global politics.

Course Title: RESEARCH METHODOLOGY

Core Course	Course Code	Instructional Hours	Credits
IX	PS 1544	4	4

Course Learning Outcomes

CO_1 –To introduce the nature and modalities of research in Social Sciences in general and Political Science in particular.

CO_2 – To understand the major steps involved in arriving at a research topic and developing it further.

CO_3 – To expose students to the practicalities of research in Political Science, particularly in regard to data collection.

CO_4 –To facilitate students critically analyse the collected data and create a scientific report of their own.

Course Title: HUMAN RIGHTS IN INDIA

Core Course	Course Code	Instructional Hours	Credits
X	PS 1545	4	4

Course Learning Outcomes

CO1- Impart basic understanding about the concept of Human Rights, its evolution and importance in our society.

CO2- To Understand the role and functions of international human rights mechanisms in the changing international order

CO3- To have a need based understanding of the instituional arrangements in India at various levels to protect Human Rights.

CO4- To develop a critical understanding of the issues faced by socially excluded groups like Dalits, Women, Children, Differently Abled, Transgender at the national level.

SEMESTER VI

Course Title: MODERN POLITICAL THOUGHT

Core Course	Course Code	Instructional Hours	Credits
XI	PS 1641	5	4

Course Learning outcomes

C01-To introduce the idea of state and government through the conceptual cues of the social contract theories of the 17th century in Europe.

C02-To provide adequate understanding of the utilitarian tradition and lead the students to maintaining proper awareness of countervailing traditions of the liberals, with special reference to German Idealist philosopher W. H. Hegel.

C03- To equip students to analyse contemporary political reality with the help of the theoretical tools provided by Socialist theorists.

C04- To familiarise students with the application of the notion of governmentality introduced by Michel Foucault.

C05- To evaluate the creative potential of Gandhi's and Ambedkar's views on Social order, modern state craft and methods of conflict resolution.

Course Title: STATE AND SOCIETY IN KERALA

Core Course	Course Code	Instructional Hours	Credits
XII	PS 1642	5	4

Course learning Outcome:

CO1 — Understand the major social and political trajectories that moulded the modern state of Kerala

CO2- Understand the present political structure of Kerala and evaluate the deep rooted societal identities of Kerala and relate its relevance.

CO3 –Analyse the aspects of political economy of Kerala

CO4– Demonstrate the understanding of the Contemporary discourses in Kerala's society.

Course Title: DECENTRALIZATION AND PARTICIPATORY DEMOCARCY

Core Course	Course Code	Instructional Hours	Credits
XIII	PS 1643	5	4

Course Learning Outcome

CO1: To acquire knowledge on the concept of decentralisation and to be able to understand its theoretical perspectives

CO2: To understand the concept of participatory democracy and to internalise its values

CO3: To evaluate the emergence of decentralisation in India and to analyse the features of 73rd and 74th Constitutional Amendment Act

CO4: To familiarise and practice the contrivances of participatory democracy

Course Title: NEW SOCIAL MOVEMENTS

Core Course	Course Code	Instructional Hours	Credits
XIV	PS 1644	4	3

Course Learning Outcomes

CO_1 –To understand the notion of New Social Movements (NSMs) using major approaches and theories.

CO_2 – To explore the gender-based New Social movements with examples from the Western and non-Western World.

CO_3 –To evaluate the trajectory and impact of New Social Movements in India.

CO_4 –To analyse the nature of New Social Movements in Kerala and the underlying reasons for its emergence.

Course Title: PROJECT/DISSERTAION

Core Course	Course Code	Instructional Hours	Credits
	PS 1645	3	4

Course Learning Outcomes:

CO1- *analyse the theories and issues by employing the appropriate research methodology to draw conclusions and make policy suggestions.*
CO2- *apply various tools they have learned and present the report in a structured manner.*
CO3- *inculcate proficiency to identify appropriate research topics and presentation*

OPEN COURSES

Course Title: HUMAN RIGHTS IN INDIA

Core Course	Course Code	Instructional Hours	Credits
Open Course	PS 1551.1	3	2

Course Learning Outcomes

CO1- To familiarize with the basic concepts of Human Rights with special focuss on Universal Declaration of Human Rights, 1948.

CO2- To make a detailed understanding about the constitutional provisions and statutory institutions dealing with Human Rights.

CO3- To develop a critical assessment of the human rights issues faced by vulnerable sessions in the state of Kerala.

CO4- To have a critical understanding about the new dimensions of human rights in general.

ELECTIVE COURSES

Semester: VI

Course Title: LOCAL SELF GOVERNMENT INSTITUTIONS AND DEVELOPMENT INITIATIVES

Elective Course	Course Code	Instructional Hours	Credits
I	PS 1661.1	3	2

Course Learning Outcomes

CO_1 –To Understand local level governance system

CO_2 – To attain efficiency in formulating and coordinating NGO-PRI ventures.

CO_3 – Analyse the local level needs and functions as volunteers.

CO_4 – Trainer in Community Development Programmes.

Course Title: MEDIA AND POLITICS

Elective Course	Course Code	Instructional Hours	Credits
II	PS 1661.1	3	2

Course Learning Outcomes

CO_1 –To understand the crucial role of media and political communication in a democracy.

*CO_2 –T*o analyse the nature of Indian media in the background of globalisation and developmental problems.

CO_3 –To examine and understand changes in media such as new media, Political Reporting in India, consent manufacturing etc.

CO_4 – To attain practical knowledge and training in media related activities.

Course Title: PARLIAMENTARY PROCEDURES AND PRACTICES

Elective Course	Course Code	Instructional Hours	Credits
III	PS 1661.3	3	2

Course Learning Outcomes

CO_1 –To get awareness about the Parliamentary procedures and practices.

CO_2 –To equip the students to be part of the legislative members array.

.*CO_3* –To build career as trainers in Parliamentary procedures.

CO_4 – To cater as partners in Public Policy formulation process with political leadership and explore the possibilities of political representation.

COMPLEMENTARY COURSES

(For Economics, History and Sociology)

Course Title: INTRODUCTION TO POLITICAL SCIENCE

Semester: I

Complementary Course	Course Code	Instructional Hours	Credits
I	PS 1131.1	3	2

Course Learning Outcomes

CO1 – To understand the meaning nature and scope of Political science and its relation with other social science subjects.

CO2 – To analyse and compare various approaches to study political science

CO3 – To critically evaluate different ideologies in Political Science and its applicability

CO4 – To understand the structure and functions of state system and various institutions within it

Semester: II

Course Title: INDIAN GOVERNMENT AND POLITICS

Complementary Course	Course Code	Instructional Hours	Credits
II	PS 1231.3	3	2

Course Learning Outcomes

CO1 – To identify the prominent features of Indian Constitution.

CO2 – To create awareness about one's own rights and duties as well as a sense of respect and protection of other's rights

CO3 – To familiarize the students about the composition and functions of various organs of Government.

CO4 – To critically evaluate Indian political system and democratic processes.

Semester: III

Course Title: DYNAMICS OF INDIAN POLITICS

Complementary Course	Course Code	Instructional Hours	Credits
V	PS 1331.5	3	2

Course Learning Outcomes:

CO1 –Discuss and evaluate various types of federalism

CO2 –Study about the types of Party System, political Parties and Its Dynamics

CO3 –Understand the election process and reforms introduced by the election commission

CO4 – Critically analyse the major factors which pose threat to Indian Democracy and political System.

Semester: IV

Course Title: INTERNATIONAL POLITICS

Complementary Course	Course Code	Instructional Hours	Credits
VII	PS 1431.7	3	2

Course Learning Outcomes

CO1 – To understand the nature and the scope of International Relations.

CO2 – To acquire basic idea about basic concepts and theories of International Relations.

CO3 –To equip the students to evaluate nature of international organisations and its impact on global politics.

CO4 – To critically examine the nature of major issues in global politics.

COMPLEMENTARY COURSES

(For English, and Double Main Courses)

Semester: I

Course Title : CONSTITUTIONAL GOVERNMENT AND DEMOCRACY IN INDIA

Complementary Course	Course Code	Instructional Hours	Credits
II	PS 1131.2	3	2

Course Learning Outcomes

CO_1 –To understand the philosophy and basic features of the Constitution of India.

CO_2 – To understand the Fundamental Rights, Directive Principles and Fundamental Duties enshrined in the Constitution of India.

CO_3 – To familiarise the organisation and functions of the Legislature, Executive and Judiciary in India.

CO_4 –To analyse the electoral process and critically evaluate the nature and development of Party System in India.

Semester: II

Course Title: DECENTRALISATION AND LOCAL GOVERNANCE

Complementary Course	Course Code	Instructional Hours	Credits
VI	PS 1231.4	3	2

Course Learning Outcomes

CO_1 –To acquire knowledge on the concept of decentralisation and to be able to understand its theoretical perspective.

CO_2 – To understand the concept of participatory democracy and to internalise its values.

CO_3 – To evaluate the emergence of decentralisation in India and to analyse the features of 73rd and 74th Constitutional Amendment Acts.

CO_4 –To develop a critical perspective on grass-root democracy and nature of the functioning of self-help groups in Kerala.

Semester: III

Course Title: HUMAN RIGHTS

Complementary Course	Course Code	Instructional Hours	Credits
VI	PS 1331.6	3	2

Course Learning Outcomes

CO_1 –To understand the concept and significance of human rights.

CO_2 – To understand and analyse the role of the UN in protecting human rights.

CO_3 – To familiarise the human rights enforcement agencies in India.

CO_4 –To critically analyse the human rights issues of marginalised and vulnerable sections in India.

Semester: IV

Course Title : NEW SOCIAL MOVEMENTS

Complementary Course	Course Code	Instructional Hours	Credits
VIII	PS 1431.8	3	2

Course Learning Outcomes

CO_1 –To understand the basic concept and theories regarding new social movements.

CO_2 – To understand and analyse the concepts of gender and its importance in new social movements.

CO_3 – To familiarise and critically analyse the major Dalit/Tribal movements in Kerala.

CO_4 –To develop a critical perspective on the major movements in civil society.

First Degree Programme
BA Economics (CBCSS)
Programme Code: 150
AY 2021-22

PROGRAMME OUTCOMES (POs)	
PO 1	Students will acquire a basic understanding regarding the origin and evolution of various economic thoughts and theories.
PO 2	They will be able to apply the acquired knowledge on various mathematical and statistical tools to analyse economic problems.
PO 3	The students will be able to apply theoretical knowledge in understanding the real economy.

PROGRAMME SPECIFIC OUTCOMES (PSOs)	
PSO 1	The students will gain knowledge in analysing Government's annual Budget, current economic activities, current stock exchange rates, market prices, financial market fluctuations as well as contemporary issues in Indian economy and economics of changing world.
PSO 2	They acquire critical thinking skills to solve contemporary issues by applying the statistical and mathematical tools which they learn as a part of their curriculum.
PSO 3	The students learn to conduct and analyse empirical studies in Economics and related fields.

COURSE OUTCOMES (COs)

SEM	COURSE CODE	COURSE TITLE	COURSE OUTCOME	
I	EC1141	Core I Introductory Micro Economics (2019 admission onwards)	CO 1	The course help the students to develop a conceptual foundation and also make use ofanalytical methods in Microeconomics.
			CO 2	Give an idea on the behaviour of consumer and producer and related theories
			CO 3	This paper gives an idea about competitive markets and how different market structures work.
I	EC 1331	Complementary I Foundations of economic theory	CO 1	It will provide a basic understanding of economic concepts and theories.
			CO 2	The students will get an understanding of the micro economic theories.
II	EC1241	Core II Intermediate Microeconomics (2019 admission onwards)	CO 1	It intends to give basic understanding of Micro Economics
			CO 2	It will enable the students to get a brief idea about the factor input markets.
			CO 3	Provides the students an understanding about Behavioural economics and also the conceptsof risk and uncertainty.
			CO 4	They get knowledge about Social Interactions, Property and Power
			CO 5	Gives an idea about General Equilibrium,
			CO 6	The students also get to know about Economic Efficiency and cases of Market Failur**e.**

II	EC.1231	Complementary III Money and banking	CO 1	It will enable the students to get an idea about the nature and significance of money and banking.
			CO 2	Will be able to differentiate between various kinds of banks and its functioning
III	EC1321	Foundation Course II Informatics for Applied Econometrics (2019 admission onwards)	CO 1	It will help the students to acquire basic informatics skills and utilise the web resources to enhance their career and academics.
			CO 2	The course also provides an exposition to econometric concepts and techniques. This enables the students to conduct and criticize empirical studies in economics and related fields. It covers estimation and diagnostic testing of simple regression models using computer software.
			CO 3	Help students in preparing digital presentations and data analysis.
III	EC1341	Introductory Macroeconomics (2019 admission onwards)	CO 1	It will help the students to understand theoretical framework and the working of an economy as a whole.
			CO 2	The students will get an idea on national income calculation as well as building theories of macroeconomics. After introducing the multiplier and the Keynesian theory of income determination, the course further introduces the student to IS- LM analysis.
III	EC 1331	Complementary V Introduction to International trade and Public Economics	CO 1	It will help the students to analyse the basic theoretical framework of public finance and trade.
			CO 2	The students will be able to understand why nations do trade and their advantages.
IV	EC1441	Core IV Mathematical Methods for Economics (2019 admission onwards)	CO 1	It will enable the students to understand economic concepts with the aid of mathematical tools.
			CO 2	It familiarize them with the basic mathematical techniques used in economic analysis like equations, matrix and calculus.
IV	EC1442	Core V Macro Economics I (2019 admission onwards)	CO 1	Introduces students to the micro foundations of macroeconomics.
			CO 2	The students get an idea of balance and payments and exchange rate
			CO 3	The students will be able to analyse the problems of inflation and unemployment, economic growth and use of fiscal and monetary policies in an open economy
IV	EC 1431	Complementary VII Indian Economy since Independence	CO 1	The students will be familiarised with the various concepts of national income
			CO 2	They get an understanding about the different sectors of the Indian economy.

V	EC1541	Core V Methodology and Perspectives of Social Science	CO 1	The course intends to familiarize the students with the broad contours of Social Sciences, specifically Economics and its methodologies, tools and analysis procedures.
			CO 2	The course also aims to create an enthusiasm among students, incorporating various concepts and issues in economics.
V	EC1542	Core VII Statistical Methods for Economics	CO 1	The course is intended to familiarize the students with statistical tools and techniques and enable them to apply these tools in Economics
			CO 2	With the help of statistical techniques such as correlation, regression and probability the students can analyse data.
			CO 3	They will get a vivid description on inflation as well as trade cycles.
V	EC1543	Core VIII Readings in Political Economy	CO 1	The students get an understanding of the the interrelationships among individuals, governments, and public policy.
			CO 2	The students will be able to examine how economic theories such as capitalism or communism play out in the real world
			CO 3	It introduces students to different perspectives of political economy : the perspectives of Adam Smith , John Maynard Keynes etc. and also to Global Economic Crisis and its Aftermath, Issues in Political Economy and Development Thinking.
V	EC1544	Core IX Economic Growth and Development	CO 1	The students begin to understand basic concepts of Economic Growth and Development and thereby enable them to acquire multi dimensional aspects of developmental issues
			CO 2	It conveys knowledge about theoretical framework of Growth and Development under different Schools of economic thought.
			CO 3	Provides the students knowledge about Political institutions, the role of the state in Economic Development and problems that affect state Governance.
V	EC1545	Core X International Economics	CO 1	The student get to understand the basic concepts and theories of international trade and enable them to have a basic understanding of the emerging trends, issues and policies in the field of international economic system.
V	EC1551	Open I Human Resource management	CO 1	It providing students the basis for understanding the significance of human resource in the growth of our economy and society and to learn the ways for integrating HRM strategies in organisations
VI	EC1641	Indian Economy	CO 1	The course provides an understanding about growth process in Indian economy, sectoral aspects of the economy by focusing agriculture, industry and service sectors, relations of India with external sector and economic reforms.

VI	EC1642	Banking and Finance	CO 1	The course familiarizes the students with the basic concepts in Banking and Finance and develop a comprehensive knowledge on the role of banks in the operation of an economy.
			CO 2	It also enables them to know the operation of the Indian Financial System and activities in the financial markets.
VI	EC1643	Public Economics	CO 1	Introduces the students to the subject matter and scope of public economics, role of government, types of market failures and the concept of public good;
			CO 2	Students get a general understanding on the basic fiscal policy instruments.
			CO 3	They get awareness on public economics in India, with special focus on budgetary system and fiscal federalism.
			CO 4	Students are get an understanding of the basic concepts, components and processes of public economics, the skills essential for understanding and analysing the fiscal policy instruments and budgetary process in India. Students develop an interest in unraveling the fiscal issues of India. The basic orientation would mould public policy makers and analysts of the future.
VI	EC1644	Environmental Economics and Disaster Management	CO 1	The student get an understanding of Basic Concepts of environmental economics, Environmental Policy Tools for Analysis,
			CO 2	The students get the knowledge on the Environmental Policy Tools for Analysis
			CO 3	The student get an understanding of the Global Environmental Issues and Disaster Management in India.
VI	EC1661.1	Kerala Economy	CO 1	The students also get an understanding of the structural changes, Sector-wise contribution and features of the Kerala Economy since the formation of the state and enable the students to have a basic understanding of the emerging trends and issues of Kerala Economy .

VI	EC1645	Project/Dissertation	CO 1	It will help the students to identify an economic problem relevant to the study of economics.
			CO 2	The students could identify real world problems and by analysing them in a systematic way, suggest solutions to solve such problems.

VTM NSS College, Dhanuvachapuram

First Degree Programme in Commerce

Programme Code: 159

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: Students will be able to build a strong foundation of knowledge in different areas of commerce
PO2: Develop the skill of applying concepts and techniques used in commerce.
PO3: Develop an attitude of working efficiently and effectively in a business environment.
PO4: Get an exposure about entrepreneurship which will enable them to make decisions at personal and professional level

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: The students will gain knowledge in preparing financial statements in accordance with GAAP (Generally Accepted Accounting Principles) and they will employ critical thinking skills to analyze financial data as well as the effect of differing financial accounting methods on the financial statements.
PSO2 The students will know the fundamental statistical concepts and their basic application in science and society and they will know how to organize, manage and present data for appropriate statistical analysis.
PSO3: The students will apply the basic theories of economics in critical thinking and problem solving.

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes	
1	Foundation Course CO 1121. METHODOLOGY AND PERSPECTIVES OF BUSINESS EDUCATION	CO1	To understand business and its role in society
		CO2	To understand entrepreneurship and its heuristics
		CO3	To comprehend the business environment
		CO4	To enable the student to undertake business activities
	Core Course CO 1141: Environmental Studies	CO1	To enable the students to acquire basic ideas about environment and emerging issues about environmental problems
		CO2	To give awareness about need and importance of environmental protection
		CO3	To enable the students to acquire basic social issues and environment
		CO4	To give awareness about human population and environment
	Core Course CO 1142 MANAGEMENT CONCEPTS AND THOUGHT	CO1	To familiarize the students with various aspects of organizational management
		CO2	To familiarize the students with various aspects of financial management
		CO3	To familiarize the students with various aspects of operations management
		CO4	To familiarize the students with various aspects of marketing management
	Complementary Course CO 1131 MANAGERIAL ECONOMICS	CO1	To familiarize the students with the economic principles and theories
		CO2	To equip the students to apply the economic theories of different business situations
		CO3	To familiarize the students with pricing policy and practices
		CO4	To familiarize the students with business cycles
2	Foundation Course CO 1221- INFORMATICS AND CYBER LAWS	CO1	To review the basic concepts and fundamental knowledge in the field of informatics
		CO2	To create awareness about the nature of the emerging digital knowledge society and the impact of informatics on business decisions
		CO3	To create awareness about the Cyber world
		CO4	To create awareness about Cyber Regulations
	Core Course CO 1241 - FINANCIAL ACCOUNTING	CO1	To familiarize the students with accounting standards
		CO2	To familiarize the students with sectional and self balancing ledgers
		CO3	To equip students to prepare the accounts of special business areas
		CO4	To familiarize Students with depreciation accounting
	CORE COURSE CO1242- BUSINESS REGULATORY FRAMEWORK	CO1	To familiarize the students with the basic mathematical tools
		CO2	To impart skills in applying mathematical tools in business practice
		CO3	To motivate the students to take up higher studies in Econometrics
		CO4	To provide a brief idea about decision making by applying mathematical tools

	Complementary Course CO 1231 - BUSINESS MATHEMATICS	CO1	To familiarize the students with the basic mathematical tools
		CO2	To impart skills in applying mathematical tools in business practice
		CO3	To motivate the students to take up higher studies in Econometrics
		CO4	To provide a brief idea about decision making by applying mathematical tools
3	CORE COURSE CO 1341- ENTREPRENEURSHIP DEVELOPMENT	CO1	To familiarize the students with entrepreneurship development
		CO2	To create awareness about institutional support and incentives to entrepreneurs
		CO3	To provide a brief idea about Micro, small and medium enterprises
		CO4	To create awareness about setting up industrial units
	Core Course CO 1342 – ADVANCED FINANCIAL ACCOUNTING	CO1	To create awareness of accounts related to dissolution of partnership firms.
		CO2	To acquaint students with the system of accounting for different branches and departments.
		CO3	To enable students to prepare accounts of consignments
		CO4	To enable the students to prepare branch accounts
	Core Course CO 1343: COMPANY ADMINISTRATION	CO1	To familiarize the students about the salient provisions of Indian Companies Act 2013.
		CO2	To acquaint the students with Management and Administration of Companies
		CO3	To acquaint the students about the disclosure and transparency of accounts
		CO4	To aware the students about compliances, governance and CSR
	Elective Course I: Stream 2 – Co-operation CO 1361.2 - PRINCIPLES OF CO-OPERATION	CO1	To inculcate the principles of co-operation among the students
		CO2	To acquaint the students with the management and working of co-operatives
		CO3	To create awareness about evolution and development of co-operation
		CO4	To provide knowledge about development co-operation in foreign nations
	Complementary Course CO 1331 – E-Business	CO1	To provide students a clear-cut idea of e-commerce and e-business and their types and models.
		CO2	To acquaint students with some innovative e-business systems.
		CO3	To impart knowledge on the basics of starting online business
		CO4	To create awareness about E- governance

4	Core Course CO 1441 – INDIAN FINANCIAL MARKET	CO1	To provide a clear-cut idea about the functioning of Indian Financial Market.
		CO2	To create awareness about Capital market operations
		CO3	To create awareness about regulatory frame work of stock exchange
		CO4	To create awareness about capital market operations in India
	Core Course CO1442 BANKING AND INSURANCE	CO1	To provide a basic knowledge about the theory and practice of banking
		CO2	To provide a basic understanding of Insurance business
		CO3	To familiarize the students with the changing scenario of Indian Banking and Insurance
		CO4	To provide a brief idea about Central banking
	Core Course CO 1443 - CORPORATE ACCOUNTING	CO1	To create awareness about corporate accounting in conformity with the provisions of Companies Act, IAS and IFRS
		CO2	To help the students in preparation of accounts of banking and insurance companies
		CO3	To enable the students to prepare and interpret financial statements of joint stock companies
		CO4	To familiarize the students with internal reconstruction
	Elective Course II: Stream 2 – Co-operation CO 1461.2 – CO-OPERATIVE MANAGEMENT AND ADMINISTRATION	CO1	To familiarize the students with the principles and practice of cooperative management and administration
		CO2	CO2. To enable the students to identify the issues in the process of management and administration of cooperatives
		CO3	To familiarize the students about the issues in cooperative management
		CO4	To enable the students to understand cooperative education and training
	Complementary Course CO 1431 – BUSINESS STATISTICS	CO1	To enable the students to gain understanding of statistical techniques those are applicable to business
		CO2	To enable the students to apply statistical techniques in business
		CO3	To familiarize the students with regression analysis
		CO4	To enable the students to gain knowledge in Index numbers
5	Core Course CO – 1541: FUNDAMENTALS OF INCOME TAX	CO1	To familiarize the students about the fundamental concepts of Income Tax
		CO2	To enable the students to acquire the basic skills required to compute the tax liability of individual assessee with more emphasis on Income from Salaries and Income from House property

		CO3	To enable the students to understand about clubbing of income
		CO4	To enable the students about filing of income tax return
	Core Course CO 1542 – COST ACCOUNTING	CO1	To familiarize the students with cost and cost accounting concepts
		CO2	To make the students learn cost accounting as a distinct stream of accounting
		CO3	To familiarize the students with cost concepts
		CO4	To enable the students to prepare cost accounting records
	Core Course CO 1543: MARKETING MANAGEMENT	CO1	To provide an understanding of the contemporary marketing process in the emerging business scenario.
		CO2	To study various aspects of application of modern marketing techniques.
		CO3	To understand the marketing strategies adopted by business firms
		CO4	To understand the consumer behavior
	Open Courses (For students from Disciplines other than Commerce) CO 1551.1- FUNDAMENTALS OF FINANCIAL ACCOUNTING	CO1	To enable the students to acquire knowledge in the basic principles and practices of financial accounting
		CO2	To equip the students to maintain various types of ledgers and to prepare final accounts
		CO3	To enable the students to prepare cashbook and passbook entries
		CO4	To enable the students to prepare financial statements
	Elective Course III: Stream 2 – Co-operation CO 1561.2 – CO-OPERATIVE LEGAL SYSTEM	CO1	To give an insight into the prevailing co-operative legal system
		CO2	To enable the students to understand the legal framework of co-operation
		CO3	To understand the Appellate Authorities and settlement of Disputes
		CO4	To enable the students to understand the formation and winding up procedures of co-operatives
6	Core Course CO 1641 AUDITING	CO1	To provide students the knowledge of auditing principles, procedures and techniques in accordance with current legal requirements and professional standards
		CO2	To familiarize students with the audit of Companies and the liabilities of the auditor
		CO3	To create awareness about vouching and verification
		CO4	To enable the students to understand the duties and responsibilities of Auditors

	Core Course CO 1642: APPLIED COSTING	CO1	To acquaint the students with different methods and techniques of costing
		CO2	To enable the students to apply the costing methods and techniques in different types of industries
		CO3	To enable the students to apply marginal costing
		CO4	To enable the students to apply standard costing techniques
	Core course CO 1643 – MANAGEMENT ACCOUNTING	CO1	To enable students to acquire sound knowledge of concepts, methods and techniques of management accounting
		CO2	To make the students develop competence with management accounting usage in managerial decision making and control.
		CO3	To familiarize the students with funds flow and cash flow analysis
		CO4	To familiarize the students with budgeting
	Elective Course IV: Stream 2 – Co-operation CO 1661.2 – CO-OPERATIVE ACCOUNTING	CO1	To familiarize the students with the special features of accounting and audit in cooperatives
		CO2	To enable the students to understand the procedures of cooperative audit
		CO3	To enable the students to understand the procedures of cooperative Audit
		CO4	To enable the students to understand Cooperative Accounting

VTM NSS College, Dhanuvachapuram

First Degree Programme in Mathematics

Programme Code:220

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study
PO2: Ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.
PO3: Introduction to various courses like Calculus,Analysis,Linear Algebra,group theory, ring theory, number theory,probability theory and testing the hypothesis.
PO4: Ability to pursue advanced studies and research in pure and applied mathematics.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: Think in a critical manner.
PSO2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.
PSO3: Formulate and develop mathematical arguments in a logical manner.
PSO4: Acquire good knowledge and understanding in advanced areas of mathematics and statistics

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes
1	Core Course	CO1:To understand the basic calculus

	Methods of Mathematics MM 1141	CO2:To have a basic idea of concepts like limit, continuity, differentiation
		CO3:To understand integration techniques
		CO4:Basic idea of area, volume and length related concepts
		CO5:Introduction to hyperbolic functions and their application
	Complementary Course for Maths Descriptive Statistics ST 1131.1	CO1:To understand the characteristics of data and describing data through illustrating examples and exercise.
		CO2:To collect , organize and summarize data, create and interpret simple graph and compute appropriate summary statistics.
	Complementary Course for Physics Calculus with application in Physics–I MM 1131.1	CO1:To understand the basic idea of differentiation and its application.
		CO2:To understand the basic idea of integration and its application.
		CO3:To have a basic idea of concepts like infinite series and limits.
		CO4:To understand the basic idea of vector algebra.
	Complementary Course for Chemistry Calculus with application in Chemistry–I MM 1131.2	CO1:To understand the basic idea of differentiation and its application.
		CO2:To understand the basic idea of integration and its application.
		CO3:To have a basic idea of concepts like complex numbers and hyperbolic function.
		CO4:To understand the basic idea of vector algebra.
2	**Core Course**	CO1:To understand the concepts of sets and functions.

	Foundations of Mathematics MM 1221	CO2:To understand the way in which a mathematician formally makes statements and proves and disproves it.
		CO3:To understand the basic concept of vector calculus.
	Complementary Course for Maths Probability and Random variables ST 1231.1	CO1:To introduce the elementary ideas of probability and conditional probability.
		CO2:To understand basic concept of random variables and its properties.
	Complementary Course for Physics Calculus with application in Physics–II MM 1231.1	CO1:To understand the basic idea of complex numbers and hyperbolic function .
		CO2:To introduce partial differentiation .
		CO3:To have a basic idea of multiple integrals.
		CO4:To understand the basic idea of vector differentiation.
	Complementary Course for Chemistry Calculus with application in Chemistry–II MM 1231.2	CO1:To understand the basic idea of infinite series and limits.
		CO2:To introduce partial differentiation .
		CO3:To have a basic idea of multiple integrals.
		CO4:To understand the basic idea of vector differentiation
3	**Core Course:** Elementary Number Theory and Calculus	CO1:To study abstract algebraic structures.
		CO2:To introduce fundamental facts in elementary number theory

	-I MM 1341	CO3:To discuss the calculus of vector valued functions and multiple integrals.
	Complementary Course for Maths Statistical Distributions ST 1331.1	CO1:To introduce standard probability distributions (discrete and continuous).
		CO2:To have a basic idea of limit theorems.
		CO3:To understand sampling distributions.
	Complementary Course for Physics Calculus and Linear algebra MM 1331.1	CO1:To understand ordinary differential equations.
		CO2:To introduce vector integration-line, surface and volume integrals.
		CO3:To have a basic idea of Fourier Series.
		CO4:To understand basic linear algebra.
	Complementary Course for Chemistry Linear algebra,Probability theory & Numerical methods MM 1331.2	CO1:To understand basic linear algebra.
		CO2:To introduce probability and statistics.
		CO3:To introduce various methods for solving numerical equations.
4	**Core Course:** Elementary Number Theory and Calculus -II MM 1441	CO1:To introduce the fundamental facts in elementary number theory.
		CO2:To introduce calculus of vector values function.
		CO3:To introduce the concept of multiple integrals

	Complementary Course for Maths Statistical Inference ST 1431.1	CO1:To understand methods of statistical inference-point & interval estimation, testing of hypothesis, large sample test and small sample test, design of experiments.
	Complementary Course for Physics Complex analysis, special functions and probability theory MM 1431.1	CO1:To give a basic idea of advanced complex analysis.
		CO2:To know the special functions applied in mathematics.
		CO3:To understand probability and statistics.
	Complementary Course for Chemistry Differential equations, vector calculus and abstract algebra MM 1431.2	CO1:To understand ordinary differential equations.
		CO2:To introduce vector integration-line, surface and volume integrals.
		CO3:To understand the basic concepts of abstract algebra and representation theory.
	Practical Practical using Excel ST1432.1	CO1:To learn the use of statistical tools available in Excel and have hands on training in data analysis.
5	**Core Course** Real Analysis-I MM 1541	CO1:To understand the notion of real numbers.
		CO2:To create a basic idea of sequence of real numbers and concept of infinite summation

		CO3:To have a minimal introduction to the metric space structure of R so as to serve as a stepping stone into the idea of abstract topological spaces
	Core Course Complex Analysis –I MM 1542	CO1:To understand the basic complex function theory
		CO2:To understand complex numbers and analytic functions
		CO3:To understand the elementary function of complex numbers
		CO4:To create a basic idea of complex integration.
	Core Course Abstract Algebra-Group Theory MM 1543	CO1:To create a strong foundation in the theory of groups with numerous examples.
		CO2:To understand various groups and their properties.
		CO3:To understand various properties of permutation group
		CO4: To understand several notions of equivalence of groups with the help of examples.
		CO5:To understand important results in group theory like Lagrange's theorem and concepts related to it.
	Core Course Differential Equation MM 1544	CO1:To discuss how differential eqations arise in various physical problems and consider some methods to solve first order differential equation and second order linear equations.
	Core Course Mathematics Software-Latex and Sagemath	CO1:To introduce two software commonly used by people working in mathematics- a typesetting software Latex, and a mathematical computation and visualization software Sagemath.
		CO2:Introducing Latex enable students to typeset their project report.

		CO3:Introducing SageMath enable students to see how computational techniques can be put into action with the help of software so as to reduce human effort.
	Open Course Operational Research MM 1551.1	CO1:To understand the formulation of linear programming models.
		CO2:To create an idea of transportation problems and their related facts.
		CO3:To understand project management-project network, CPM, PERT.
6	**Core Course** Real Analysis-II MM 1641	CO1:To understand the notion of functions of real numbers.
		CO2:To create a basic idea of derivatives and their related concepts.
		CO3:To understand the theory of Riemann integration.
	Core Course Complex Analysis –II MM 1642	CO1:To understand the series representation for analytic function.
		CO2:To understand residue theory of complex numbers
		CO3:To understand the idea of conformal mapping.
	Core Course Abstract Algebra-Ring Theory MM 1643	CO1:To create a strong foundation in the theory of rings with numerous examples.
		CO2:To understand various rings and their properties.
		CO3:To understand various properties of ring homomorphism.
		CO4: To understand several notions like integral domain, UFD, ED with examples.
	Core Course	CO1:Introduce linear algebra methods and methods in it

	Linear Algebra MM1644	for solvingpractical problems.
		CO2:Introduce linear equations and their geometry
		CO3:To understand vector spaces with examples.
		CO4:To create a strong idea and concept of determinant.
		CO5:To analyse the matrix-eigen values,Diagonalization etc
	Core Course Integral Transforms MM 1645	CO1:To understand application of ordinary differential equation.
		CO2:To understand problem of basic integral calculus.
		CO3:To understand Laplace transform and Fourier series and transform.
	Core Course (Elective) Graph Theory MM 1661.1	CO1: To build an awareness of some of the fundamental concepts in graph theory.
		CO2:To develop better understanding of the subject so as to use these ideas skillfully in solving real world problems.

Semester 1 | Core Course I

PY 1141 : Basic Mechanics and Properties of Matter

36 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply the basic concepts of mechanics to rigid bodies	Understand & Apply	7
CO2	Understand conservation laws and apply the basic idea of work-energy theorem to physical systems	Understand & Apply	3
CO3	Understand Oscillations concept and apply the basic idea to understand pendulum concepts and wave motion	Understand & Apply	12
CO4	Understand and apply the basic ideas of elasticity concepts of physical systems	Understand & Apply	8
CO5	Understand and apply general ideas regarding surface tension concepts	Understand & Apply	3
CO6	Understand and apply the basic ideas of fluid dynamics	Understand & Apply	3

Semester 1 | Complementary Course I

PY 1141 : Basic Mechanics and Properties of Matter

36 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply the basic concepts of mechanics to rigid bodies	Understand & Apply	7
CO2	Understand conservation laws and apply the basic idea of work-energy theorem to physical systems	Understand & Apply	3
CO3	Understand Oscillations concept and apply the basic idea to understand pendulum concepts and wave motion	Understand & Apply	12
CO4	Understand and apply the	Understand &	8

	basic ideas of elasticity concepts of physical systems	Apply	
CO5	Understand and apply general ideas regarding surface tension concepts	Understand & Apply	3
CO6	Understand and apply the basic ideas of fluid dynamics	Understand & Apply	3

Semester 2 | Core Course II

PY 1241 : Heat and Thermodynamics

36 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply principles of heat to physical entities	Understand & Apply	8
CO2	Understand and apply thermodynamics and its applications	Understand & Apply	18
CO3	Understand and apply basic concepts of entropy	Understand & Apply	10

Semester 2 | Complementary Course II

PY1231.1 – Thermal Physics and statistical mechanics 36 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand ideas in transmission of Heat	Understand	14
CO2	Understand and apply thermodynamics	Understand & Apply	9
CO3	Understand entropy	Understand	9
CO4	Understand ideas of statistical mechanics	Understand	4

Semester 3 | Core Course III

PY 1341 : Electrodynamics

54 hours (Credit - 3)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply the basic concepts of Electrostatic fields	Understand & Apply	10
CO2	Understand electrostatic fields in matter	Understand	10
CO3	Understand and apply the concepts of magnetostatics	Understand & Apply	7
CO4	Understand the ideas of electromagnetic induction	Understand	7
CO5	Understand and analyze the properties of electromagnetic waves	Understand	6
CO6	Understand the behavior of transient currents	Understand	7
CO7	Understand and apply the basic aspects of ac circuits	Understand & Apply	7

Semester 3 | Complementary Course II

PY1331.1 – Optics, Magnetism and Electricity (54 hours)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Uunderstand and apply Interference	Understand & Apply	12
CO2	Understand Phenomenon of diffraction-	Understand	14
CO3	Understand Principle of operation of Laser and Fibre Optics	Understand	8
CO4	Understand Magnetic properties of matter-	Understand	10
CO5	Understand and apply Electricity concepts	Understand & Apply	10

Semester 4 | Core Course IV

PY 1441 : Classical and Relativistic Mechanics

54 hours (Credit - 3)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand the basic concepts of particle dynamics to physical systems	Understand	5
CO2	Understand the various conservation laws	Understand	6
CO3	Understand and apply the motion in a central force field.	Understand & Apply	10
CO4	Understand elementary ideas in collisions	Understand	6
CO5	Understand and apply Lagrangian dynamics	Understand & Apply	9
CO6	Understand and apply Hamiltonian dynamics	Understand & Apply	5
CO7	Understand and apply frames of reference, Galilean transformation and special theory of relativity.	Understand & Apply	13

Semester 4 | Complementary Course IV

PY1431.1 Modern PhysicsandElectronics 54 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply concepts in Modern Physics	Understand & Apply	20
CO2	Understand and apply elementary ideas of Quantum Mechanics	Understand & Apply	10
CO3	Understand and apply Electronics	Understand & Apply	16
CO4	Understand and apply Digital Electronics	Understand & Apply	8

Semester 5 | Core Course V

PY 1541 : Quantum Mechanics

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand the emergence of Quantum Mechanics	Understand	18
CO2	Understand and apply concepts of wave mechanics	Understand & Apply	22

CO3	Understand and apply the Schrödinger equation to simple physical systems	Understand & Apply	14
CO4	Understand general formalism of Quantum Mechanics	Understand	18

Semester 5 | Core Course VI

PY 1542 : STATISTICAL PHYSICS, RESEARCH METHODOLOGY AND

DISASTER MANAGEMENT

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand the basic principles of statistical physics and its applications	Understand	18
CO2	Understand the importance of research methodology	Understand	18
CO3	Understand and apply error analysis and its estimations	Understand & Apply	12
CO4	Understand disaster management, health emergencies, diseases and measures to prevent them.	Understand	24

Semester 5 | Core Course VII

PY 1542 : ELECTRONICS

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand basic circuit theory concepts	Understand	4
CO2	Understand the basic principles of diodes, rectifiers.	Understand	14
CO3	Understand the principles of transistor	Understand	16
CO4	Understand the working and designing of power amplifiers	Understand	5
CO5	Understand the working and designing	Understand	8

	of oscillators		
CO6	Understand concepts of fundamentals of modulation	Understand	5
CO7	Understand construction and operation of special devices.	Understand	8
CO8	Understand the basic operation of Op – Amp and its applications	Understand	12

Semester 5 | Core Course VIII

PY 1544 : ATOMIC & MOLECULAR PHYSICS

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand vector atom models	Understand	10
CO2	Understand the concepts in atomic spectra	Understand	14
CO3	Understand basis of X-ray diffraction	Understand	8
CO4	Understand molecular spectra	Understand	28
CO5	Understand Resonance spectroscopy principle and applications	Understand	12

Semester 5 | Core Course IX

PY 1551.5 : ENERGY PHYSICS

54 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand various forms of energy	Understand	7
CO2	Understand about solar energy and its applications	Understand	10
CO3	Understand about wind energy and its applications	Understand	9
CO4	Understand about biomass energy and its applications	Understand	9
CO5	Understand about tidal energy and its applications	Understand	9

CO6	Understand about consumption, crisis and impacts of energy sources	Understand	10

Semester 6 | Core Course X

PY 1641 : SOLID STATE PHYSICS

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand elementary ideas about crystal structure	Understand	18
CO2	Understand conduction in metals – free electron model	Understand	12
CO3	Understand the concepts in band theory	Understand	10
CO4	Understand basic concepts about dielectric properties of materials	Understand	12
CO5	Understand elementary ideas about magnetic properties of matter	Understand	12
CO6	Understand ideas about superconductivity	Understand	8

Semester 6 | Core Course XI

PY 1642 : NUCLEAR & PARTICLE PHYSICS

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand the general properties of nuclei	Understand	14
CO2	Understand ideas about various nuclear models	Understand	11
CO3	Understand about radioactivity emissions	Understand	12
CO4	Understand the various nuclear reactions and concepts	Understand	9
CO5	Understand particle detectors and accelerators	Understand	6
CO6	Understand the concept behind nuclear fission and fusion process	Understand	12
CO7	Understand basic features of particle physics	Understand	8

Semester 6 | Core Course XII

PY 1643 : CLASSICAL & MODERN OPTICS

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand interference of light	Understand	12
CO2	Understand and apply principles of diffraction	Understand & Apply	14
CO3	Understand ideas regarding dispersion	Understand	5
CO4	Understand basic ideas in polarization	Understand	12
CO5	Understand concepts in LASER and nonlinear optics	Understand	14
CO6	Understand fibre optics and applications	Understand	8
CO7	Understand principle and types of holography	Understand	7

Semester 6 | Core Course XIII

PY 1644 : DIGITAL ELECTRONICS & COMPUTER SCIENCE

72 hours (Credit - 4)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand and apply number systems, Boolean algebra , logic gates, arithmetic and sequential circuits	Understand & Apply	22
CO2	Understand the basics of computers and the memory systems.	Understand	11
CO3	Understand and apply programming in C++	Understand & Apply	25
CO4	Understand and apply 8085 microprocessors and its programs	Understand & Apply	

Semester 6 | Core Course XIV

PY 1661.4 : NANO SCIENCE AND TECHNOLOGY

54 hours (Credit - 2)

	Course Outcome	Class Level	Class sessions allotted(Hrs)
CO1	Understand basic ideas about nanotechnology	Understand	6
CO2	Understand electrical transport in nanostructure	Understand	15
CO3	Understand introductory quantum mechanics for nanoscience	Understand	8
CO4	Understand growth techniques of nanomaterials	Understand	9
CO5	Understand characterization tools of nanomaterials	Understand	10
CO6	Understand applications of nanotechnology	Understand	6

B. Sc. PHYSICS PROGRAMME SPECIFIC OUTCOMES

This undergraduate course in Physics would provide the opportunity to the students:

- To understand the basic laws and explore the fundamental concepts of physics
- To understand the concepts and significance of the various physical phenomena.
- To carry out experiments to understand the laws and concepts of Physics.
- To apply the theories learnt and the skills acquired to solve real time problems.
- To acquire a wide range of problem solving skills, both analytical and technical and to apply them.
- • To produce graduates who excel in the competencies and values required for leadership to serve a rapidly evolving global community.
- To motivate the students to pursue PG courses in reputed institutions.
-

Department of Chemistry 2021-22

VTM NSS College, Dhanuvachapurm

Programme Specific Outcomes (PSOs) and Course Outcomes (COs)

- A thorough understanding of Chemistry's words, ideas, procedures, principles, and experimental methodologies is possible.
- This course covers the fundamental ideas of chemical sciences as well as the instruments required for practising chemistry.
- The program's multidisciplinary approach allows students to apply their academic knowledge to societal industrial needs.
- They will be proficient in scientific problem solving, critical thinking, analytical reasoning, and experimentation.
- They can follow and comprehend general laboratory practise guidelines and safety precautions. They can do qualitative and quantitative chemical analysis using methods ranging from simple to advance.

Programme offered	**B.Sc Chemistry**
B.Sc Chemistry	
Programme Specific Outcome **(Core Course)**	PSO 1: Develop scientific outlook ,scientific attitude and scientific temper PSO 2: Develop skill in experimenting, analyzing and interpreting data PSO 3 Develop research attitude and adopt scientific method of identifying, analyzing and solving research problems in an innovative way PSO 4: Apply physical and mathematical theories and principles in the context of chemical science PSO 5: Use chemistry related soft wares for drawing structure and plotting graphs PSO 6: Use instruments- potentiometer, conductometer, pH meter and colorimeter. PSO 7: Acquire skill in safe handling of chemicals including hazardous materials. PSO 8: Identify the ingredients in household chemicals, use them in a critical way PSO 9: Predict analytical procedures, compare experimental, theoretical and graphical methods of analysis PSO 10: Predict reaction mechanism in organic reactions PSO 11: Understand the terms, concepts, methods, principles and experimental techniques of physical, organic, inorganic and analytical chemistry PSO12: Develop critical thinking and adopt healthier attitudes towards individual, community and culture through the course of Chemistry PSO13: Become cautious about environmental aspects and impact of chemicals in soil, water and air and adopt ecofriendly approach in all frontiers of life PSO 14: Become responsible in consumption of natural resources and adopt measures for sustainable development. PSO15: Visit Chemical factories and industries with scientific curiosity PSO 16: Develop writing skills and presentation skills using audio visual aids PSO 17: Compare and share knowledge in an interdisciplinary manner PSO18: Inculcate spirit of originality, novelty, and necessity in scientific research

		PSO 19: Contribute to the academic and industrial requirements of the society PSO 20: Get motivated to higher studies - PG Degree in different branches of Chemistry, BEd Degree in Physical Science, and job opportunities in industrial and non-industrial sectors PSO 21: Adopt safer life skills in a human friendly and eco-friendly way		
Course code	***Course Name***	***Course Outcome***	***Cognitive Level***	***PSO No.***
CH1141	Inorganic Chemistry I	CO 1: Discuss the course of development of structure of atom.	U	PSO1
		CO 2: Apply rules for filling electrons in classifying elements into s,p,d and f blocks	A	PSO10
		CO 3: Define various scales of electronegativities and theirapplications	U	PSO10
		CO 4: Define Effective nuclear charge and Slater's rules	U,A	PSO10
		CO 5: Discuss about diagonal relationship and anomalousbehaviourof hydrogen and other first element in each group.	U	PSO4
		CO 6: Correlate and predict general properties of s and p blockelements based on their electronic configuration.	A	PSO4
		CO 7: Realise applications of s and p block elements in sustainableand renewable energy sources.	A	PSO14
		CO 8: Define various concepts of acids and bases.	U	PSO11
		CO 9: Understand reactions in non-aqueous solvents.	U	PSO11
		CO 10: Realise various causes, effects and control measures of environmental pollution.	E	PSO13
		CO11: Review national movements for environmental protection.	U, A	PSO21
CH1221	Methodology and Perspectives of Sciences and General Informatics	CO 1: Appreciate the development of scientific theoriesthrough years with specific examples	U	PSO1
		CO 2: Develop curiosity and scientific attitude towards theapplication of chemistry in daily life	C	PSO1
		CO 3: Outline a procedure for experimentation	A	PSO2
		CO 4: Appraise the current development in Chemistry	E	PSO1
		CO 5: Identify the common ingredients of house holdsynthetic products	U	PSO8
		CO 6: Discriminate and classify chemicals used asdrugs,explosives,	U	PSO7
		CO 7: Get motivated in visiting chemical Industries	E	PSO15
		CO 8: Adopt safety measures in handling chemicals	A	
		CO 9: Draw titration curves and explain theory of volumetrictitrations	A	PSO2/PSO3
		CO 10: Select suitable indicators for acid base titration knowing the theories of acid base titration andindicators	A	PSO11
		CO 11: Develop computational skills	A	PSO5
		CO 12: Discuss separation techniques of filtration andchromatographic techniques	U	PSO3
CH1341	Inorganic Chemistry II	CO 1: Understand various theories of chemical bonding andtheir limitations.	U	PSO4
		CO 2: Predict stability of atoms and the nature of bondingbetween atoms.	U,A	PSO4
		CO 3: Discuss various applications of intermolecularinteractions	U	PSO4
		CO 4: Understand chemistry of glass, silicates and silicones	U	PSO7 PSO8
		CO 5: Discuss chemistry of Boron compounds, oxyacids andoxides of Phosphorous	U	PSO11
		CO 6: Understand refractory carbides, nitrides, borides	U	PSO11

		andsilicides.		
		CO 7: Describe various types of halogen compounds.	U	PSO3
		CO 8: Understand chemistry of noble gas	U	PSO3
		CO 9: Understand inorganic polymers and their applications.	U	PSO8
		CO 10: Distinguish between types of nuclear reactions.	U	PSO11
		CO 11: Describe measurement of radioactivity.	U	PSO2 PSO3
		CO 12: Discuss applications of radioactivity in various fields.	U	PSO3
		CO 13: Understand introductory concepts of nano chemistry	U,A	PSO18
		CO 14: Suggest methods of synthesizing nano materials.	U	PSO18
		CO 15: Appreciate the variety of applications of nanomaterials.	U,A	PSO18
CH1441	Organic Chemistry I	CO 1: Recall the fundamentals of organic chemistry.	R	PSO1
		CO 2: Apply the electron displacement effects to compareacidity, basicity and stability oforganiccompounds/intermediates.	A	PSO4
		CO 3: Judge the reaction mechanism of substitution andelimination on the basis of the structure of alkyl halides.	U	PSO10
		CO 4: Summarise the chemistry of reaction intermediates.	U	PSO10
		CO 5: Discussoptical,geometrical and conformationalisomerism of organic compounds.	U	PSO11
		CO 6: Use CIP rules to predict the configuration oforganiccompounds	A	PSO10
		CO 7: Differentiate photochemical and thermal reactions.	U	PSO11
		CO 8: Discuss theory of colour and constitution and themethodof synthesis of dyes	U	PSO8
		CO 9: Explain aromaticity, orientation effect and mechanism ofaromatic electrophilic substitution.	U	PSO10
		CO 10: Demonstrate the method of determination of reactionmechanism.	A	PSO10
CH1442	Lab-Inorganic Qualitative Analysis	CO 1: Obey Lab safety instructions, develop qualities ofpunctuality, regularity and scientific attitude, outlookand scientific temper (GOOD LAB PRACTICES)	U	PSO1
		CO 2: Develop skill in safe handling of chemicals, take precaution against accidents and follow safety measures	A	PSO2/ PSO8
		CO 3: Use glass wares,electric oven, burners and weighing balance	A	PSO1
		CO 4: Develop skill in observation, prediction and interpretation of reactions	A	PSO1
		CO 5: Detect solubility, and classify compounds according to their solubility	U	PSO3
		CO 6: Apply the principle of common ion effect and solubility product in the identification and separation of ions	A	PSO1& PSO2
		CO 7: Develop skill in preparing and purifying inorganic complex compounds	A	
		CO 8: Use filtration and chematographic techniques, vacuum pump and centrifugal pumps	U	PSO4
CH1541	Physical Chemistry I	CO 1: Identify, compare and explain the properties and behaviourof ideal and real gases, knowing kinetic theory of gases and different types of molecular velocities andcollision properties.	U	PSO11
		CO 2: Perform numerical problems of gases under a set	A	PSO2

		ofconditions		
		CO 3: Differentiate between amorphous and crystalline solids, understandanisotropy, symmetry and types of crystals, X- ray diffraction methods of study of crystal structure, identify the imperfections in crystalsunderstand the physical aspects of surface tension and viscosity of liquids and the basics of liquid crystals andtheir applications	U	PSO11
		CO 4: Representation of lattice planes and calculation of interplanar spacing, draw the crystal structures of NaCland CsCl	A	PSO9
		CO 5: Recalling the basic concepts of solutions, concentrationterms, Raoult's law and colligative properties	U	PSO9
		CO 6: Determination of colligative properties and molecularmass of solute	E	PSO9
		CO 7: Understand the working principle Electro-Chemical cells	U	PSO9
		CO 8: Design and Determine the potentials ofelectrochemicalsystems	E	PSO2
		CO 9: Assess the nature of electrolytes in terms of dissociation and ionic conductance of electrolytes in terms of mobilityof ions	E	PSO2
		CO 10: Integrate the theory into practical applications of conductometric titrations	A	PSO3
CH1542	Inorganic Chemistry III	CO 1: Discuss the electronic configuration and related properties of transition elements and inner transitionelements	U	PSO11
		CO 2: Understand preparation of selected transition metalcompounds,lanthanides and actinides	U,A	PSO11
		CO 3: Compare lanthanide and actinide contraction and theirconsequences.	U	PSO11
		CO 4: Name coordination complexes,organometallics, discusstheir properties and bonding	U	PSO11
		CO 5: Understand stability of complexes and factors affectingstability	U	PSO3
		CO 6: Describe isomerism in coordination compounds	U, A	PSO3
		CO 7: Discuss spectrochemical series, CFSE and theirconsequences	U	PSO3
		CO 8: Correlate geometry, stability and Jahn Teller effect andits causes	A	PSO11
		CO 9: Discuss reaction mechanisms and applications ofcoordination compounds	U	PSO11
		CO 10: Name and Classify organometallic compounds	U	PSO3
		CO 11: Discuss preparation and properties and bonding ofcarbonyls	U	PSO3
		CO 12: Identify the role of organometallic compounds in organicsynthesis	U	PSO10
		CO 13: Discuss the role of inorganic ions in biological systems and biochemistry of haemoglobin, myoglobin,cytochromes, iron sulphur proteins	U	PSO10
		CO 14: Discuss various bioinorganic processes likephotosynthesis, working of sodium potassium pump, etc	U	PSO17
		CO 15: Describe various aspects of metallurgyand instrumental methods of analyses viz., spectrophotometric methods, thermal methods and tools available to measurenanomaterials	U	PSO6
CH1543	Organic	CO 1: Describe the preparation of hydroxy, carbonyl &	R	PSO10

	Chemistry II	amino compounds, carboxylic acids and organo Mg, Li & Zn compounds.		
		CO 2: Distinguish primary, secondary & tertiary alcohols andamines.	U	PSO10
		CO 3: Write reaction steps in ascending & descending of alcohol and aliphatic acid series, interconversion of aldose and ketose, chain lengthening and shortening of aldoses.	U	PSO11
		CO 4: Explain the structure of glucose, fructose, sucrose, starch and cellulose.	U	PSO11
		CO 5: Predict the outcome and mechanism of simple organic reactions, using a basic understanding of the reactivity of functional groups	A	PSO10
		CO 6: Illustrate the use of organic reagents in synthesis.	A	PSO3 PSO10
		CO 7: Discuss fundamental principles of supramolecular and green chemistry	U	PSO13
CH1641	Physical Chemistry II	CO 1: Understandbasic concepts ofthermodynamicsspectroscopy and group theory	U	PSO11
		CO 2: Apply laws of thermodynamics in physical and chemicalprocesses and real system	A	PSO1
		CO 3: Classify processes, properties and systems on athermodynamic basis		
		CO 4: Discuss the second law of thermodynamics and assessthermodynamic applicationsusing second law of thermodynamics.	E, A	PSO3
		CO 5: Discuss basic concepts of statisticalthermodynamics	U	PSO11
		CO 6: Solve numerical problems based onthermodynamics andthermochemistry		PSO2
		CO 7: Understand the basics of spectroscopic techniques-Rotational, Vibrational and Raman Spectroscopy	U	PSO2
		CO 8: Compare NMR and ESR spectroscopy and theirapplications	U	PSO3
		CO 9: Evaluate physical and chemical quantities using non-spectroscopic techniques.	U, E	PSO4
		CO 10: Identify the elements of symmetry and determine thepoint groups of simple molecules	E	PSO11
		CO 11: Differentiate diamagnetism andparamagnetism,measurement of magnetic susceptibility	U	PSO11
		CO 12: Correlate dipole moment with geometry of molecules	R, U	PSO11
CH1642	Organic Chemistry III	CO 1: Outline the chemistry of simple heterocycliccompounds	U	PSO10
		CO 2: Classify amino acids, proteins, nucleic acids, drugs,terpenes, vitamins, lipids and polymers.	U	PSO10
		CO 3: Discuss the synthesis of amino acids, peptides, drugs and polymers.	U	PSO9
		CO 4: Describe the isolation and structure of terpenes and alkaloids.	R	PSO10
		CO 5: Explain the mechanism and techniques ofpolymerisation.	U	PSO11
		CO 6: Discuss the principle of UV, IR, NMR and Mass spectroscopy.	U	PSO2
		CO 7: Interpret spectroscopic data to elucidate the structure of simple organic compounds.	A	PSO18
		CO 8: Use the simple organic reactions to elucidate the structure of quinoline, piperine and conine.	A	PSO18

CH1643	Physical Chemistry III	CO 1: Recall the basic physical concepts in quantum mechanics, colloids, adsorption, Chemical Kinetics, catalysis, chemical and ionic equilibria, phaseequilibria, binary liquid systems and photochemistry	R	PSO4
		CO 2: Understand the basic concepts involved in quantum mechanics, colloids, adsorption, Chemical Kinetics, catalysis, chemical and ionic equilibria, phaseequilibria, binary liquid systems and photochemistry	U	PSO4
		CO 3: Derive and Interpret important theories and equationsinvolved in physical chemistry	A	PSO10
		CO 4: Demonstrate the origin of quantum numbers bycorrelating the Cartesian and spherical polar coordinates of hydrogen atom.	A	PSO10
		CO 5: Identify and recognize the applications of variousprinciples, equations andphysical processes	U	PSO10
		CO 6: Perform calculations involving physical concepts andequations	A	PSO4
		CO 7: Analyzegraphical representations (phase diagrams, two and three components, vapour pressure – composition and boiling point –composition, temperature-composition) present in physicalchemistry.	A	PSO9
		CO 8: Understand terminology	U	PSO11
		CO 9: Understand the effects of external influence on variouschemical processes	U	PSO1
		CO 10: Understand different laws and principles of physicalchemistry	U	PSO3
CH1544	Inorganic volumetric analysis	CO 1: Develop skill in selecting, primary and secondarystandards	U	PSO1
		CO 2: Develop skill in weight calculation of primary standards weighing by electronic balance, making of solutions of definite strength (standard solutions)	A	PSO2 PSO8
		CO 3: Use sophisticated glass wares, calibrate apparatus and develop skill in keen observation, prediction and interpretation of results	A	PSO1
		CO 4: Perform volumetric titrations under acidimetry-alkalimetry, permanganometry, dichrometry, iodimetry- iodometry,cerimetry, argentometry and complexometry	A	
		CO 5: Compare the advantages and disadvantages of different volumetric techniques	U	
		CO 6: Practice Punctuality and regularity in doing experiments and submitting Lab records	A	
CH1545	Physical chemistry experiments	CO 1: Develop Scientific outlook and approach inapplying principles of physical chemistry in chemical systems/reactions	U	PSO1
		CO 2: Use computational methods for plotting graph	A	PSO2/PSO8
		CO 3: Describe systematic procedures for physical experiments	U	PSO1
		CO 4: Acquire Instrumentation skill in using conductometer, potentiometer, refractometer, stalagmometer and Ostwald's viscometer.	U	PSO3
		CO 5: Compare theory with experimental findings	A	PSO1& PSO2
		CO 6: Practice Punctuality and regularity in doing experiments and submitting Lab records	A	

CH1551.1	Essentials of Chemistry (Open Course)	CO1:Understand the dvelopement of Chemistry as a discipline and the role of chemistry as a central science	U	PSO1
		CO2:Discuss the fundamental properties of atom, structure of atom, classification of elements in to a periodic table	U	PSO3
		CO 3: Become aware of environmental issues and itseffectto man and other living beings	U	PSO12
		CO 4: Review major environmental disasters and suggestcontrolling and preventive measures	U	PSO12
		CO 5: Discuss the laws of environmental protection Appreciate the evolution of Science and Chemistry and the early form of chemistry	U	PSO21
		CO 6: Differentiate between simple molecules and giant molecules and the bonding nature	U	PSO11
		CO 7:Explain different types of bonding and predict stability	U	PSO4
		CO 8:Identify house hold chemicals, their advantages and disadvantages	U	PSO12
		CO9:Critically select chemical soaps.detergents, dyes and drugs	A	PSO21
CH1644	Organic Chemistry experiments	CO 1: Develop curiosity in systematically analyzingorganic compounds	A	PSO1
		CO 2: Differentiate and identify organic compounds bytheir characteristic reactions towards standard reagents	U	PSO10
		CO 3: Confirm their findings by preparing solid derivatives, and thus understand reliability of experimental results	A	PSO2
		CO 4: Determine physical constants of organic compounds	A	PSO3
		CO 5: Separate organic compounds by TLC/paper/column chromatographic techniques	A	PSO3
		CO 6: Prepare soaps	A	PSO18
		CO 7: Apply the principles and techniques in organic chemistry, thereby developing skill in designing an experiment to synthesize and purify organic compounds	A	PSO18
		CO 8: Practice systematic scientific procedure andprepare adequate report of them	A	PSO16
		CO 9: Understand the chemistry behind organicreactions	A	PSO10
CH1645	Gravimetric Experiments	CO 1: Understand precipitation techniques inquantitative context	U	PSO1
		CO 2: Appreciate the application of silica crucible and sintered crucible in gravimetry	A	PSO2 PSO8
		CO 3: Practice technique of making, diluting solutions on quantitative basis	A	PSO1
		CO 4: Realise the factors affectingprecipitation/crystallisation	A	PSO1
		CO 5: Take precautionary measures in filtration, drying and incineration of precipitates	U	PSO3
		CO 6: Understand the principle of colorimetry to estimate Fe3+ and ammonia	A	PSO1& PSO2
		CO 7: Practice Punctuality and regularity in doing experiments and submitting Lab records	A	PSO18

CH1661.3	Polymer Chemistry (Elective Course)	CO 1: Differentiate between Natural and synthetic polymers	U	PSO14
		CO 2: Understand polymerization process of monomericunits	U	PSO12
		CO 3: Critically analyse the advantages and disadvantagesof polymers	A	PSO12
		CO 4: Analyse different Applications of Polymers	A	PSO4
		CO 5: Identify the properties of polymers.	U	PSO11
		CO 6: Realize the necessity of biodegradable substitutes for a sustainable development	U,A	PSO12 PSO12
CH1646	Project and Factory visit	CO 1: Develop an aptitude for research in chemistry	U, A	PSO1
		CO 2: Practice research methodology and literature search	A	
		CO 3: Critically choose appropriate research topic and presentation	A	PSO2 PSO8

Complementary courses

Programme Specific Outcome	Complementary Courses in Chemistry aim at certain Programme Specific Outcome (PSO) in consistent with those of the major courses. PSO1: Obey Lab safety instructions, develop qualities of punctuality, regularity and scientific attitude, out look and scientific temper (Good Lab Practices) PSO2: Develop skill in safe handling of chemicals and glass wares, take precaution against accidents and follow safety measures. PSO3: Avoid random usage of dangerous chemicals and Use chemicals in a critical way PSO 4: Acquire a comprehensive knowledge of Chemistry, its impact on human, society and the environment to lead a better life in harmony with nature**.**		
Course code	***Course Name***	***Course Outcome***	***Cognitive Level***
CH1131 .1	Theoretical And Analytical Chemistry (Complementary Chemistry for physics majors)	CO 1: Discuss the rules for filling electrons in atomic orbitals	U
		CO 2: Correlate stability of atom with electronic configuration	U
		CO 3: Discuss theories of chemicalbondingand theirlimitations	U
		CO 4: Predictgeometryofmoleculesfromthetypeof hybridisation	U, A
		CO 5: Recognise fundamentals of thermodynamics and the predict spontaneity of reactions	U, A
		CO 6: Derivethermodynamicpropertiesofsystemsin equilibrium	A
		CO 7: Critically select suitable indicators for acid base and redoxtitrations	E, A
		CO 8: Appreciate the application of common ion effect and solubility product in precipitation and intergroup separation of cations	A
		CO 9: Discuss the basic principles of paper chromatography and thin layer chromatography	U
		CO 10: Solve numerical problemson bond order, molarity, normality and Lattice energy	A
CH1131 .3	Analytical And Environmental Chemistry (Complimentary Chemistry for Botany majors)	CO 1: Discuss Bohr atom model and represent electronic configuration of elements	U
		CO 2: Predict structure of simple molecules based on the concept of hybridisation	A
		CO 3: Identify hydrogen bonding in relation to physical and chemical properties	U
		CO 4: List the various chemical bonds	R
		CO 5: Apply the VSEPR theory to explain the geometry of molecules	A
		CO 6: Discuss the theory of volumetric analysis	U
		CO 7: Become aware of threat of chemical pollutants air, water and soil	A
CH1131 .4	Theoretical Chemistry (Complimentary Chemistry for zoology	CO 1: Differentiate particle nature and wave nature of matter	U
		CO 2: Associate wave concept with microscopic matter	A
		CO 3: Understand the relevance of periodic classification of elements	U
		CO 4: Describe the various types of chemical bonds	R
		CO 5: Apply the VSEPR theory to explain the geometry of molecules	E,A

	majors)	CO 6: Comprehend different segments of titrations	U
		CO 7: Apply the principles of colorimetry to estimate ions and elements	A
		CO 8: Recognize the factors affecting environment and solutions for it	E
CH1231 .1	Physical And Industrial Chemistry (Complimentary Chemistry for Physics majors)	CO 1: Define enthalpies of formation, combustion, neutralization, solution and hydration reactions	R,U
		CO 2: Apply Hess's law for thermo chemical calculations	A
		CO 3: Predicttheeffectoftemperaturepressureand concentration on a system in equilibrium based on Le Chatelier principle	U
		CO 4: Classify acidic and basic compounds in accordance with different concepts.	U
		CO 5: Suggest method for determination of pH	A
		CO 6: Discuss petrochemicals and their applications	
		CO 7: Realise the depletion of petroleum products and the need for alternate sources of energy.	U
		CO 8: Recognise the necessity of sustainable development	U
		CO 9: Appreciate the role of solar energy in photosynthesis and discuss methods of solar energy harvesting	U
		CO 10: Become responsibleinthe consumptionofnatural resourcesand avoid factors affecting the harmony of nature from the equilibrium concept.	A
		CO 11: Discuss and the Illustrate general methods and techniques in metallurgy	U,A
		CO 12: Predict methods of concentration, extraction metals from their ores	A
		CO 13: Discuss theapplications of Van Arkel method and zone refining in metallurgy	U
CH1231 .3	Inorganic and bioinorganic chemistry (Complimentary Chemistry for botany majors)	CO 1: Understand the biological and environmental aspects of organic compounds	U
		CO 2: Comprehend the meaning of stability of nucleus	R
		CO 3: Summarise the applications of radioactivity	U
		CO 4: Predict the properties of transition metal complexes	A
		CO 5: Apply complexation reactions in qualitative and quantitative analysis	U
		CO 6: Appreciate biological processes like photosynthesis, respiration etc	E
		CO 7: Realise the use of trace elements in biochemical processes	A
CH1231 .4	Inorganic Chemistry (Complimentary Chemistry for zoology majors)	CO 1: Understand the biological and environmental aspects of organic compounds	U
		CO 2: Comprehend the meaning of stability of nucleus	R
		CO 3: Summarise the applications of radioactivity	U
		CO 4: Predict the properties of transition metal complexes	A
		CO 5: Understand the applications of metal complexes	U
		CO 6: Learn to appreciate biological processes like photosynthesis, respiration etc	E
		CO 7: Discuss the biochemistry of trace elements	U, E
CH1331.1	Physical Chemistry (Complimentary Chemistry for physics majors)	CO 1: Discuss on electrochemical cells and emf measurements	U
		CO 2: Apply the principles of physical Chemistry in Catalysis andphotochemistry	A
		CO 3: Draw unit cells and structure of crystals	U
		CO 4: Understand the effect of temperature onmolecular velocities ofgases	R
		CO 5: Calculate cell emf and electrode potentials	A
		CO 6: Construct electrochemical cells	A
		CO 7: Classify between Photochemical reactions	U
		CO 8: Relate electrolyte concentration with emf	E
CH1331 .3	Physical Chemistry (Complimentar	CO 1: Classify reactions on the basis of order and molecularity	A
		CO 2: Understand the effect of temperature on reaction rates	U
		CO 3: Understand the theories of catalysis	U

	y Chemistry for botany majors)	CO 4: Categorize compounds into acids and bases	U
		CO 5: Discuss the principle and application of UV and NMR spectroscopy.	U, A
		CO 6: Understand the properties of colloids and their application	U
CH1331 .4	Organic Chemistry(Complimentary Chemistry for zoology majors)	CO 1: Classify carbohydrates, aminoacids, proteins, nucleic acids, lipids, polymers and drugs.	U
		CO 2: Summarize optical, geometrical and conformational isomerismDraw the structure of simple carbohydrates	U
		CO 3: Discuss the structure of proteins	U
		CO 4: Explain the synthesis of amino acids, peptide,drugs	U
		CO 5: Predict absolute configuration of stereo centers	A
CH1431 .1	Spectroscopy and Advanced Material (Complimentary Chemistry for physics majors)	CO 1: Discuss the principle and applications of rotational, vibrational,electronic and NMR spectroscopy.	U
		CO 2: Illustrate isomerism, geometry and bonding in co-ordinationcomplexes	A
		CO 3: Appreciate the use of co-ordination compounds in qualitative andquantitative analysis	U
		CO 4: Solve numerical problems relating to nuclear chemistry	R
		CO 5: Appreciate the use of biodegradable polymers	A
		CO 6: Apply the importance energy and environment conservation	U
		CO 7: Get insight to the emerging area of nano and advanced materials	A
CH1431 .3	Organic Chemistry (Complimentary Chemistry for botany)	CO 1: Discuss the principle and applications of chromatography and electrophoresis	U
		CO 2: Classify amino acids, proteins, carbohydrates and vitamins. Identify and distinguish the structure of amino acids, peptides, proteins and nucleic acids.	U
		CO 3: Summarise the concept of optical isomerism.	U, A
		CO 4: Categorise crude drugs and explain the method of evaluating crude drugs.	U
		CO 5: Draw the structure of aminoacids, carbohydrates, simple optical isomers	R
		CO 6: Explain the preparation and reactions of amino acids and carbohydrates	U
		CO 7: Discuss the extraction process and general properties of natural products -oils, fats, terpenes and alkaloids.	U
CH1431 .4	Physical Chemistry (Complimentary Chemistry for zoology)	CO 1: Classify reactions on the basis of order and molecularity	U
		CO 2: Discuss different concepts of acids and bases	R,U
		CO 3: Understand different techniques used for the study of colloids	U
		CO 4: Calculate rate and order of reactions	E,A
		CO 5: Review the principles underlying the working of sophisticated instruments	U
CH1432 .1	Lab Course for Physics Majors (Complimentary Chemistry)	CO 1: Obey Lab safety instructions, develop qualities of punctuality, regularity and scientific attitude, outlook and scientific temper(GOOD LAB PRACTICES)	E, U
		CO 2: Develop skill in safe handling of chemicals, take precautionagainst accidents and follow safety measures	A
		CO 3: Develop skill in observation, prediction and interpretation ofreactions	U, A
		CO 4: Apply the principle of common ion effect and solubilityproduct in the identification and separation of ions	A
		CO 5: Develop skill in weight calculation for preparing standardsolutions	A
		CO 6: Perform volumetric titrations under acidimetry-alkalimetry,permanganometry, dichrometry, iodimetry-iodometry,cerimetry, argentometry and complexometry	A
		CO7: Determine physical constants	A
CH1432 .3	Lab Course for Botany Majors (Complimentary Chemistry)	CO 1: Obey Lab safety instructions, develop qualities of punctuality,regularity and scientific attitude, outlook and scientific temper (GOOD LAB PRACTICES)	R, U, A
		CO 2: Develop skill in safe handling of chemicals, take precautionagainst	U, A

		accidents and follow safety measures	
		CO 3: Develop skill in observation, prediction and interpretation ofreactions	U, A
		CO 4: Prepare organic compounds, Purify and recrystallise	U, A
		CO 5: Develop skill in weight calculation for preparing standardsolutions	E, A
		CO 6: Perform volumetric titrations under acidimetry-alkalimetry,permanganometry, dichrometry, iodimetry-iodometry,cerimetry, argentometry and complexometry	A
		CO 7: Conduct chromatographic separation of mixtures	A
CH1432 .4	Lab Course for Zoology Majors (Complimentary Chemistry)	CO 1: Obey Lab safety instructions, develop qualities of punctuality, regularity and scientific attitude, outlook and scientific temper(GOOD LAB PRACTICES)	R,U,A
		CO 2: Develop skill in safe handling of chemicals, take precautionagainst accidents and follow safety measures	U,A
		CO 3: Develop skill in observation, prediction and interpretation ofreactions	U,A
		CO 4: Prepare organic compounds, Purify and recrystallise	U,A
		CO 5: Develop skill in weight calculation for preparing standardsolutions	E,A
		CO 6: Perform volumetric titrations under acidimetry-alkalimetry,permanganometry, dichrometry, iodimetry-iodometry,cerimetry, argentometry and complexometry	A
		CO 7: Conduct chromatographic separation of mixtures	A

V.T.M. N.S.S. COLLEGE, DHANUVACHAPURAM
DEPARTMENT OF BOTANY BO 245

PROGRAMME OUTCOMES – B.Sc. BOTANY

- To impart knowledge of Science is the basic objective of education.
- To develop scientific attitude is the major objective to make the students open minded, critical and curious.
- To develop skill in practical work, experiments and laboratory materials and equipments along with the collection and interpretation of scientific data to contribute the science.
- To understand scientific terms, concepts, facts, phenomenon and their relationships.
- To make the students aware of natural resources and environment.
- To provide practical experience to the students as a part of the course to develop scientific ability to work in the field of research and other fields of their own interest and to make them fit for society.
- The students are expected to acquire knowledge of plant and related subjects so as to understand natural phenomenon, manipulation of nature and environment for the benefit of human beings.
- To develop ability for the application of the acquired knowledge to improve agriculture and other related fields to make the country self reliant and sufficient.
- Understand and appreciate the role of biology in societal issues, such as the environment and biological resources, biodiversity, ethics and human health and diseases.
- To enrich the students with the latest developments in the field of Information technology, Biotechnology, Bio informatics and other related fields of research and development.
- To create enthusiasm to understand more about the beautiful planet Earth and to give awareness to the public the need to protect the planet from all kinds of exploitation.
- To keep the scientific temper which the student acquired from school level and to develop a research culture.

V.T.M. N.S.S. COLLEGE, DHANUVACHAPURAM
DEPARTMENT OF BOTANY BO 245

COURSE OUTCOMES – B.Sc. PROGRAMME

Semester : 1st **Course Code BO 1141**

Course Name : Angiosperm Anatomy and Reproductive Botany and Palynology

- Students are able to understand the complexities of cell wall organization, microscopic and sub microscopic structures.
- Students can distinguish various anatomical features of monocots and dicots (stem and root) with respect to permanent tissues and tissue systems.
- Identify and differentiate male and female gametophyte development in angiosperms.
- Distinguish monocot and dicot embryo and the basic features of pollen grains.

Semester : 2nd **Course Code BO 1221**

Course Name : Methodology and Perspectives in Plant Science

- Students will be familiarized with the fundamental characteristics of Science.
- Develops an idea about involvement of science in improvement of human life.
- Create awareness of scientific approach towards life and learns the values of ethics in science.
- Develops skills to interpret scientific data using basic statistical methods.
- Create skills to prepare specimens for microscopic and gross anatomical studies and familiarize with different microscopic methods for sample analysis.
- Students become able to prepare buffers, measure pH, separate plant pigments and construct absorption spectrum of a sample.

Semester : 3rd **Course Code BO 1341**

Course Name : Microbiology, Phycology, Mycology, Lichenology and Plant Pathology

- The student can prepare micro preparations and identify the thallus and reproductive structures of lower plant groups like algae, fungi and lichen

V.T.M. N.S.S. COLLEGE, DHANUVACHAPURAM
DEPARTMENT OF BOTANY BO 245

- An awareness created among students about various microbes, structure and economic importance
- Students can use effectively the methodology to isolate and identify bacteria present in curd and root nodules
- Can identify various plant diseases, etiology of pathogens and control measures
- Able to prepare fungisides like tobacco decoction and Bordeaux mixture.

Semester : 4th **Course Code BO 1441**

Course Name : Bryology Pteridology, Gymnosperms and Paleobotany

- Students are able to make micropreparations of thallus and reproductive structures of as well as better understanding of the life cycle of selected members of Bryophytes, Pteridophytes and Gymnosperms
- Can understand the economic and ecologic importance of lower groups of plant kingdom
- Better understanding of fossilization and importance of Palaeobotany
- Identify various parts of fossil plants through micro slides

Semester : 5th **Course Code BO 1541**

Course Name : Angiosperm Morphology, Systematic Botany, Economic Botany, Ethnobotany and Pharmacognosy

- Ability to identify different types of inflorescences, flowers and fruits, their arrangement and relative position.
- Familiarization of basic rules of Angiosperm classification and different types of classification.
- Preparation and maintenance of Herbarium.
- Identification of plants to their respective families.
- Understanding of ethnobotanical and pharmacological significance of plants.

Semester : 5th **Course Code BO 1542**

V.T.M. N.S.S. COLLEGE, DHANUVACHAPURAM
DEPARTMENT OF BOTANY BO 245

Course Name : Environmental Studies and Phytogeography

- Develops awareness about natural resources, its conservation and importance of sustainable lifestyles.
- Understands and identify different ecosystems and ecosystem processes.
- Develops deep understanding about biodiversity and importance of its conservation
- Develops skills to identify polluted sites, its major pollutants and recognize the need to mitigate environmental pollution
- Awareness about different types of disasters and to adopt strategies to overcome and reduce the impact
- Identify the importance of phytogeographical sites in India

Semester : 5th **Course Code BO 1543**

Course Name : Cell Biology, Genetics and Evolutionary Biology

- Students have a better understanding of cell structure and cell organelles
- Can prepare microslides of cell divisions and identify various stages of mitosis and meiosis
- Able to workout problems in classical genetics, modified mendelian ratios and population genetics
- Able to understand genetic diseases and their inheritance # Understand evolutionary principles, theories and methods of speciation

Semester : 5th **Course Code BO 1551.2**

Course Name : Mushroom Cultivation and its Marketing

- Identify mushrooms, structure and mode of propagation
- Understand commercial ways of mushroom cultivation, marketing and their nutritional value
- Better understanding of methods of processing and storage of mushrooms

V.T.M. N.S.S. COLLEGE, DHANUVACHAPURAM
DEPARTMENT OF BOTANY BO 245

Semester : 6th **Course Code BO 1641**

Course Name : Plant Physiology and Biochemistry

- Students get a clear understanding of the basic concepts of Physiology and Biochemistry.
- Understands photosynthesis, respiration, plant growth regulators, nitrogen metabolism and stress physiology
- Familiarization of basic physiological practical procedures.
- Students get the basic knowledge about the macromolecules and their overall role in cell metabolism; and secondary plant products.
- Identification of protein, reducing and non-reducing sugar by qualitative tests.

Semester : 6th **Course Code BO 1642**

Course Name : Molecular Biology, General informatics and Bioinformatics

- Understands DNA as genetic material, develops awareness about chemical composition and different types of DNA including their replication method.
- Students understand various molecular aspects of gene expression and regulation of genes
- Develops awareness about various academic services applied for their studies
- Awareness about features of a computer, different application and system software.
- Recognizes the need for safe use of internet and also become aware about health issues related to over usage of computers and mobile phones as well as cybercrimes and cyber laws.
- Students will be familiarized to molecular phylogeny, Biological Databases, Sequence analysis, Genomics, Proteomics & Comparative genomics

Semester : 6th **Course Code BO 1643**

Course Name : Plant Breeding, Horticulture and Research Methodology

- Students able to identify and use various horticultural implements

- Can propagate plants through grafting, budding and layering &can prepare manures, fungicides etc.
- Can effectively do plant breeding methods and understands ttheir practical application in betterment of food crops
- Can devise an experimental design and carry out a project
- Students trained about various steps for the conduct of a research project and write a project report

Semester : 6th **Course Code BO 1651**

Course Name : Biotechnology and Nano biotechnology

- Students are familiarized in preparation of culture solutions, sterilization, inoculation of explants, induction of callus and morphogenesis
- They are familiarized in biotechnological tools like RFLP, RAPD and PCR techniques
- Use of equipments and tools in biotechnology
- Understanding of ethical and legal issues in biotechnology and basic knowledge about IPR
- Better understanding of nanosystems, biosensors and application of nanotechnology in biological systems

VTM NSS College, Dhanuvachapuram

First Degree Programme in ZOOLOGY

Programme Code: 250

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: Provide students with the opportunity to study animal life in all its diversity, at scales that range from the sub cellular to that of the ecosystem.
PO2: Understand the nature and basic concepts of cell biology, biochemistry, Taxonomy and Ecology.
PO3: Emphasizes a mix of laboratory expertise, practical field skills and traditional as well as modern taxonomy.
PO4: Understand the applications of biological sciences in Apiculture, Sericulture, Aquaculture and Agriculture.
PO5: To provide the students with a suitable foundation for careers in for example research, teaching, the biological control of pests or the conservation of endangered species in the wild.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: Application of biological knowledge in practical fields.
PSO2: Understand the unity and diversity of life and their ecological and evolutionary significance.
PSO3: Acquire basic skills in the observation and study of nature.
PSO4: Develop positive attitude towards sustainable development.

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes
1	Core Course I - **ZO1141 Animal Diversity I**	CO1: Provide students with an in-depth knowledge of the diversity in form, structure and habits of invertebrates.
		CO2: Learn basics of systematics and understand hierarchy of different categories.
		CO3: Learn diagnostic characteristics of different phyla through brief studies of examples.
		CO4: Obtain overview of economically important invertebrates.
		CO5: Classify all the invertebrate phyla up to class.
	Complementary Course I - **ZO1131 – Animal Diversity I**	CO1: Student gets concrete idea about evolution, hierarchy and classification of invertebrate phyla
		CO2: Learn basics of systematic by learning the diagnostic

		and general characters of various groups
		CO3: Student gets an overview of typical examples in each phyla
		CO4: Study the economic importance of invertebrates with special reference to insect pests
2	Core Course II - **ZO1241 Animal Diversity II**	CO1: Provide students with an in-depth knowledge of the diversity in form, structure and habits of vertebrates
		CO2: Learn general characters and classification of different classes of vertebrates.
		CO3: Understand the vertebrate evolutionary tree.
		CO4: Obtain overview of economically important vertebrates.
	Complementary Course II – **ZO1231 Animal Diversity 2**	CO1: Understand the nature and bionomics of vertebrates
		CO2: Understand the evolution, hierarchy and classification of different classes of chordates
		CO3: Get an idea on the morphology and physiology of various organisms
		CO4: Study the adaptations and economic importance of specific vertebrates
3	Foundation Core Course II- **ZO1341 Experimental Zoology, Instrumentation, Biostatistics and Bioinformatics**	CO1: Introduce the methodology and perspectives of science in general so as to enable the students to systematically peruse Zoology in relation to other disciplines that come under the rubric of science.
		CO2: Learn fundamental characteristics of science as a human enterprise.
		CO3: Understand how science works.
		CO4: Study to apply scientific methods.
	Complementary Course III - **ZO1331 – Functional Zoology**	CO1: Students get familiarized with the physiology of human body and to take precautionary measures to safe guard own health.
		CO2: Study the structure and function of different systems in human body
		CO3: Understand the etiology of common physiological disorders, syndromes and diseases
4	Core Course III- **ZO1441 Ecology, Habitat Destruction and Disaster Management**	CO1: Basic knowledge ecosystem, food chain, food web and energy flow.
		CO2: General awareness on pollution and their impacts.
		CO3: Impart basic knowledge on ecosystem and their functioning.
		CO4: Learn about various types of anthropogenic pressures on ecosystem, related degradation and remedial measures.
		CO5: Get awareness on toxicants, their impacts on human health and environment and remedial measures

	Core Course IV- **ZO1442 Practical I – Instrumentation, Animal Diversity I and Animal Diversity II**	CO1: Students learn anatomy through simple dissections and mounting on permitted species.
		CO2: Students get familiarized with various organ systems by examining approved animals.
		CO3: Emphasize the adage that 'seeing is believing' by observing typical examples and economically important specimens.
		CO4: Students learn the working principle of different scientific instruments.
		CO5: Students become familiar with economically important species.
		CO6: Strengthen what students studied in theory by giving them an opportunity to have first-hand experience in lab as well as outside.
	Complementary Course IV - **ZO1431 – Applied Zoology**	CO1: Student gets an idea of the applied branches of zoology with a view of educating youngsters on the possibilities of self employment
		CO2: Study the basic principles of culture and breeding of common edible and ornamental fishes of Kerala and art of aquarium keeping
		CO3: Understand the human genomics and reproductive biology
		CO4: Understand the stem cell research and pre-natal diagnostics techniques
	Complementary Course V - **ZO1431 Practical 1-Animal Diversity I and II, Functional Zoology and Applied Zoology**	CO1: Students get Hands on training experience in anatomy through simple dissections and mounting
		CO2: Students get familiarized with conventional organ system in common easily available animals
		CO3: Emphasize the adage that 'seeing is believing' by observing typical examples and economically important specimens.
		CO4: Students carry out clinical analysis of blood and urine
5	Core Course V - **ZO1541 Cell and Molecular Biology**	CO1: Acquire sufficient knowledge on the fundamental structure, function and biochemistry of the cell.
		CO2: Understand the principles of molecular biology and gene manipulation.
		CO3: Learn ultra structure of prokaryotic and eukaryotic cells
		CO4: Understand the fundamental difference between prokaryotic and eukaryotic cell.
		CO5: Learn the structure, replication and modification of the genetic material of eukaryotes.
		CO6: Understand the mechanism of gene expression and gene regulation.
		CO 7: Get awareness on bacterial recombination.
		CO 8: Acquire scientific knowledge on cancer and ageing.

	Core Course VI - **ZO1542 Genetics and Biotechnology**	CO1: Learn structure of gene
		CO2: Learn the underlying genetic mechanism operating in human and state of art of bio-techniques.
		CO3: Students develop a proper understanding on the relationship between heredity and variation.
		CO4: Learn the mechanism of crossing over and inheritance pattern in human.
		CO5: Students become aware of different genetic syndromes and the possible ways to reduce its occurrence.
		CO6: Students understand the principles and techniques involved in DNA technology and get an overview of modern techniques like PCR, hybridoma technology, gene therapy and human cloning.
	Core Course VII - **ZO1543 Immunology and Microbiology**	CO1: Understand the scope and importance of clinical immunology.
		CO2: Understand the principle and mechanism of immunology.
		CO3: Learn malfunctioning and disorders of immune system.
		CO4: Students acquire knowledge on immunodeficiency diseases.
		CO5: Transplantation and mechanism of graft retention and rejection are learnt.
		CO6: Students get brief history of microbiology.
		CO 7: Students develop a broad understanding of the positive as well as negative aspects of microbes.
		CO 8: Economic importance (applied aspects) of microbes in industry can be studies
	Open Core Course - **ZO1551.2 Human Health and Sex Education**	CO1: Students understand importance of good health
		CO2: Students are educated about clean sexual habits thereby warding off sexually transmitted diseases
		CO3: Students gain knowledge about various contraceptive methods
		CO4: Knowledge about Assisted Reproductive Techniques
6	Core Course VIII - **ZO1641 Physiology and Biological Chemistry**	CO1: Students develop a clear understanding of the correlation and coordination between the structure and function of different organs and organ systems of the body.
		CO2: Proper study on the physiology help students understand the physiology of different organ systems of the body.
		CO3: Students learn the correlation between the diseases and the abnormal structure or improper functions of organs
		CO4: Students understand the possible causes of abnormal physiology and the resultant diseases.
		CO5: Students understand the structure and function of bio-molecules and their role in metabolism.

	Core Course IX - **ZO1642 Developmental Biology and Experimental Embryology**	CO1: Students get a brief idea about history of developmental biology.
		CO2: Provide students a bird's eye view of sophisticated embryological techniques.
		CO3: Study various stages involved in the development of organisms.
		CO4: Study initial developmental procedures involved in Amphioxus, Frog and Chick.
		CO5: Procure information on state-of-the-art experimental procedures of embryology.
		CO6: Understand the teratogenic effects of various drugs and chemicals.
		CO 7: Different control mechanisms of development including gene action are studied.
	Core Course X - **ZO1643 Ethology, Evolution and Zoogeography**	CO1: To study physiological basis of behavior
		CO2: Study the different types of communication system among animals
		CO3: Knowledge of organic evolution with special reference to man.
		CO4: Student gets knowledge on distribution of animals in the biosphere
	Core Course XI - **ZO1644 Practical II - Biotechnology, Immunology and Microbiology**	CO1: Prepare and observe chromosomal arrangements during cell division.
		CO2: Study chromosomal aberrations in man.
		CO3: Gain of broad knowledge of conventional biotechnological procedures.
		CO4: Perform routine blood analysis.
	Core Course XII - **ZO1645 Practical III – Physiology and Biological Chemistry, Molecular Biology and Bioinformatics**	CO1: Understand basic principles in physiology.
		CO2: Learn clinical procedures for blood and urine analysis.
		CO3: Skill in simple biochemical laboratory procedures.
	Core Course XIII - **ZO1646 Practical IV – Developmental Biology, Ecology, Ethology and Zoogeography**	CO1: Identify various stages of embryological development of Amphioxus, frog and chick through slides and models.
		CO2: Estimate various water quality parameters for aquaculture.
		CO3: Extract and study soil organisms using Berlese funnel.
		CO4: Study and identify different zoogeographical realms with fauna.
	Core Course (Project) - **ZO 1647 Zoology Project and Field Study**	CO1: Develop aptitude for research in Zoology
		CO2: Become proficient to identify appropriate research topic and presentation

	Elective Course – **ZO1651.2 Ornamental Fresh Water Fish Production**	CO1: Students become aware of the vast potentials involved in ornamental fish farming and trading.
		CO2: Students learn scientific methods of setting up of aquariums and fish tanks
		CO3: Students learn the culture breeding and marketing of indigenous ornamental fishes

FIRST DEGREE PROGRAMME

ADDITIONAL LANGUAGE – HINDI (BA / B Sc - 2017 admission onwards)

Course Outcome

SEMESTER - I

Prose and Grammar (HN 1111.1)

CO1 - To sensitize the student to the aesthetic and cultural aspects of literary appreciation and analysis

CO2 - To introduce modern Hindi prose to the students

CO3 - To understand the cultural, social and moral values of modern Hindi prose

CO4 - To understand the theory and practice of Hindi Grammar.

Instructional hours per week: 4

No of credits - 3

SEMESTER – II

Fiction, Creative Writing and Communication Skills (HN 1211.1)

CO1 - To guide the students to the world of Hindi Fiction (Novel & Short Story)

CO2 - To develop the capacity of creative process

CO3 - To develop the capacity of communication skills

Instructional hours per week: 4

No of credits -3

SEMESTER – III

Drama, One Act Plays and Translation (HN 1311.1)

CO1 - To make the students learn and understand the literary and stylistic elements of Hindi Drama and One Act Plays

CO2 - To understand the distinct features of Hindi Drama.

CO3 - To develop communicative skills in Hindi and English through Translation.

Instructional hours per week: 5

No of credits - 4

SEMESTER - IV

Poetry, Long Poems and Culture (HN 1411.1)

CO1 - To introduce the student to the world of Hindi poetry - Ancient and Modern

CO2 - To sensitize the student to the aesthetic aspects of literary appreciation and analysis

CO3 - To introduce the specialties of Indian culture and Kerala Culture

Instructional hours per week: 5

No of credits – 4

FIRST DEGREE PROGRAMME

ADDITIONAL LANGUAGE – HINDI (B Com) Course Outcome

SEMESTER – I

Prose, Commercial Hindi and Letter Writing (HN 1111.2)

CO1 - To help the student to understand and appreciate Hindi prose

CO2 - To enrich the knowledge of short story, essay, prose etc

CO3 - To enrich the knowledge of commercial letter writing and the form and style of other letters.

Instructional hours per week: 4

No of credits - 4

SEMESTER – II

Poetry, Translation, Technical Terminology and Communication (HN 1211.2)

CO1 - To sensitize the student to the aesthetic aspects of literary appreciation

CO2 - To introduce ancient and modern Hindi poetry.

CO3 - To develop communicative skills in Hindi and English through Translation.

CO4 - To familiarize the technical terms used in offices

CO5 - To enrich the developments of communication-medias

Instructional hours per week: 4

No of credits – 4

FIRST DEGREE PROGRAMME

ADDITIONAL LANGUAGE – HINDI (BA / B Sc - 2020 admission onwards)

Aim of the Course and Course Outcome

SEMESTER - I

Hindi Katha Sahitya (HN 1111.1)

To familiarize the students with the world of fiction

To develop their faculty of appreciation of fiction

To develop creativity in the students

CO1 - Recollect the main works of the representative fiction writers

CO2 - Understand the craft of the fiction writers

CO3 - Analyze and evaluate the works of fiction writers they studied

CO4 - Understand how the resource language is used as a medium in creative writing

Instructional hours per week: 4

No of credits - 3

SEMESTER – II

Hindi Nibandh aur Anya Gadya Vidhayem (HN 1211.1)

To acquaint the students with the different forms of prose in Hindi

To develop their faculty of appreciation of prose

To develop the skill of evaluating prose writing of representative prose writer in Hindi

CO1 - Recollect the main works of the prescribed writers

CO2 - Understand the forms of various prose writing in Hindi

CO3 - Analyze and evaluate the prose forms prescribed, with respect to the craft and the relevance

Instructional hours per week: 4

No of credits -3

SEMESTER – III

Hindi Natak, Vyakaran tatha Anuvad (HN 1311.1)

To familiarize the students with the development of plays in Hindi

To learn to appreciate play

To use Hindi language correctly by understanding grammar

To facilitate the use of translation as a tool for communicating in Hindi and English

To motivate the students for a career as a translator

CO1 - Critically appreciates play

CO2 - Understands difference between spoken Hindi and written Hindi

CO3 - Writes grammatically correct sentences in Hindi

CO4 - Defines different parts of speech and identifies them in a given sentence

CO5 - Translates simple passages from English to Hindi

Instructional hours per week: 5

No of credits - 4

SEMESTER - IV

Hindi Kavita Evam Ekanki (HN 1411.1)

To understand development of Hindi poetry through selected poems

To develop the faculty of appreciation of Hindi poems

To familiarize the students with the development to one act plays in Hindi

Learn to appreciate Hindi one act play

CO1 - Appreciates ancient and modern Hindi poems

CO2 - Critically evaluates the contribution of Ancient and Modern poets to the development of Hindi potry

CO3 - Elucidates key lines of poetry with reference to context

CO4 - Appreciates and evaluates one act play with respect to craft and subect

Instructional hours per week: 5

No of credits – 4

FIRST DEGREE PROGRAMME

ADDITIONAL LANGUAGE – HINDI (B Com – 2020 admission onwards)

Aim of the Course and Course Outcome

SEMESTER – I

Hindi Gadya Aur Vyavasayik Lekhan (HN 1111.2)

To acquaint students with different forms of prose and styles involved in prose writing

To develop the faculty of appreciation of prose

To develop the skill of evaluating prose writing of prescribed prose writers in Hindi

To make the students aware of the importance of correspondence

To make them proficient in letter writing- both personal and official

CO1- Appreciates prose writings in Hindi

CO2 - Critically evaluates the contribution of prescribed writers of prose to Hindi literature

CO3 - Differentiates various types of letters based on their style and components

CO4 – Writes personal, official and business letters in Hindi

Instructional hours per week: 4

No of credits - 4

SEMESTER – II

Hindi Kavita, Anuvad aur Paribhashik Sabdavali (HN 1211.2)

To make students understand development of Hindi poetry through selected poems

To develop the faculty of appreciation of Hindi poems

To make students understand the importance of translation

To facilitate the use of translation as a tool for communicating in Hindi and English

To motivate and equip the students for a career as a translator

CO1 - Understands the development of Hindi poetry from the Bhakti period to modern times

CO2 - Translates simple passages to Hindi to English and vice versa

CO3 - Opens a career that of a translator

Instructional hours per week: 4

No of credits - 4

FIRST DEGREE PROGRAMME

Department of Physical Education

Semester – V - Open Course

Course Name - Health and Fitness Education

Course Code - PE 1551

Course Outcome

CO1 - Understand the multidimensional concept of health, including physical, mental, social, spiritual, and emotional dimensions.

CO2 -Define and appreciate the significance of physical education in promoting overall health and well-being.

CO3 -Recognize and analyse the factors affecting health, such as biological, personal, environmental, and socio-cultural influences.

CO4 - Gain knowledge about proper nutrition, balanced diet, and the impact of malnutrition and food adulteration on health.

CO5 - Identify common hypokinetic diseases like diabetes, obesity, and hypertension, along with their causes and preventive measures.

CO6 - Comprehend the effects of alcohol, tobacco, drugs, and excessive screen time on health.

CO7 - Explain the importance of muscular endurance, strength, flexibility, body composition, and various fitness components.

CO8 - Demonstrate understanding of circulatory and respiratory systems and their roles in physical performance.

CO9 - Implement warm-up, cool-down, oxygen debt, and second wind concepts in fitness routines.

CO10 - Explore wellness concepts and methods for enhancing personal well-being.

CO11 - Understand hygiene practices, both personal and environmental, for maintaining a healthy lifestyle.

CO12 -Recognize the significance of recreation and leisure activities in maintaining overall health.

CO13 - Identify the importance of correct body posture and apply remedies for common postural deformities.

CO14 - Demonstrate knowledge of basic first aid principles and apply them to various situations such as bleeding, bites, burns, and injuries.

CO15 - Gain awareness of major sports events like Olympic games, Asian games, and National games, and the significance of national sports awards.

CO16 - Understand the role of media in sports and address issues like women in sports and doping.

CO17 - Explain the scientific basis of physical activity, including concepts like heart rate, blood pressure, and body mass index.

CO18 - Differentiate between aerobic and anaerobic exercises, and understand the benefits of various types of exercises.

CO19 - Gain an understanding of different types of fitness and their relevance to overall health.

Postgraduate Degree Programme in English Language and Literature

Programme Code: 530

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: to demonstrate the ability to engage critically with a wide range of selected texts by offering interpretations and evaluations from multiple perspectives
PO2: to demonstrate an understanding of the formal structure of the various genres
PO3: to show an awareness of the literariness of literary language
PO4: to demonstrate the ability to analyse and explain the complexities and subtleties of human experience
PO5: to be able to relate the socio-politico-historical context to the evolution of the forms, styles, and themes of texts

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: to enable students to engage critically and creatively with a wide range of selected texts
PSO2: to develop in them an appreciation of the nuances of literary language through an understanding of the way the English language functions
PSO3: to help them understand the relationship between art and life in order to comprehend the social/ emotional/ psychological and cultural value of literary texts
PSO4: to provide students with the skills and knowledge necessary to work towards a research and in any place. of their preference

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcomes

1	Core Course EL 211 - CHAUCER TO SHAKESPEARE	CO1: provide students with an idea of the major historical events and the socio-cultural contexts that shaped the literature of the 15th and 16th centuries
		CO2: develop in students a historical awareness of the evolution of poetry, drama, prose fiction and literary criticism
		CO3:examine critically the contribution of poets , dramatists and prose writers that marked the singularity of the age
		CO4: display an awareness of the major historical events and the socio-cultural context which shaped the medieval and early Renaissance period and literature
		CO5: explain the impact of the Renaissance on the thought and literature of the period
		CO6: explain how socio-historical factors have influenced individual texts and how individual texts are representative of their age
	Core Course EL 212- SHAKESPEARE STUDIES	CO1: to give an overview of the socio-political and historical events which were instrumental in patterning Elizabethan consciousness
		CO2: to help students appreciate Shakespeare as a pioneering figure in defining the course of English drama
		CO3: to look into Shakespeare's contributions to enriching the English language
		CO4: to identify the discourses met within the plays and to familiarize the learners with significant critical responses
		CO5: evaluate the significance of the socio-political and historical events which shaped the perspective of the Elizabethan Age
		CO6: relate the texts selected for study to the genres/ subgenres they belong to and identify and explain their formal/ stylistic/ literary features
	Core Course EL 213- THE AUGUSTAN AGE	CO1: familiarize the students with the major socio-political and literary trends in English literature from the Reformation to the post-Restoration era
		CO2: evaluate critically the contributions of Augustan writers
		CO3: introduce the students to the various features of Augustan poetry and prose examine the relative similarities

		and differences between the different types of Restoration drama
		CO4: acquire a critical understanding of the emergence and popularity of prose and novel in England, during the period assess critically the conflicting trends in the literature of the age
		CO5: display an awareness of specific features of Neo-Classicism in English literature
	Core Course EL 214- THE ROMANTICS AND VICTORIANS	CO1: understand the socio-cultural, political and intellectual contexts that nourished Romantic and Victorian Literature
		CO2: evaluate critically the different phases of Romanticism, the change in mood and temper in the Victorian era and the conflict between science and religion at the turn of the century
		CO3: explain and analyze the similarities and differences between the different types of novels of the Romantic and Victorian ages
		CO4: display an awareness of the contributions of the poets, novelists and prose writers
		CO5: understand the social and literary changes that influenced drama in the century
		CO6: relate the texts selected for study to the genres they belong to and identify and explain the structural, formal, stylistic and literary features.
2	Core Course EL 221 – FROM MORDERNISM TO THE PRESENT	CO1: familiarize students with the socio-cultural impulses that shaped the twentieth century English society
		CO2: introduce and examine the various movements that dominated the literature, culture, and arts of the century and which produced significant shifts in the patterns of thought and living
		CO3: introduce the students to the poets, novelists, dramatists, essayists, prose writers and critics of the age
		CO4: examine the similarities and differences between the literature of the first and the second half of the centuries
		CO5: demonstrate an understanding of how the age affected the literature and the various genres demonstrate a knowledge of the major movements that influenced British and European literature
	Core Course EL 222 - INDIAN WRITING IN ENGLISH	CO1: enable students to understand the historical and socio-cultural contexts for the emergence of English as a medium for communication and literary expression in India
		CO2: provide students a perspective on the diverse aspects of Indian Writing in English
		CO3: enable students to trace the evolution of Indian Writing in English

		CO4: enable students to get an overview of Indian English poetry, prose, drama, novel and short story
		CO5: help students to develop a general understanding of Indian aesthetics enable an understanding of the recent trends in Indian Writing in English
	Core Course EL 223 – AMERICAN LITERATURE	CO1: understand the socio-political factors that shaped the American literary scene analytically explore works of prose, poetry, drama and fiction in relation to their historical and cultural contexts
		CO2: examine the Afro-American experience as articulated in African American literature
		CO3: compare/contrast literary works through an analysis of genre, theme, character, and other literary devices
		CO4: demonstrate knowledge of the contributions of major literary periods, works and persons in American literature and recognize their continuing significance
		CO5: evaluate the thoughts, beliefs, customs, struggles, and visions of African American writers
		CO6: identify key ideas and characteristic perspectives or attitudes as expressed in American literature
	Core Course EL 224- CRITICAL STUDIES	CO1: familiarize the students with the basic premises of the foundational schools of modern thought, particularly on the construction of the subject, language, and socio-cultural formations.
		CO2: discuss the intellectual milieu in Europe that led to the emergence of theories of structuralism, post structuralism, psychoanalysis, Marxism and feminism
		CO3: familiarize the students with the primary conceptual apparatus of these systems of thought
		CO4: enable the students to analyze literary phenomena using the theoretical tools provided by the above schools.
		CO5: gain an idea of the evolution of critical thinking in Europe and India in the 20 and 21st centuries.
		CO6: would sharpen their analytical and critical faculties drawing inspiration from the readings provided.
3	Core Course EL-231 : LINGUISTICS AND STRUCTURE	CO1: to enable students to get a fundamental understanding of the basic nature, branches, and history of linguistics
		CO2: to examine the features of language units at the phonological, morphological and syntactical levels
		CO3: to familiarize the students with history and developments of Modern Grammar
		CO4: have developed an awareness of the basic nature, branches, and history of linguistics

	OF ENGLISH LANGUAGE	CO5: have become familiar with contrastive linguistics
		CO6: be able to analyse language units based on their phonological, morphological and syntactical features
	Core Course EL 232- CRITICAL STUDIES	CO1: introducing postmodernism that has derived its key ideas from post structuralist assumptions like multiple meanings and deconstructed centres.
		CO2: a theory of history, society, culture, art, and literature, postmodernism questions the superiority of order and the unity of experience.
		CO3: peep into theories that reject elitism, sophisticated formal experimentation and tragic sense of alienation predominant in the modernist writers.
		CO4: Theories of postmodernism critique grand narratives and promote the existence of little narratives in literary expressions.
		CO5: celebrates fragmentation which obliterates the illusion of the text as "real" and provides multiple interpretations and even parody.
	Core Course EL-233.1 EUROPEAN DRAMA	CO1: to examine the historical and current theories and acquisition to create critical awareness of approaches and methodologies and the underlying principles in the ESL context to understand learner problems and learner factors in developing proficiency
		CO2: language skills, to evaluate critically syllabi, teaching materials, and evaluation procedures
		CO3: have acquired knowledge of the historical and current theories in ELT
		CO4: be able to assess critically the implications of the various approaches, methods, techniques
		CO5: have developed the ability to critically evaluate syllabi, teaching materials, and evaluation procedures
4	Core Course EL-234.3 FICTION AND FILM	CO1: Fiction and film Studies is a new area of research and teaching that brings in new perspectives to our notions regarding texts' and 'meanings and therefore to the study of literatures, cultures and societies.
		CO2: develop theoretical tools and critical perspectives to interrogate the advertisement, film, television, newspaper and internet texts that saturate our lives

		CO3: focus of cultural studies is a revisionary reading of the concept of culture, viewing culture as a discourse that openly critiques the concept of high culture and low culture.
		CO4: teases out the intersections of power and culture particularly in modes of representation.
		CO5: interests to theorists of culture are figurations of the popular and the interplay between the dominant and the subordinated.
	Core Course EL 242 CULTURAL STUDIES-	CO1:introduce the history, culture and literature of South Asia explore the writings of the national literatures of India, Pakistan, Bangladesh, Sri Lanka and other South Asian countries
		CO2: demonstrate an analytical awareness of the history of European imperialism
		CO3: experiences of immigration and diaspora as reflected in South Asian literatures identify and differentiate between the distinguishing factors such as culture, class, religion, and other differences amongst South Asians
		CO4: explain critically themes of identity, memory, alienation, assimilation, solidarity and resistance
	Core Course EL 245- COMPREHENSIVE PAPER	CO1: introduce students to the concepts and practices of theatre familiarise various aspects of theatre studies including the basics, history, genres, and aesthetic theories
		CO2: understand the social, cultural, and political functions of theatre
		CO3: enhance their aptitude and skills in the field of theatre and performance studies
		CO4: ensure their theoretical and practical expertise to be good practitioners of theatre arts
		CO5: appreciate theatre as an art and a "socio-cultural institution
		CO6:differentiate each genre, movement, and its historical significance
	Core Course/Project Work EL 246-	CO1: brief objectives are the successful development of the project's procedures of initiation, planning, execution, regulation and closure as well as the guidance of the project team's operations towards achieving all the agreed upon goals within the set scope, time, quality and standards.

	PROJECT	CO2: have a specific duration and unique and a set of methodology intended to produce a singular product, outcome or result.
		CO3: to impart students the skill to lead and manage research
		CO4: inculcating the need for further studies in the specified subject and develop new spaces of knowledge
		CO5: exploring new places of interest with the help of theories and methodology

Postgraduate Degree Programme in HISTORY

Programme Code: 540

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: **Ethics**: Develop the right perceptions on society, social rights and of ethical problems, and have critical understanding on culture and values
PO2: **Effective Communication**: The ability to formulate effective and convincing written and oral arguments.
PO3: **Problem Solving:** Acquire the ability to define issues related to society that span distinct eras and to generate alternate solution.
PO4: **Critical Thinking** : To explain how and why important events happen in history
PO5: **Global Perspective:** Familiarization with the main currents in Indian and world History.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: Create historical consciousness and cognise the major Historical themes and causative factors in History
PSO2: Students should be able to differentiate among multiple theories, concepts and methodology in the practice of History from a range of written or spoken genres. They should be able to explain, analyse and articulate contemporary issues and events using such perspectives, theories and ideologies
PSO3: Develops critical thinking faculty to analyse and interpreting sources germane to the subject and develops historical communication through the development of skill in writing and research.
PSO4: Provides knowledge on historicity various aspects of contemporary issues, concerns, policies and practices.

Course Outcome

Code	Course	
Hy 211	Historical Method- I	• This course seeks to provide students with a clear cut scientific method of research • The basic tools and techniques of research • Theoretical knowledge in textual analysis and source criticism
Hy 212	Indian History-I(Up to 600 A D)	• Know the pre-historic, Proto-historic India • Know the development of culture and social formation • To learn the social stratification in ancient India
Hy 213	Kerala History-I	• Know the pre-historic, Proto-historic Kerala • Limelight to the social formations in Early Kerala • Transmarine contacts and the development of trade • To analyse the belief systems and practices
Hy 214	Bronze Age Civilizations (Elective)	
Hy 221	Historical Method- II	• Drag the attention of the students into criticism • Textual analysis help the students to check the credibility of the sources • Help students to identify sources • Gives direction to the students to select a problem
Hy 222	Indian History-II	• Transition in Medieval India • Helps to know the nature of Indian feudalism • Know the medieval society and culture • To analyse the political development in North and South India
Hy 223	Kerala History-II	• Political developments in Kerala

		• To learn the socio economic process and practices • Colonialism in Kerala
Hy 224	History of Medieval Europe (Elective)	
Hy 231	Issues in Historiography	• This course seeks to new issues and questions in Historiography • Seeks to familiarize the modern Historiography • Spotlight the philosophy of History
Hy 232	Indian History-III	• Focus on Colonialism in India • To give an idea of the early resistance of India . • Making of the Indian nation based on Gandian Ideology
Hy 233	Kerala History-IV	• History of Kerala covering 1800 1947 • Socio-Economic changes in Kerala by the Social reformers and institutions
Hy 234	Modern Revolutions-English, American and French (Elective)	• To acquaint the students of modern ideologies and revolutions
Hy 241	Indian Historiography	• Aims to develop analytical skills and accumulation of significant knowledge about Indian Historiography
Hy 242	Indian History-IV	• Covers the contemporary developments in India
Hy 243	Kerala History-IV	• Kerala after 1956 • Women, Dalits and marginalized sections • Kerala Model of development
Hy 244	Twentieth Century Revolutions (Elective)	• To acquire knowledge on the spirit of revolutions in the modern period

AY 2021-22
MA ECONOMICS
Programme Code: 550

PROGRAMME OUTCOMES (POs)

PO 1	The students will get equipped with advanced knowledge of applied Economics & development issues of Indian Economy in general and Kerala Economy in particular.
PO 2	The students will acquire knowledge in various econometric concepts and methods of data analysis which help them in research endeavours as well as economic forecasting.
PO 3	The students will acquire necessary skills catering to the needs of the industry and policy makers.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1	The students will be able to critically approach various economic issue and also develop problem solving and interpretation skills.
PSO 2	They will be able to interpret government policies on taxation, environment, development and suggest practical remedies to economic issues.
PSO 3	The students will get equipped in applying economic theories and econometric methodology on real economic data by means of empirical models, and hence get a comprehensive idea on the process of doing research.

COURSE OUTCOMES (COs)

COURSE CODE	COURSE TITLE	COURSE OUTCOME	
EC 211	Microeconomics I	CO 1	It will enable the students to get a thorough knowledge about the basic principles of micro economics.
		CO 2	It provided an understanding of the principles of economics in application to individual decision makers, both consumers and firms.
		CO 3	This paper equips the students with the various aspects of the conventional as well as the recent developments in microeconomic theory
EC 212	Economics of growth and development	CO 1	It familiarises the students with the conceptual routes, theoretical dynamics and practical strategies of growth and development.
		CO 2	This paper orient the students towards major themes of development, lead them towards more methodical probes and equip them with adequate analytical knowledge.
		CO 3	It connects students of Economics to academic concerns, policies and practical solutions relevant for progression of all economies.
		CO 4	Students will be able to get a complete picture about the economics of growth and development.
		CO 5	Knowledge on various development theories will enable students to differentiate various problems faced by the economies and suggest suitable remedial measures.

EC 213	Indian Economic policy I	CO 1	It will enable the students to have an understanding of the various issues of the Indian Economy with a policy perspective.
		CO 2	Students can acquire knowledge on the development perspectives of Indian Economy during the post Liberalization period since 1991.
EC 214	Quantitative Methods	CO 1	This paper will familiarize the students the basic quantitative techniques used in economic analysis,
		CO 2	It will enable the students in making use of a quantitative approach in formulating economic problems. It inculcating analytical ability in finding solutions to mathematically formulated economic problems.
		CO 3	It will enable the students to understand economic concepts with the aid of mathematical tools
EC 221	Micro Economics II	CO 1	It will help the students to relate various microeconomic theories with real life situations.
		CO 2	Knowledge on insurance, value of information, risk and uncertainty have great practical application.
EC 222	Economics of social sector and Environment	CO 1	It will help the students to realize the economic importance of environment.
		CO 2	Students can study the level of economic degradation and suggest remedial measures to ensure sustainable development.
EC 223	Indian Economic Policy II-Kerala's Economy	CO 1	It will help the students to understand the emerging trends and issues of Kerala economy.
		CO 2	Students also gets an understanding of Kerala's agriculture, Industry and development.
EC 224	Research Methodology and Econometrics	CO 1	It will enhance the research aptitude of the students with the help of econometric tools.
		CO 2	Various econometric concepts will help students to apply economic concepts into empirical data.
EC 231	Macro Economics I	CO 1	It will enable the students to get a perfect knowledge about macroeconomics.
		CO 2	Understand the neo-classical and Keynesian theories.
		CO 3	Study macroeconomics of an open economy.
		CO 4	Analyse the demand and supply of money.
EC 232	International Economics I	CO 1	Students will be able to analyse various international economic phenomena.
		CO 2	Understand various trade theories.
		CO 3	General and partial equilibrium analysis on tariff, quota and customs union has a great practical relevance.
EC 233	Public Economics	CO 1	It will help the students to get a clear picture about the significance of public economics.
		CO 2	Analyse the principles of taxation, public revenue and public debt.
		CO 3	Understand the Indian public finance regime.
		CO 4	Students get a detailed understanding on Fiscal federalism.
EC 201	Optional I Mathematical Economics	CO 1	It will enable the students to apply mathematical tools in economic theory.
		CO 2	Students can mathematically analyse producer and consumer behaviour.
		CO 3	Study mathematical growth models.
		CO 4	Mathematically determine fluctuations in national income.

EC 205	Optional I Agricultural Economics	CO 1	Students will get a complete picture about the agricultural scenario of the Indian economy.
		CO 2	Understand agricultural marketing and supply response.
		CO 3	Issues in Indian agriculture.
		CO 4	Understand Economics of agricultural production.
EC 241	Macro Economics II	CO 1	It will enable the students to get a complete knowledge about macroeconomics.
		CO 2	Understand the theories of business cycles.
		CO 3	Analyse recent developments in Macroeconomics.
EC 242	International Economics II	CO 1	Students will be able to understand the various aspects of international trade.
		CO 2	The paper give students an idea on the evolution of international trade system.
		CO 3	Will now know the difference between various kinds of exchange rate regimes.
EC 243	Finance and Capital market	CO 1	It will help to develop comprehensive knowledge on the role of finance in the operation of an economy.
			It also helps the students get an understanding of fundamental and technical analysis
		CO 2	Get an idea on the working of money and capital markets and enable the students to analyse the performance of stock markets.
EC 207	Optional II Advanced Econometrics	CO 1	It will equip the students with basic theory of econometrics and its applications.
		CO 2	The advanced econometric methods will help students to do empirical data analysis.
EC 2011	Optional II Welfare Economics	CO 1	It helps the students in the evaluation of normative significance of economic events and issues and how the branches of economics such as public finance, cost-benefit analysis and economics of government policy use welfare economic criteria as their foundation.
EC 244	Dissertation	CO 1	It will help the students to identify an economic problem relevant to the study of economics and provides the students a base on idea of pursuing research in future.
	Viva-Voce		

Postgraduate Degree Programme in Mcom (Finance)

Programme Code: 590

PROGRAMME OUTCOMES (POs)

Intended outcomes
PO1: To apply knowledge acquired in problem solving, team building with enhanced to develop ability among communication and interpersonal skills.
PO2: They will be ready for employment in functional areas like accounting, taxation, banking, insurance and corporate law.
PO3: They will also acquire an ability to start entrepreneurial activities.
PO4: The students will exhibit courses such as CA, CS, CMA, CFA etc.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Intended Outcomes
PSO1: The students will be able to address tax situations for a variety of tax payers such as wage earners, sales persons, small business, professionals, investors, home and rental property owners.
PSO2 They will also develop advanced theoretical knowledge and research capabilities in their preparation for academic and research focused careers.
PSO3: They also acquire strong subject matter expertise in finance, financial instruments and markets

COURSE OUTCOMES (COs)

Semester	Course Name and Course Code	Indented Outcome
1	Core Course	CO1: To impart knowledge on Business Ethics and Social responsibility of Business

	CO211Business Ethics and Corporate Governances	CO2: To provide knowledge of various factors influencing the corporate sector
		CO3: To create awareness about organizational culture
		CO4: To make familiarize with corporate governance
	Core Course **CO212 Legal Frame work for Business**	CO1To enable student acquire updated knowledge and develop understanding of the regulatory framework for business.
		CO2To make students aware of opportunities available in various legal compliances so as to enable them employable.
		CO3To expose students in emerging trends in good governance practices including governance.
		CO4To enable the students to know various FDI Policies.
	Core Course **CO213Research Methodology**	CO1To provide an insight into the fundamentals of social science research
		CO2To understand the need, significance and relevance of research and research design
		CO3To acquire practical knowledge and required skills in carrying out research
		CO4To enable the students to understand about testing of hypothesis
	Core Course **CO214Planning and Development Administration**	CO1To give an insight into the structure of Indian Economy.
		CO2 Providing the students a general idea, regarding planning process and procedure.
		CO3Make the students aware of plan preparations of central, state and Local Self Government
		CO4To create an awareness about local self-government
2	Core Course	CO1 Making the students to understand International Financial Reporting Standards and tools &techniques in various accounting situations.

	CO215 Advanced Corporate Accounting and Reporting	CO2 Expose the students to advanced accounting issues and practices like Investment, Consolidation of financial statements, Liquidation etc.
		CO3 To create an awareness about IFRS
		CO4 To familiarize the students with Liquidation of companies
	Core Course **Semester 2** **CO221 E-Business and Cyber Law**	CO1 To equip the students with the emerging trends in business
		CO2To equip the students to introduce and explore the use of information technology in all aspects of business
		CO3 To familiarize with the students cyber world and cyber regulations
		CO4Tofamiliarize the students with e-business technologies
	Core Course **CO222 Strategic Management**	CO1 To create a conceptual awareness on various strategies
		CO2 To familiarise students with the formulation and implementation of strategies
		CO3 To familiarise the students with strategic alternatives
		CO4 To familiarise the students with Environment analysis
	Core Course **CO223 Quantitative Techniques Econometrics**	C01 To impart expert knowledge in the application of quantitative techniques in research.
		C02 To impart knowledge in the use of SPSS in processing and analysis of data.
		C03 To create awareness about probability and non –probability distribution
		C04To provide knowledge about SQC
3	Core Course **CO224 International Business**	C01 To provide an understanding of international business and its various dimensions
		C02 Tofamiliarise the students with theoretical foundations of IB

		C03 Tofamiliarise student with methods of entering into foreign market
		CO4 To enable the students to understand about MNCs
	Core Course **CO 225 Investment Management** .	CO1To provide a general understanding about investment avenues and personal finance.
		CO2 To give a broader understanding about behavioural finance and how it equip to decide personal investment.
		CO3 To provide an understanding about financial markets
		CO4 To get knowledge about financial modelling
	Core Course **Semester 3** **CO231 U Income Tax Planning and Management**	C01 To expose the students to the latest provisions of Income Tax Act.
		C02 To identify the Tax Planning and Assessment Procedures for Individuals, Firms andCompanies.
		C03To enable the Students to understand Clubbing of income
		C04Tofamiliarise the students with Carry forward of income
	Core Course **CO232 F Security Analysis and portfolio Management**	C01 To provide students an awareness about investment
		C02 To provide students an awareness about security analysis
		C03 To provide students an awareness about financial derivatives
		C04 To provide students an awareness about port folio management
4	Core Course **CO233 F International Financial Management**	C01 To convey the basic concepts of international financial management.
		C02 To impart knowledge on strategies that support corporate finance
		CO3 To familiarise the students with the international financial markets and instruments.

		CO4 To convey an understanding about foreign exchange risk management
		C01 To convey the basic concepts of international financial management.
	Core Course **CO234 F Strategic Cost and Management Accounting**	C01 To comprehend and familiarizethe established techniques, methods and practices in advanced Cost and Management Accounting to the students.
		C02 To introduce the evolving dynamic Cost and Management Techniques developed to support the emerging business models.
		C03 To impart on knowledge on process costing
		C04 To create awareness about ratio analysis
	Core Course **Semester-4** **CO241W Goods &Service Tax & Customs DutyLaw& Practices**	C01 To gain expert knowledge of the principles and laws relating to the Service Tax& customs Duty
		C02 To gain expert knowledge of the principles and laws relating to the Central Excise Duty, Customs duty and Central Sales Tax
		C03 To impart knowledge on demand, adjudication, offences and other provisions in the Act
		C01 To gain expert knowledge of the principles and laws relating to the Service Tax& customs Duty
	Core Course **CO242 F Risk management &Derivatives**	C01 To familiarize the students with financial markets and instruments.
		CO2. To understand the risk management process and its application
		CO3. To give a broader awareness on derivatives and its applications
		CO4: To create awareness on the global financial markets and institutions
	Core **CO243F Accounting Standards**	CO1 To acquaint the students to understand the structure, process and organizational set up involved in evolving accounting standards in India.

		CO2 To enable the students to apply some key standards while preparing and presenting the financial statements
		CO3 To get an idea about impairment of assets
	CO244F Management Optimization Techniques	C01 To impart knowledge on various facets of project management viz. project preparation, feasibility study as well as project scheduling and monitoring. C02 To convey basic principles of project optimization using various Operational Research tools C03 To enable the students for intelligent decision making
Course/Project Work		CO1 Able to prepare project reports
		CO2 Find a job as Research Assistant
		CO3Enable the students to do Research activities.