VIMALA COLLEGE (AUTONOMOUS), THRISSUR

PROGRAMME OUTCOMES,
PROGRAMME SPECIFIC OUTCOMES& COURSE OUTCOMES

2019-2020

PROGRAMME OUTCOME: UG
At the end of a UG programme, a student would have:

1. Acquired good subject knowledge
2. Cultivated an intellectual curiosity and love for learning
3. Established a sound foundation for higher learning
4. Comprehended the nuances of research
5. Attained language skills and ability for effective communication
6. Obtained problem solving and analytical skills
7. Ability to function in multidisciplinary domains
8. Imbibed sound values and principles
9. Capability to apply knowledge and learning for environmental sustenance
10. Ability to collaborate for common good and social welfare

PROGRAMME OUTCOME: PG
At the end of a postgraduate programme, the student would have :

1. Acquired in-depth discipline knowledge
2. Cultivated a passion and yearning for lifelong learning
3. Procured current awareness and global perspective
4. Become adept at sourcing and utilizing information
5. Internalized research acumen
6. Acquired the expertise to apply knowledge for environmental sustenance
7. Inculcated the ability to function in multidisciplinary domains
8. Attained the maturity and prudence to respond to one's calling
9. Harnessed the ability to collaborate for common good and social welfare
10. Imbibed professional and ethical responsibilities

M A ENGLISH
PROGRAMME SPECIFIC OUTCOMES

PSO1	Know the recent developments in language and literature
PSO2	Develop theory based evaluation and analysis of literary texts
PSO3	Interpret the structure and evolution of language from different points of views
PSO4	Understand the historical development of English literature from Old English to the present
PSO5	Employ the acquired knowledge in criticism and interpretation in a variety of contexts

COURSE OUTCOMES

PROGRAMME	**PROGRAMME SPECIALIZATION**	**COURSES**	**OUTCOME**
M A	ENGLISH	ENG1CO1 BRITISH LITERATURE FROM THE AGE OF CHAUCER TO THE EIGHTEENTH CENTURY	Outline the literary characteristics from the age of Chaucer to Eighteenth Century
			Comprehend the works of major poets of the Eighteenth Century
			Analyze the growth of different types of poetry during from Chaucer Eighteenth Century
			Infer the social and political concerns embedded in the plays of eminent playwrights.
		ENG1CO2 BRITISH LITERATURE: THE NINETEENTH CENTURY	Outline the history and literary characteristics of the Romantic and Victorian Age
			Comprehend the works of major poets of the Nineteenth Century.
			Infer the social and political concerns embedded in the prose passages and plays
			Evaluate different nuances present in Nineteenth Century fiction writings

		ENG1CO3 HISTORY OF ENGLISH LANGUAGE	Understand the origin of language through the various related theories.
			Locate the evolution of language and its functional aspects.
			Comprehend the significance of linguistics as a tool in the study of language.
		ENG1CO4 INDIAN LITERATURE IN ENGLISH	Understand the history and evolution of Indian English Literature
			Develop an overview of the different genres of Indian writing in English
			Analyse the socio-political and cultural concerns embedded in the writings of India
			Identify the elements of Indianness in the different writings of India
		ENG2CO5 TWENTIETH CENTURY LITERATURE UP TO WORLD WAR II	Understand the literary characteristics of Twentieth Century
			Comprehend the works of major poets of the Twentieth Century.
			Infer the social and political concerns embedded in the plays of eminent playwrights.
			Evaluate different nuances present in Twentieth Century fiction writings
		ENG2CO6 LITERARY CRITICISM AND THEORY-PART 1	Introduction to the evaluation of literary criticism, Movements and schools of thought.
			Evaluation of the contribution of Indian Aesthetics to Criticism.
			Develop a critical thinking and appreciation of Literary Works.
			Differentiate between criticism and theory.

		ENG2CO7 AMERICAN LITERATURE	Comprehend the history and evolution of American literature through the ages
			Understand the various movements and concerns of American literature
			Interpret some of the classic works of different American authors
			Develop an overview of the different genres of American literature
		ENG2CO8 POSTCOLONIAL WRITINGS	Analyse the history, geography, language and culture that shaped the postcolonial texts
			Examine the regional elements in the works
			Compare the social, political, religious and cultural contexts within which the texts are located.
			Acquire an understanding of major fictional modes In vogue in postcolonial countries
		VPEG3C05 TWENTIETH CENTURY BRITISH LITERATURE: POST 1940	Apply modern perspective reading in poetry, drama and fiction
			Analyse how gender, race, caste, ethnicity, region and religion evolves in the works
			Understand the concept and types of poetry, drama and fiction reflecting the age and its importance
		VPEG3C06 ENGLISH LANGUAGE: HISTORY AND STRUCTURE	Infer different elements of Semiology
			List the characteristics of human language.
			Explain the evolution of English language.
			Analyze different types of word formation in English.
			Classify different varieties of

			English
			Develop the techniques of pronounciation and perceive different types of Grammar
		ELECTIVE 1 POSTCOLONIAL FICTION AND DRAMA	Understand the nuances of Post Colonial Theory and concepts
			Analyse literary and cultural texts from a post colonial perspective
			Familiarise with diasporic writing and its peculiarities
			Understand the politics of historiography and representation in the post colonial context
		ELECTIVE 2 FILM STUDIES	Classify major movements of world cinema
			Distinguish major film genres
			Analyse selected film texts
			Appraise case studies of classic cinema
			Appraise case studies of classic cinema
		VPEG4CO7 INDIAN ENGLISH LITERATURE	Understand the history and evolution of Indian English Literature
			Develop an overview of the different genres of Indian writing in English
			Analyse the socio-political and cultural concerns embedded in the writings of India
			Identify the elements of Indianness in the different writings of India
		ELECTIVE 1 INTRODUCTION TO CHILDREN'S LITERATURE	Evaluate the place of Children's Literature in World Literature
			Create an acquaintance with the major authors in Children's Literature.

			Examine the various kinds of narrative techniques in Children's Literature
			Understand the evolution of Children's Literature.
		ELECTIVE 2 AMERICAN ETHNIC WRITING	Understand the evolution and history of American Ethnic writing
			Understand the concept of ethnicity and multiculturalism
			Comprehend the different ethnic movements
			Understand the Black, Jewish, Japanese and Amerindian presences in American literatures and their histories
			Perceive the social and political concerns embedded in the ethnic writings
			Evaluate the religious and cultural aspects prominent in the American writings

B A ENGLISH
PROGRAMME SPECIFIC OUTCOMES

PSO1	Use English effectively in formal and informal situations
PSO2	Know various genres in English literature
PSO3	Develop interest in language and literature
PSO4	Appreciate literary works

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B A	English (Core Courses)	ENG1B01 INTRODUCING LITERATURE	Identify the various genres in English literature
			Promotes understanding of literature to become readers for life

			Enable the students to identify basic concepts of language
			Understand basic grammatical concepts thereby developing proper responses to literature.
			Determine the different kinds of narrative techniques in Literature
			Understand literary texts as cultural artifacts shaped by social, political, economic and natural environments
		ENG2B02 APPRECIATING POETRY	Develop taste for poetry with theoretical basis
			Build an awareness about the cultural diversity of the world literature with reference to poetry
			Develop the ability to distinguish between the writing styles of various authors
		VEG3B03 - READING DRAMA	Develop taste for drama with theoretical basis
			Infer various kinds of theatres and techniques of drama
			Build an awareness about the cultural diversity of the world literature with reference to drama
			Construction of attitudes, values and behaviour and creation of roles and relationships to gain an understanding of dramatic experience
			Develop the ability to distinguish between the writing styles of various authors
		VEG3B04 - READING FICTION	Interpret the characteristics of various forms of fiction
			Appraise the literary styles of eminent fiction writers.
			Relate to various modes of fiction writings in relation to their socio-historic and cultural contexts
			Apply critical thinking to examine fiction writings from different contexts

			Categorize the major Indian philosophies and Schools of thought
			Distinguish between the methodologies of Natural Sciences, Social Sciences and Humanities
			Comprehend the inter relationship between language, culture and identity
		VEG4B05, MODERN ENGLISH LITERATURE	Identify different literary movements and their characteristics.
			List the contributions of major literary theorists.
			Examine the various aspects of novel
			Examine the use of language in poetry
			Identify the socio-economic background presented in plays.
			Categorize the major Indian philosophies and Schools of thought
			Distinguish between the methodologies of Natural Sciences, Social Sciences and Humanities
			Comprehend the inter relationship between language, culture and identity
			Examine social realities through discourses and ideologies
		VEG5B07 - INDIAN WRITING IN ENGLISH	Understand the history and evolution of Indian English Literature
			Develop an overview of the different genres of Indian writing in English
			Analyse the socio-political and cultural concerns embedded in the writings of India
			Identify the elements of Indianness in the different writings of India
		VEG5B08 LANGUAGE & LINGUISTICS	Understand the origin of language through the various related theories.
			Locate the evolution of language and its functional aspects.

			Comprehend the significance of linguistics as a tool in the study of language.
			Examine speech mechanism and articulation of sounds.
			Assess language as a system by exploring its morphological, semantic and syntactic levels. Understand the major concepts of modern linguistics and its interdisciplinary dimensions.
		VEG5B09 METHODOLOGY OF LITERATURE	Identify different traits of literature
			Distinguish between literature and other discourses
			Discover different varieties of English literatures.
			Understand the various textual approaches
			Analyze texts based on certain theoretical frames.
		VEG5B10 INFORMATICS	Understand the history and types of computers
			Analyse the function of hardware in computers
			Apply the software tools for better communication skills
			Create multimedia content
			Evaluate the security issues in the digital scenario
		VEG5DO1 FILM STUDIES	Classify major movements of world cinema
			Distinguish major film genres
			Analyse selected film texts
			Appraise case studies of classic cinema
		VEG6B12 LITERARY CRITICISM & THEORY	Introduction to the evaluation of literary criticism, Movements and schools of thought.
			Evaluation of the contribution of Indian Aesthetics to Criticism.

			Develop a critical thinking and appreciation of Literary Works.
			Differentiate between criticism and theory.
		VEG6B13 LITERATURES IN ENGLISH: AMERICAN &POST COLONIAL	Understand the nation's cultural identity-ancestry, heritage, language, physical appearance through varied literatures in English.
			Analyze the effects of colonization and imperialism on colonies.
			Identify how new forms of imperialism replace colonization.
			Comprehend the implications of the American dream in their lives.
		VEG6B14 WOMEN'S WRITING	Identify concepts of class, race and gender through poems and stories in literature
			Understand evolution of feminist movements through the various ages of English writers
			Evaluate the different female experiences addressed in various literary genres
			Create an awareness of female subjugation by utilizing literary theory
			Analyze patriarchal norms to enhance critical thinking
		VEG6B15 WRITING FOR THE MEDIA	Infer the role of journalism, advertising in a democratic society and nature of news
			Compare the difference between print media, electronic media and digital media
			Develop competency in online writing, blog, social networking sites and technical writing
			Apply media writing skills
		VEG6E01 WORLD CLASSICS IN TRANSLATION	Introduce literatures other than English literature to the students

			Create a spirit of enquiry and exploration into world literature
			To form a broad vision of life by exposing the students to the various problems / situations of life
			Analyse the concepts of different genres of literature

B A FUCTIONAL ENGLISH

PROGRAMME SPECIFIC OUTCOMES

PSO1	Use English language required to perform specific functions
PSO2	Operate language confidently effectively and independently
PSO3	Develop interest in language and literature
PSO4	Employ the acquired knowledge in criticism and interpretation in a variety of contexts

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B A	Functional English (Core Courses)	FEN1BO1 COMMUNICATION SKILLS IN ENGLISH	Identify, analyse & use the linguistic and pragmatic variations in English in relation to context and speakers.
			Attain an advanced level of mastery in all the macro skills of English
			Improve their debating skills and develops their ability to discuss various topics of social relevance.
			Improve their vocabulary skills by keeping a vocabulary journal
			Understand the different theories and models of communication

		FEN2B02 GRAMMAR AND USAGE	Explain the basic concepts of grammar
			Identify the different parts of speech
			Construct different types of sentences
			Understand the relevance of mechanics and stylistic conventions in academic writing
			Make use of MLA style sheet for writing and documentation in academic papers
		VFE3B03 ENGLISH AND COMMUNICATION TECHNOLOGY	Understand the history and types of computers
			Analyse the function of hardware in computers
			Apply the software tools for better communication skills
			Create multimedia content
			Evaluate the security issues in the digital scenario
		VFE3BO4 APPLIED PHONETICS	To identify and categorise distinct English sounds, its production and the varied phonetics symbols.
			Classify the various phonemes and explain the realisational differences including allophonic variations.
			Understand the importance of organs of speech in the production and articulation of a speech sound.
			Use phonetic symbols for transcription.
			Illustrate syllable divisions and breath groups.
			Determine stress patterns in given words and sentences.
			List all intonation patterns in English and identify semantic changes due to their differences.
			Identify and explain the differences between British and American English.

		VFE3CO3 FOUNDATIONS OF AESTHETICS AND CRITICISM	Explain the various concepts of Eastern and Western Classical Literary Criticism.
			Compare and contrast both Eastern and Western Classical Foundations
			Analyze the different Indian Aesthetic Theories.
			Assess an evolution of English criticism.
			Survey the major literary movements and poetic devices
			Relate different writers with their main ideas with reference to the main critical texts written by them.
		VFE4B05 INTRODUCTION TO LINGUISTICS	Define language and list all its characteristics.
			List the contributions of major linguists.
			Compare human and animal communication.
			Utilise key concepts in linguistics to comprehend language.
			Examine the various branches of linguistics.
		VFE4B06 ENGLISH FOR BUSINESS COMMUNICATION	Understand business correspondence.
			Define business terms and understand usages
			Develop Presentation skills
			Comprehend and plan outline of meetings.
			Develop business communication
			Analyse various steps in the process of editing and proof reading
		VFE4CO4 AMERICAN LITERATURE	Comprehend the history and evolution of American literature through the ages
			Understand the various movements and concerns of American literature
			Interpret some of the classic works

			of different American authors
			Develop an overview of the different genres of American literature
		VFE5B07 CREATIVE WRITING	Understand and appreciate various writing styles
			Evaluate one's personality and others' based on the physiological and psychological aspects of personality
			Apply leadership qualities
			Analyse and resolve conflicts and motivate others for their well being
		VFE5B08 FUNCTIONAL ENGLISH FOR PRINT MEDIA	Create in the student an awareness of the basic theories and concepts related to communication and to give them basic training in writing for the newspaper.
			Introduce mass media and the characteristics of mass media to students
			Familiarize them with the history and fundamentals of print media newspaper.
			Introduce mass media and the characteristics of mass media to students
		VFE5B09 THEATRE FOR COMMUNICATION	Understand the history of theatre and performance
			Analyse plays in relation to history, theory and culture
			Understand modern theatre practices
			Demonstrate ideas through dramatic forms and theatre conventions
		VFE5B10 CONTEMPORARY LITERARY AND CULTURAL THEORY	Introduction to the evaluation of literary criticism, Movements and schools of thought.
			Evaluation of the contribution of Indian Aesthetics to Criticism.
			Develop a critical thinking and appreciation of Literary Works.

			Differentiate between criticism and theory.
		VFE6B11 ENGLISH LANGUAGE TEACHING	Understand the scope and potential of English as a universal language
			Analyse the crucial role of the teacher as the facilitator, team player and organiser
			Apply the theories of second language learning in teaching environment
			Evaluate the approaches, methods and techniques in ELT
			Create lesson plan incorporating teaching aids and activities to develop LSRW
		VFE6B12 FUNCTIONAL ENGLISH FOR ELECTRONIC MEDIA	Detail the history and fundamentals of electronic media
			Script radio talk, interviews, documentaries and drama
			Understand the basics of TV program production
			Develop competency in online writing- Blog, social networking sites, technical writing
		VFE6B13 TRANSLATION STUDIES	Get to know literatures of various languages.
			Understand the cultures behind languages.
			Identify various aspects of language skills in an individual.
			Express one's thoughts in different languages.
		VFE6B14 INTRODUCTION TO FILM STUDIES	Classify major movements of world cinema
			Distinguish major film genres
			Analyse selected film texts
			Appraise case studies of classic cinema
		VFE6B15	Understand the techniques and

		ELECTIVE 1 – LANGUAGE FOR ADVERTISING : THEORY AND PRACTICE	procedure involved in advertisement production.
			Identify the role of advertising in the marketing field.
			Comprehend the importance of advertisement in the present scenario.
			Create advertisement copy with proper structure and components
			Analyze the different types of advertisements in terms of creativity.

M.A MALAYALAM

PROGRAMME SPECIFIC OUTCOMES

PSO1	Develop analytical and critical ability to the contemporary aesthetical and theoretical aspects of literature and make new contributions to literature.
PSO2	Develop skills in language for publishing/online writing, translating, media interpretation.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.A.	MALAYALAM	MAL1CO1 - ANCIENT MALAYALAM POETRY	Understand the origin of Malayalam poetry
			Introduce and analyze Ancient poetry forms
			Analyze the ancient poems
			Analyze the different language patterns that present in ancient poems
			Understand the influence of other

			languages in the development of Malayalam poetry
			Analyze and criticize the periods of Malayalam poetry till the modernization.
		MAL1CO2 MODERN POETRY	History of Malayalam poetry after medieval period
			Understand the different stages of poetry in the period of modernization.
			Analyze the change of language form in modernity.
			Criticize the form of Modern poetry
			Read poems in a new way of aesthetics with critical thinking.
		MALC03 KERALA REGION AND CULTURE	Understand Ancient history & culture of Kerala
			Analyze tribal culture
			Analyze the influence of foreign cultures
			The influence of sangam age
			Analyze and criticize the period of Dutch, French, Portuguese and English foreign cultures in Kerala
			Analyze the renaissance in Kerala history
		MAL1CO4 MALAYALAM GRAMMAR	Understand the origin of Malayalam grammar.
			Analyze Malayalam Alphabet and understand different opinions of grammaticians.
			Compare ‘Keralapanineeyam’ and ‘Vyakaranamithram’ two works in grammar.
			]\iAnalyze the discussions on ‘Keralapanineeyam’, book by A.R.Rajarajavarmma
			Compare different opinions of

			grammatarians about the process of Malayalamgrammar
		AEC MAL1A01 AUDIT COURSE/BOOK REVIEW	Understand the practical knowledge of various language abilities.
			Analyse the new books in Malayalam language and literature
			Evaluate the credit of new books and compare with others in the basis of different ideologies
			Study the creative works in Malayalam language and literature
			Analyse the reasons behind the new published works in Malayalam literature.
		MAL2CO5 MODERN MALAYALAM PROSE	Understand the transition period of Malayalam prose from ancient stage.
			Analyze the modernization proses under which the prose has to be changed
			Familiar the different prose texts in the Modern period
			Criticize the modern Malayalam
			Understand the cultural background of Malayalam modern poetry.
		MAL2CO6 HISTORY OF LANGUAGE AND PLANNING	Understand the history and development of Malayalam language and literature
			Understand the different modes of language planning and modernization
			Understand how to increase the affection towards the mother tongue and culture behind the language
			Analyse the different stages of Malayalam language development up to the computational Malayalam

			Understand to restructure the language in order to use it through new media world.
		MAL2CO7 LINGUISTICS	Understand the theories in Linguistics
			Analyze the Malayalam on the basis of linguistic theories
			Analyze different discourses of Malayalam language
			Understand the dialectology of Malayalam language
			Understand the development and changing process of Malayalam language
		MAL2CO8 LITERARY THEORIES	Understand the history of eastern literary theories and literary forms in Kerala literature
			Identify the influence of Indian literary theories in Malayalam criticism
			Understand different Indian literary theories
			Introduce Ancient eastern poets
			Historical analysis of literary criticism
			Cultural Analysis of different literary forms on the basis of Indian literary theories
			Cultural study through eastern criticism
			Compare eastern and western literary theories and literature
		MAL2A02 TRANSLATION PRACTISES	Understand the theoretical and practical levels of translation
			Identify Aims And Objectives Of Translation As An Academic Discipline
			To Create Basic Linguistic And Cultural Competences With Translational Skills And Knowledge In Translation Studies
			Acquire The Skill To Do Translation From Malayalam To English And Vice Versa

			Find And List The Areas Where Translation Is Applicable
			Understand The Different Methods And Techniques In Translation
		MAL3C10 LITERARY CRITICISM	General Awareness About Malayalam Criticism
			Introduce The History Of Malayalam Criticism.
			Understand Different Theories Of Criticism.
			Apply The Theories To The Literary Works.
		MAL3E ECO-FEMINIST-DALIT LITERATURE	Understand the definitions of feminine, Dalith and ecology in the background of literature.
			Analyze the literacy works on the basis of feminist, dalith and eco aesthetic theories.
			Understand the techniqual language patterns that represent peculiar ideologies.
			Read the literacy works on the basis of new critical approaches.
		MAL3E FILM STUDIES	Understand The Film As A Medium Of Contemporary Society
			Study The History And Development Of Film Art
		MAL3E MALAYALAM DRAMA	General Awareness About Malayalam Drama
			Introduce The History Of Malayalam Drama
			Understand The Influence Of Drama In The Society
			Understand The Techniques Of Modern Malayalam Drama
		MAL4C15 LITERARY	Aware and AnalyzeThe Criticism And Study Of Films.

		THEORIES WESTERN	
			Co4 Aware How To Create A Short Film-Campus Film-Documentary
			Introduce the western and modern literary theories
		MAL4E FOLKLORE	Understand The Folk Tradition, Culture, And History.
			Examine The Relation And Relation-Morality To Literacy And Literacy To Morality.
			Identify the' The Collective Identity'.
			Trace The History And Development Of Folklore Studies.
			Understand The Origin Of Folkloristic In Academic Bodies.
			Understand The Different Folk Genre And Its Influence In Literature.
			Analyze The Folk Literature.
			Trace The Study Of Kerala Folklore And Its Origin & Development.
			Explore The Folk Tradition In Kerala Culture And Collectivity.

B.A MALAYALAM

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the evolution morphology of Malayalam language and Literature.
PSO2	Understand and critics cent temporary aesthetical and theoretical aspects of Literature and make contributions of literature.
PSO3	Develop skills in language for publishing/online writing, translating, and media interpretation.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME

B.A	MALAYALAM	MAL1B01 NAVOTHANA MALAYALAKAVITHA	General Awareness about Modern Malayalam poetry.
			Introduce the history & development of modern Malayalam poetry.
			Understand new narratives of modern Malayalam poetry.
			Introduce the new perspectives of modern Malayalam poetry.
		MAL2B02 KATHASAHITHYAM	General Awareness About Malayalam Short Story
			Introduce The History Of Malayalam Short Stories
			Understand The History &Different Stages Of Malayalam Short Story
			Inculcate Creative Skills
		MAL2B03 NAVEENA MALAYALAKAVITHA	General Awareness About Modern Malayalampoetry
			Introduce The History & Development Of Modern Malayalam Poetry
			Understand New Narratives Of Modern Malayalam Poetrty
			Introduce The New Perspectives Of Modern Malayalam Poetry
		MAL3BO04 DHRISHYAKALA SAHITHYAM	Understand the history and development of Malayalam drama
			Understand the different Kerala art forms
			Analyse the folk rituals in kerala culture
			Understand the new theatre forms in kerala
			Understand the background culture of popular art forms

		MAL4B05 PRACHEENA MADHYAKALA MALAYALA KAVITHA	Understand Ancient Malayalam Literary Periods.
			Introduce Ancient Malayalam Literary Forms.
			Understand The Features Of Manipravalam Poetry.
			Understand The Features Of Champukavyams.
		MALB06 MALAYALANOV ALSAHITHYAM	General Awareness about Malayalam Novel.
			Introduce The History of Malayalam Novel& Short stories.
			Understand The History &Different Stages Of Malayalam Novel.
			Introduce Translated Novels
		MAL5B07 MALAYALAM GRAMMAR	Understand The Theories Of Malayalam Grammar.
			Analyze Malayalam Language Usages.
			Create Own Conclusions About Malayalam Grammatical Usages
			Compare Different Grammatical Theories with Kerala panineeyam.
		MAL5B08 COURSE TITLE-–WESTERN LITERARY THEORIES	Understand The Western Literary Theories.
			Identify The Greek-Anglo Literary Critics.
			Aquaria Critical. Skills through Critical Works.
			Historical Analysis of Western Literary Theories.
		MAL5B09 MALAYALASAHI THYAVIMARSA	General Awareness About Malayalam Criticism

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			Introduce The History Of Malayalam Criticism.
			Understand Different Theories Of Criticism.
			Apply The Theories To The Literary Works.
		MAL5B10 FOLKLORE	Understand The Folk Tradition, Culture, And History.
			Identify The' The Collective Identity'.
			• Trace The History And Development Of Folklore Studies.
			Explore The Folk Tradition In Kerala Culture And Collectivity.
		MAL5D01 CHALACHITHRA PADANAM	Understand The Film As A Medium Of Contemporary Society
			• Study The History And Development Of Film Art
			• Aware and AnalyzeThe Criticism And Study Of Films.
			Co4 Aware How To Create A Short Film-Campus Film-Documentary
		MAL6B11 LINGUISTICS AND HISTORY OF LANGUAGE	Understand The Theories Of Linguistics
			Analyze Different Discourse Of Malayalam Language.
			Understand The History And Development Of Malayalam Language
			• Compare Language And Society
		MAL6B12 COURSE TITLE-GADHYASAHITHYAM	Understand The History And Development Of Malayalam Prose.
			Introduce Medieval

			Malayalam Prose.
			Understand The Features Of Malayalam Gadyam.
			Understand The Features Of Ancient Malayalam Manuscripts.
		MAL6B13 COURSE TITLE - EASTERN LITERARY THEORIES	Understand The Eastern Literary Theories.
			Understand Different Theories Of Eastern Literary Criticism.
			Acquire Critical skills Through Literary Theories.
			Historical Analysis of Eastern Literary Theories.
		MAL6B14 COURSE TITLE- NAVASAMSKAR APADANANGAL	Aware Different Culture Patterns
			Study Different Cultural Stages Of Kerala
			Aware The Cultural Background Of Literary Works
			Create The Ability To Criticize Different Culture Of Literature
		MAL6B16 METHODOLOGY OF RESEARCH	Understand the new ways of research studies
			Analyse the possibilities of research studies of Malayalam language and literature
			Understand the methodology and preliminary format of research thesis .
			Criticise and analyse the previous study material with the help of research tools
			• Understand the knowledge levels of Malayalam language literature through different research approaches

		MAL6B17 ELECTIVE STHREEPADANANGAL	Understand the definitions of feminine, Dalith and ecology in the background of literature.
			Analyze the literacy works on the basis of feminist, dalith and eco aesthetic theories.
			Understand the techniqual language patterns that represent peculiar ideologies.
			Read the literacy works on the basis of new critical approaches.

B.A	MALAYALAM (COMPLEMENTARY COURSE)	COURSE CODE – MAL2[1]CO1,CORSE TITLE-KERALAPADANAM-POORVAKALAKERALAM, MADHYAKALAKERALAM. MAL4[3]CO2-ADHINIVESHAKALAKERALAM, -ADHUNIKAKERALAM	UNDERSTAND THE RENAISSANCE AND REFORMATION MOVEMENTS OF KERALA ANALYZE THE CONTINUOUS DEVELOMENTS OF KERALA THROUGH DALIT -WOMEN-EDUCATIONAL AND AGRICULTURAL MOVEMENTS UNDERSTAND THE KERALA STATE FORMATION AND FIVE YEAR PLANS AND KERALA DEVELOPMENT MODEL THE INFLUENCE OF SOCIO –CULTURAL

			ASPECTS IN THE ECONOMIC DEVELOPMENT OF KERALA AND ANALYZE AND THE CONTRIBUTION OF EMIGRANTS INTRODUCE AND ANALYZE ART FORMS OF KERALA
B.A	MALAYALAM (COMMON COURSE)	COURSECODE – VMLA01,A02,A03 ,A04 COURSE TITLE- – MALAYALASAHI THYAM 1 2 3 4	GENERAL AWARENESS ABOUT MALAYALAM LITERATURE INTRODUCE THE DIFFERENT LITERAR Y FORMS INTRODUCE MALAYALAM E CONTENT INCULCATE CREATIVE SKILLS

SANSKRIT UG & PG COMMON & COMPLEMENTARY PROGRAMME

PROGRAMME SPECIFIC OUTCOMES (PG)

PSO1	UNDERSTAND HISTORY OF SANSKRIT LITERATURE
PSO2	DEVELOP THE ABILITY FOR TRANSLATION
PSO3	CULTURAL ANALYSIS OF INDIAN SOCIETY ON THE BASIS OF SANSKRIT LITERATURE

PSO4	TO DEVELOP THE ABILITY FOR UNDERSTAND, ANALYSIS AND CRITICAL THINKING ABOUT SANSKRIT LITERARY FORMS.

PROGRAMME SPECIFIC OUTCOMES (UG)

PSO1	Internalize basic structure of Sanskrit Language.
PSO2	Develop interacting and communicating skills in Sanskrit.
PSO3	Understand the ancient Indian tradition and culture through a critical approach.
PSO4	Develop an analytic method and critical thinking in Sanskrit literature and regional cultures.
PSO5	Evaluate the traditional knowledge and relate it to contemporary socio-cultural scenario.
PSO6	Acquire the ability to live fruitfully in the society imbibing traditional values and to discharge duties and responsibilities as ideal citizens.

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
M.A. Malayalam	Sanskrit	SKT 3E08 Basic Sanskrit	To impart general awareness of Sanskrit epic literature to students.
			To enable the student to enjoy and appreciate Katha Literature.
			To familiarize the student with Prose literature.
			Understand the poetic merits and development of Epics and their impact on later Sanskrit Literature.
			Understand the basic principles of grammar
			Understand the Method of Sanskrit Translation.
BA/BSc	Sanskrit	SKT 3A 09 (01) SAMSKRTASAHITYASAMIKSHA - III	Understand the vast literary heritage of Sanskrit Dramas.
			Appreciate the works of important play writers in Sanskrit.

			Evaluate Sanskrit Dramatic Literature through the study of Urubhanga.
			Recognize the literary merits of Bhasa.
			Understand the specific features of the works of Bhasa.
			Understand the general features of Alankaras in Sanskrit literature and how far it is useful in the appreciation of literature.
B.A. Malayalam	Sanskrit	SKT 4 (3) C 02 SASTRAMIMAMSA-II	Understand the history and evolution of Intellectual traditions of India.
			Understand general features and concepts of Indian philosophical schools.
			Understand specific doctrines of Non – Vedic philosophical systems (Nastika Darsanas) Jainisam, Buddhisam and Carvaka.
			Understand the categories and special features of Vedic Schools of Indian Philosophy (Astika Darsanas) Nyaya, Vaisesika, Sankhya, Yoga, Mimamsa and Vedanta systems.
			Analyse the epistemology, metaphysics and ontology of Indian Philosophical schools.
			Evaluate the dimensions of philosophical thoughts based on their interdisciplinary application.

			Articulate on the conceptual and methodological distinctions of Indian Philosophical systems.
			Transform philosophical ideas into socially relevant and self-reflexive perspectives.

DEPARTMENT OF HINDI

COURSE OUTCOMES

COMMERCE

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
	Commerce	VHD1ACM1 - PROSE FORMS IN HINDI LITERATURE	Develop critical understanding of prose forms in Hindi Literature
			Identify the specificities of various types of prose forms
			Prose of eminent authors of different period
			Appraise selected proses
		VHD2ACM2 - POETRY,CORRESPONDENCE AND TRANSLATION	Understanding origin and development of Hindi Poetry
			Introduce the students to the basic elements of poetry, including the stylistic and rhetorical devices employed in poetry, and to various genres of poetry.
			Train students in various perspective readings in poetry Subjects like gender, race, caste, ethnicity, religion, region, environment and nation etc.will be discussed
			Make them understand various types of letters both personal and business. Facilitate the use of translation as a tool for communication between different

			languages

DEPARTMENT OF HINDI

COURSE OUTCOMES

COMPUTER SCIENCE

		VHD1ACS1-PROSE AND ONE ACT PLAYS	Develop critical understanding different prose forms.
			Aquaint the students with different forms, thoughts and styles used in Hindi prose writing ,to make hem able to express their thoughts in these different forms
			Introducing Hindi one act plays to the students for appreciation and critical analysis
			Developing their creative thinking and writing
		VHD2ACS2-POETRY AND SHORT STORIES	Understanding origin and development of Hindi Poetry and short story
			Introduce the students to the basic elements of poetry, including the stylistic and rhetorical devices employed in poetry, and to various genres of poetry
			Appraise selected short fiction readings
			Train students in various perspective readings in poetrySubjects like gender, race, caste, ethnicity, religion, region, environment and nation etc.will be discussed

DEPARTMENT OF HINDI

COURSE OUTCOMES

BA/BSc

Programme	Programme Specialization	Course Code and Name of Course	Course Outcomes
		VHD1A01-PROSE AND DRAMA	Develop taste for drama and fiction
			Identify the specificities of various types of fiction and Drama
			Fiction and Drama of eminent authors of different period
			Appraise selected fiction and Drama readings. Improve a love of fiction and Drama
		VHD2A02- GRAMMAR CORRESPONDENCE AND TRANSLATION	Make students able to use Hindi language correctly and efficiently
			Make them understand various types of letters both personal and business
			Facilitate the use of translation as a tool for communication between different languages
			Evaluate the possibilities of translation
		VHD3A03-POETRY IN HINDI	Understanding origin and development of Hindi Poetry
			Introduce the students to the basic elements of poetry, including the stylistic and rhetorical devices employed in poetry, and to various genres of poetry.
			Train students in various perspective readings in poetry

			Subjects like gender, race, caste, ethnicity, religion, region, environment and nation etc.will be discussed
		VHD4A04-NOVEL AND SHORT STORIES	Develop critical understanding of fiction
			Identify the specificities of various types of fiction
			Fiction of eminent authors of different period
			Appraise selected short fiction readings.Improve a love of fiction

MA ECONOMICS

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand Partial and General Equilibrium theories in Microeconomics and Macroeconomics
PSO2	Understand Indian Economic Growth and Development in Research perspective
PSO3	Understand Banking, trade and financial systems of Indian and international economy
PSO4	Analyse research problems using econometric tools
PSO5	To equip the statistical methods and tools that is essential for the empirical and analytical study of economics.

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
M A	ECONOMICS	ECO1 C01 Microeconomics: Theory and Applications I	Explain consumer behaviour under uncertainty
			Examine choice under risk
			Discuss the recent developments in demand theories
			Distinguish between CD and CES

			production function
			Examine modern theories of cost
			Differentiate collusive and non collusive models of oligopoly
			Discuss different concepts of game theory
		ECO1 C02 Macroeconomics: Theories and Policies I	Explain the Law of consumption and theories of Consumption function
			Discuss theories of Investment
			Explain the Neo classical, Keynesian and post Keynesian theory of Demand for money
			Explain Money supply ,its measure and Money multiplier
			Discuss the practical implications of theories of inflation and unemployment
			Discuss the theories of business cycle
			Discuss the IS LM General Equilibrium , Neo classical and Keynesian version
			Examine the objectives of macroeconomic policies
			Discuss the implications of Fiscal and Monetary policy instruments
		ECO1C03 Indian Economy: Problems and Policies	Examine the contribution of different sectors to GDP and employment
			Discuss the role of different sectors for economic development and examine the major developmental issues and Environmental Degradation
			Explain the implications of economic Planning in India
			Discuss the Implications of Economic reforms in India
			Explain the structural Changes of Kerala Economy
			Discuss about the Decentralization and state finances
		ECO1C04 Quantitative Methods for Economic Analysis I	Explain Functions, Graphs , Matrices and its properties
			Explain Application of Linear

			functions in Economics
			Describe Derivative of a function and its application in Economics
			Discuss Functions of several variable and it's application in Economics
			Describe Rules of Integration and it's Economic Application such as Producer's and Consumer;s surplus
			Explain Differential and Difference Equation
			Discuss Financial Mathematics
		ECO2 C05 - Microeconomics: Theory and Applications-II	Awareness about the Intertemporal Choice and Capital Decisions
			Understand and analyse the General Equilibrium and Welfare Economics
			Knowledge about the Externalities and Public Goods
			An understanding about Asymmetric information
			An awareness about Behavioural Economics
		ECO22C06 Macroeconomics: Theories and Policies II	Explain Classical and Keynesian theories of output and employment
			Discuss the Monetarists view on BOP, exchange rate, great depression and fiscal and monetary policies
			Distinguish between New Classical Macro Economics Real business cycle school and Supply side Macro Economics
			Discuss new Keynesian explanations for real wage rigidity
			Discuss new Keynesian explanations of business cycle and policy implications
			Discuss the political distortions and macroeconomic performance
			Examine the alternative approaches to political business cycle
			Discuss the policy implications of politico-economic model
		Public Finance: Theory and Practice: ECO2 C07	To comprehend the need for public sector

			To examine the public revenue and policy
			To explore public expenditure and debt
			To gain knowledge about the concept of fiscal federalism
			To analyse the trends in Indian public finance
		ECO2C08 Quantitative Methods for Economic Analysis II	Understand the concepts of random experiment and definitions of Probability
			Explain Discrete and Continous random variables and it's probability distribution
			Understand the concept of bivariate random variables and its Probability distribution function
			Discuss Discrete and ContinousProbabilty distributions
			Understand the concept of Law of Large numbers
			Understand the concept of Sampling Distribution
			Explain point estimation and its properties
			Discuss the Methods of Interval estimation
			Understand the concept of testing of Hypothesis
			Understand the concept of testing of Hypothesis
			Understand and apply the statistical tests for mean, proportions, variance and correlation coefficient
			Understand and apply tests based on F and Chi- square distribution
			Explain the concept of non parametric test
		ECO3C09 International Trade	Explain importance and contributions of trade to development
			Examine terms of trade and economic development
			Discuss the developments in trade theories
			Examine transportation cost and

			international trade
			Explain how economic growth affect international trade.
			Distinguish between tariff and non tariff trade barriers
			Explain international trade policies
			Discuss different forms of economic integration
		ECO3 C10 Growth and Development	Discern the Concepts and Measurements of Economic Growth and Development
			An understanding about the Theories of Economic Growth
			Evaluate the Partial Theories of Economic Growth and Development
			Examine the Stage Theories of Economic Growth
			Understand the way of Financing Economic Development
		ECO3 C11- Basic Econometrics	Understanding methodology of Econometrics
			Estimation, Evaluation and Interpretation of Econometric models of different functional forms
			Discuss econometric problems and remedial measures
			Understanding the dummy variables and specification, estimation and evaluation of dummy variable models
			Explain the qualitative response models and its applications
			Analysing specification errors, its consequences, detection and remedies
			Forecasting using estimated models
			Policy analysis using econometric models
		ECO3 E01 Banking: Theory andPractice	Knowledge about the structure and functions of central banks
			Theoretical and practical knowledge about policies of Reserve Bank of India
			Knowledge about the structure and

			functions of commercial banks
			An understanding about specialized financial and investment institutions
			Familiarize the trends in innovations in the banking transactions
			An awareness on the banking sector reforms in India since 1991
			Develop an overview about international banking and multinational banking
		ECO4 C12 - International Finance	An understanding about the Balance of Payments concepts and Adjustment Mechanisms
			Comprehend the concept Exchange Rate and Theories of Exchange Rate
			Awareness about the Foreign Exchange Market and Mundell-Fleming model
			Knowledge about International Capital Flows
			An awareness about International Monetary System
		ECO4 C13 Financial Markets	Understand structure and functions of financial market
			Knowledge about the concepts of financial inclusion and inclusive growth
			Analyse the instruments of money market
			Examine the reforms in the Indian money market
			Understand the capital market instruments and institutions
			Examine the capital market reforms and the role of SEBI in capital market
			Evaluate the trading mechanism in stock exchange
			Identify the various types of derivatives and trade mechanism in derivative market
			Differentiate between options and future market

			Acquire an awareness on trends in the global financial markets
		ECO4 E01 Advanced Econometrics	Understand Qualitative regression models and its applications
			Understand the dynamic econometric models, their estimation methods
			Differentiate fixed effects and Random effects regression models in the context of panel data
			Estimation of Simultaneous equation models
			Explain the importance of instrumental variables and the estimation of instrumental variable regression model
			Understand basic concepts of time series econometrics and tests of stationarity
			Estimation and forecasting of stochastic process models
			Estimation and forecasting of ARCH and GARCH models
		ECO4E10 Research Methodology and Computer Applications	Understand different approaches in Social Science Research
			Explain formulation of hypothesis in Research
			Explain research design based on different methods of research
			Describe data collection methods and tools
			Describe data compilation, coding and analysis techniques
			Understand Report Writing procedures
			Analyse data using different statistical methods with the help of excel package
			Tabulation and analysis of data using SPSS
		ECO4 P14- Project	Understand different research methods and methodology
			Understand the main secondary data sources of economic variables
			Experience sample survey methods
			Understand tabulation and analysis

			of data
			Study Report Writing

BA ECONOMICS

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand different sectors and fiscal features of Indian economy and Kerala economy
PSO2	Understand economic theories on consumption, savings, investment and distribution at micro and macro levels
PSO3	Analyse theories of economic growth and development
PSO4	Understand the evolution of different schools of thought in economics
PSO5	Understand the fundamentals of financial economics, capital market and international economics
PSO6	Compute and interpret the economic indicators using mathematical and statistical techniques

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
B A	ECONOMICS	ECO1 B01 Microeconomics I	To explore and understand the need to study economics
			To understand and analyse the demand and supply concepts
			To comprehend consumer behaviour and utility analysis
			To learn the concepts of production and costs
		ECO1 B02 Macroeconomics I	To get introduced to macro economics
			To examine the classical macroeconomics
			To comprehend the Keynesian macroeconomics
			To understand the concept of money in economics

		ECO3 B03 Quantitative Methods for Economic Analysis - I	Formulate and solve basic mathematical problems. .
			Understand and will have an insight into multidimensional problems by the concept of matrices
			Arrange and summarize the raw data numerically and graphically.
			Identify and enumerate the relationship between variables, if it exists.
			Frame a mathematical model based on the relationship between the variables.
		ECO3 B04 Microeconomics II	To understand the basic market structure and perfect competition
			To comprehend the monopoly market
			To explore monopolistic competition and oligopoly
			To examine the pricing and employment of inputs
		ECO4 B05Quantitative Methods for Economic Analysis II	Determine the continuity and differentiability of a function and do the differentiation for the function.
			Construct and interpret the index numbers for a real-life situation.
			Recognize and interpret the trend of a phenomenon, at a basic level using time series.
			Evaluate the population trend using fertility and mortality rates.
			Explain and calculate the probability of simple and compound events.
		ECO4 B06 Macroeconomics II	To comprehend the working of IS-LM model in the economy at an aggregate level
			To explore the theories of inflation and unemployment

			To examine the business cycles and its effects
			To enable a detailed analysis of the fiscal and monetary policy
		EC05 B07 Fiscal Economics	Understand the meaning and scope of public finance
			Knowing the type of goods specially public goods, private goods, mixed and merit goods
			Discuss the meaning and importance of public expenditures and related theories
			Understand the concept of Project evaluation and Cost Benefit Analysis
			Identify the sources of sources of public revenue –Impacts, Incidence and Shifting of taxation
			Discuss the concept of public debt and debt management
			Examine the budget and types of budget
			Understand the functioning of the federal finance, Examine the functions of Finance Commission
			Understand the functioning of the local finance
		ECO5B08 India's economic development	Understand the development experience in India during pre and post independent period
			Analyse the economic reforms since 1991
			Explain the sectoral contribution of Agriculture and Industry
			Explain the trend in agriculture and industrial sector in India
			What are the challenges facing Indian Economy and the remedial measures to overcome the challenges.

			Examine the Kerala Model of Development
		ECO5 B09 Economics of Capital Market	An understanding about the characteristics of different financial assets
			Knowledge about the basic concepts, structure and functions of capital market
			An understanding about the capital market instruments and institutions
			Understand the role of SEBI in capital market
			Gain knowledge about the functions of primary market and its intermediaries
			Identify the methods of issue in the new issue market and its applications
			Knowledge about secondary market and functioning of stock exchanges
			An awareness about various stock market indices
		ECO5 B10 Mathematical Economics	Understand the meaning and importance of mathematical economics
			Gain an understanding about various economic functions
			Estimate average functions, marginal functions and elasticity
			Calculate profit maximizing output and cost minimizing output using Lagrangian multiplier and substitution methods
			Differentiate production functions including homogenous, non homogenous, linear and non linear functions

			Identify the properties of CD production function
			Apply linear programming for constraint optimisation
			Determine market equilibrium under perfectly competitive, monopoly, monopolistic and oligopoly markets
		ECO5 D01 Economics in Everyday Life	An understanding about the Basic Concepts and the Methods of Economics
			Knowledge about the basic Microeconomic Concepts
			An understanding about the Macro Economic Concepts
		ECO6 B11 Financial Economics	Familiarize the concepts of financial economics, time value of money and investment criteria
			Identify and analyse different types of risks and return
			Evaluate the cost of capital and use of the CAPM model in investment analysis
			Understand the fundamentals of valuation of securities
			Analyse the derivatives market comprising of forwards, futures and options
		ECO6B12 International Economics	Understand the importance of internal and international trade
			Explain the superiority of Modern theory of trade by comparing other theories.
			Examine the commercial policy of international trade.
			Explain different forms of economic integration

			Examine different systems of foreign exchange determination
			Explain the equilibrium and disequilibrium in Balance of Payment
		ECO6 B13 Development of Economic Thought (Sem VI)	Discuss the ideas and contributions of Mercantilists to economic thought
			Understanding the major ideas and contributions of Physiocrats to economic thought
			Understanding the ideas of British political economists mainly on value, price, profit, wage and income distribution
			Knowing the ideas of major Classicals and Keynes
			Discuss the term socialism, French socialism, and Marxism
			Understanding the major contributions of Early Indian economic thought
			Discuss the colonial economic policies and nationalist responses
		ECO6B14 Economics of Growth and development	Understand concepts of growth and Development and different measures of Development
			Examine evolution of theories of Growth and Development
			Examine different perceptions about development and underdevelopment
			Understand facts about economic growth
			Understand concepts of poverty &inequality and its measurements
			Examine the concepts of sustainable development, models and issues of environment

		ECO6 B15 Research Methodology	Understand the importance of research methodology for understanding social reality
			Exposure to the fundamental techniques and methods in social research
			Familiarize with the quantitative and qualitative strategies of research in social science
			Understand the statistical packages for data analysis
			Equip to develop research and work with a research problem
			Understand Report writing
		ECO6 B17 Behavioral Economics	An awareness about Behavioural Economics
			Examine the Choice Under Risk & Uncertainty
			Gain knowledge about the Inter-temporal Choice
			Familiarize the concept of Behavioral Game Theory

MA SOCIOLOGY

PROGRAMME SPECIFIC OUTCOMES

PSO1	The programme can provide a comprehensive overview of the foundational concerns and current debates in sociology, and offers a range of options for exploring applications in specific areas of research.
PSO2	Learn about current theoretical tools and develop skills in research and data analysis, which can be used in a range of professional fields.
PSO3	The sociology MA program provides a solid foundation in community studies, family studies, gender, environment, demography, development, kinship, social inequality etc.
PSO4	Prepare them for work in a range of careers that value analytical ability, the

	capacity to link theoretical sophistication to empirical research, and the skill of communicating complex ideas to a range of audiences
PSO5	The programme is also an excellent basis for pursuing further research in sociology or more specialised or applied subjects.

COURSE OUTCOMES

MA SOCIOLOGY (2019-20)

SEMESTER I & II

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
MA (1st sem) (2019 Admission)	SOCIOLOGY	SOCIC01 FOUNDATIONS OF SOCIOLOGICAL THEORY	Understand the intellectual and historical forces for the development of Sociological theory. Comprehend and analyse the contributions of pioneering figures in Sociology. Analyse the relevance of the classical theory in contemporary societies.
		SOCICO2 RESEARCH METHODOLOGY OF SOCIOLOGY	Understand the differences between qualitative and quantitative research methods. Analyse the steps in social research. Understand the tools and techniques for data collection.
		SOCICO3 SOCIOLOGY OF INDIAN SOCIETY	Understand the historical emergence of Indian Society from pre-independent to post independent period as well as development of India as a nation based on the perspectives of A R Desai, Rama Chandra Guha and Satish Deshpande. Comprehend the development of sociology in India as well as to analyse significant approaches for studying Indian Society.

			Develop an ability to compare and contrast different approaches to study Indian Society which is emphasizing on different aspects. Get an overview to analyse contemporary issues faced by Indian society with possible solutions reflecting on Nehru's Constituional view as well as Nationalistic view of Gandhi, Tagore which is the basis of Indian Society.
		SOCI C04 RURAL AND TRIBAL SOCITIES IN INDIA	Get familiar with the basics of rural and tribal societies in our country. Understand and analyse the major problems faced by tribes. Comprehend the trajectory of rural societies. Get an overview of the rural and tribal social institutions.
MA (2nd sem) (2019 Admission)	SOCIOLOGY	SO2 C 05 SCHOOLS OF SOCIOLOGICAL THEORY I	Get familiarized with different strands of Functionalist school of thought to study society with a critical perspective. Critically examine distinct conflict perspectives and their significance in contemporary society. Differentiate different theories of symbolic perspective as well as its uniqueness in perceiving society from other schools. Critically analyse the significance of Phenomenological as well as ethnomethodological perspective in Sociology. Get an over view of major schools of thought, their limitations as well as comparison with other perspectives.

		S0C2C06 RESEARCH METHODOLOGY II	Analyse the scaling techniques and various types of scales. Apply statistical measures in social research. Understand the process and analysis of data. Understand various types of reports and format of reports.
		SOC2 C07 URBAN SOCIOLOGY	Familiarise with the basic ideas of Urban Sociology. Comprehend Urban Ecological Processes and theories. Understand and analyse recent theoretical developments in Urban Sociology. Get an overview of Urbanisation in Indian Context. Ability to critically analyse Urban Society.
		SO2 CO8 GENDER STUDIES	Get an overview of feminism, its origin, development, different waves as well as perspectives. Get familiarized with different concepts related to gender studies. Critically analyse theories which covers distinct aspects of gender. Understand the gender dynamics in India and the representation of gender. Analyse the gender in Kerala society.

SEMESTER III & IV

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
MA (3rd sem) (2016 Admission)	SOCIOLOGY	VPSO3C09 SCHOOLS OF SOCIOLOGICAL THEORY II	Understanding the evolution and growth of critical theory. Trace out the historical development of Phenomenology and Ethnomethodology. Analyse the scope of micro macro integration as a theoretical paradigm in Sociology. Get familiarized with Structuralism as a major theoretical perspective.
		VPS03C10 SOCIOLOGY OF DEVELOPMENT : THEMES AND PERSPECTIVES	Understand distinct typologies of development as well as its relation with social structure and culture. Develop an ability to comprehend as well as to analyse distinct theories on development and underdevelopment. Examine different paths of development, its application in India as well as resistantmovements against the negative impact of development. Critically understand Kerala Model of Development . Direct exposure to the activities of local self administration by field visit.
		VPSO3E01 ENVIRONMENTAL SOCIOLOGY	Get familiarized with the major concepts related to environment. Understanding major theoretical perspectives related to Environmental Sociology. Analyse the major environmental problems. Trace out the trajectory of environmentalism.
		VPSO3E02 PROJECT PLANNING AND PREPARATION	Get familiarized with the basic steps involved in project planning and preparation.

			Get an overview for project implementation and planning. Bring out the ability among students for preparing project report and evaluation. Ability to prepare and present project report.
MA (4th sem) (2016 Admission)	SOCIOLOGY	VPSO4C11 CURRENT DEBATES IN SOCIAL THEORY	Understand the current debates in social theory Analyze the theories on culture and society Understand late modernity theories in Sociology
		VPSO4C12 WOMEN STUDIES	Get familiarised with theories of feminism and methodologies in women research. Critically analyse the role of women in economy as well as distinct concepts related to economy which demarcates male and female. Articulate knowledge about women's representation in politics as well as laws for the Protection of women. Diagnose the contemporary problems faced by women in india , its solution as well as feminist movements in a critical perspective.
		VPSO4E01 SOCIOLOGY OF MEDIA AND COMMUNICATION	Understand the basic concepts related to media Analyse the theoretical perspectives related to media Understand the relationship between media and society

		VPSO4E09 Course Title GUIDANCE AND COUNSELING	Understand basic ideas of guidance and counselling Analyze the process and techniques of counselling Understand the areas of counselling Understand the modern trends in counselling

BA SOCIOLOGY

PROGRAMME SPECIFIC OUTCOMES

SL.NO.	PROGRAM SPECIFIC OUTCOMES
PO1	Understand the relationship between social structure, identities and inequalities.
PO2	Explore social problems in local, national and global contexts by using research methods of sociology.
PO3	Creating generalizations or descriptions about the changing social world.

COURSE OUTCOMES

BA SOCIOLOGY (2019-20)

SEMESTER I & II

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
BA (2019 Admission)	SOCIOLOGY	SGY1B01: BASICS OF SOCIOLOGY	Understand the relation between the individual and society Understand the parts and processes within society Understand social process and its various types
		SGY2B02: INDIAN SOCIETY: STRUCTURE AND TRANSFORMATION	Understand the sociological perspectives on the study of the dynamics of Indian Society Analyze various institution in Indian society and its major changes Analyze the issues and challenges of contemporary society
BA (2019 Admission)	Economics (Complementary)	SGY1 (2) C01: PRINCIPLES OF SOCIOLOGY	Understanding that society can be studied scientifically Recognizethe contributions of social sciences in understanding contemporary social realities Develop sociological perspective on

			current issues
BA (2019 Admission)	Economics (Complementary)	SGY1 (2) C01: PRINCIPLES OF SOCIOLOGY	Understanding that society can be studied scientifically Recognizethe contributions of social sciences in understanding contemporary social realities Develop sociological perspective on current issues

SEMESTER III & IV

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
BA (2016 Admission)	SOCIOLOGY	VSO2B03 SOCIAL INFORMATICS	Understand concepts and functional knowledge in the field of informatics Functional knowledge in a standard office package and popular utilities Understand social issues and concerns related to informatics
		VSO2 B04 FOUNDATION OF SOCIOLOGICAL THEORIES	Understand the formation of sociological thought Understand the intellectual and philosophical foundations of Sociological theories and contributions of Classical theorists to Sociology.
BA (2016 Admission)	SOCIOLOGY	VSO2 B04 FOUNDATION OF SOCIOLOGICAL THEORIES	Understand the formation of sociological thought Understand the intellectual and philosophical foundations of Sociological theories and contributions of Classical theorists to Sociology.
		VSO4B05 SOCIAL RESEARCH METHODS	Understand of fundamentals of social research Analyze different types and methods in social research distinguish the characteristics of qualitative and quantitative research

Semester V &VI

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
BA (2016 Admission)	SOCIOLOGY	VSO5 B07 INDIAN SOCIETY AND SOCIAL CHANGE	*Understand the sociological perspectives on the study of the dynamics of Indian Society* *Analyze various institution in Indian society and its major changes*
		VSO5B08 THEORETICAL PERSPECTIVES IN SOCIOLOGY	*understand the nature and characteristics of different schools of Sociological theories and theoretical analysis* *Understand the intellectual roots of modern Sociological theories and major contributors in different Schools of thought*
		VSO5B09 SOCIAL ANTHROPOLOGY	*Understand the basic concepts in social anthropology* *Analyze the anthropological studies on culture and society,tribes in India etc*
		VSO5B10 RESEARCH METHODS AND STATISTICS	*Understand the basics in social statistics* *Understand the sampling techniques, data management and presentation* *Enable to write report*
	Open Course	VSO5D01 LIFE SKILL DEVELPMENT	*Knowledge of necessary life skills in everyday life* *Understand the individual role in addressing issue relevant to the life situations* *Enable the students to establish productive interpersonal relationships*

			with others
BA (2016 Admission)	SOCIOLOGY	VSO6B11 ENVIRONMENT AND SOCIETY	*Understand the basic arguments in environmental Sociology.* *Analyse the theoretical discussions in Environmental Sociology.* *Understand the environmental issues and the need for conservation.*
		VSO6B12 SOCIOLOGY OF MASS COMMUNICATION	*Understand the meaning, functions and various types of media.* *Understand various theories on media and communication.* *Discuss the concepts of media and society.*
		VSO6B13 WOMEN AND SOCIETY	*Understand the importance of women studies* *Analyze gender differences and various gender issues*
		VSO6 B14 POPULATION AND SOCIETY	*Understand theoretical explanation of population studies and related concepts* *Analyze various population theories* *Understand various changes in population in society*
		VSO6E01 SOCIOLOGY OF DEVELOPMENT	*Understand the various concepts and perspectives of development* *Evaluate the theories of development and underdevelopment* *Understand the development and dilemmas related to development in Indian context* *Analyze development experience in*

			Kerala

HISTORY (AS COMPLEMENTARY COURSE FOR BA ECONOMICS AND BA ENGLISH)

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
BA	Economics	HIS1C01 – MODERN INDIAN HISTORY (1857 TO THE PRESENT): I	CO1 - Understand the entry of European powers to India
			CO2 -Identify the modes of expansion and consolidation of East India Company Rule
			CO3 - Analyze the modes of resistance against British rule.
			CO4 -Recognise the contemporary socio-religious changes
			CO5 -Understand the emergence of nationalism among Indians
			CO6-Identify the features of early phases of national movement
			CO7 - Analyse the economic critique of colonialism
			CO8 -Understand the emergence of mass movements against the British
		HIS2C01 – MODERN INDIAN HISTORY (1857 TO THE PRESENT): II	CO1 - Understand the Gandhian tools for struggle against British
			CO2 - Recognise the various Gandhian constructive programmes
			CO3 - Understand the critique of Gandhian methods
			CO4 - Identify the foundations of Indian republic
			CO5 - Analyze the changes in economy in post-independent India

			CO6 - Understand the issue of communalism in India after independence.
BA	ENGLISH	HIS1C03 – SOCIALAND CULTURAL HISTORY OF BRITAIN: I	CO1 - Identify the early invasions of groups to British Isles
			CO2 - Understand and analyse the nature of Anglo-Saxon life
			CO3 - Analyze the medieval social formations and institutions
			CO4 - Understand the early literature in Old and Middle English language
			CO5 - Understand the rise of Tudor dynasty in England
			CO6 - Identify the changes in economy and society in early modern Britain
		HIS2C03 – SOCIAL AND CULTURAL HISTORY OF BRITAIN: II	CO1 - Study the history of major revolutions in modern world and its impact on British history and literature
			CO2 - Understand the rise of various new trends in literature
			CO3 - Analyze the emergence of Britain as a colonial power
			CO4 - Understand the aspects of life in Victorian and post-Victorian England
			CO5 - Analyze the role of Britain in the post-colonial world
			CO6 - Identify the various literary trends of the late nineteenth and twentieth century.

POLITICAL SCIENCE (AS COMPLEMENTARY COURSE FOR BA SOCIOLOGY AND BA ENGLISH LITERATURE)

PSO1	Understand about party system, regionalism , procedure of amendment,
PSO2	Understand the electoral process and organization of bureaucracy
PSO3	Understand the main features of Indian federal system, centre state relations and three tier system of decentralization ,
PSO4	Understand the challenges to Indian Democracy

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
Complementary program	Political Science	VPS3C03-Indian Constitution And Politics - Political Dynamics	Explain the features of the Indian Party System
			Analyze the growth, ideology and Programmes of 7 National Parties
			Scrutinize the reasons for the growth of Regionalism
			Examine ideology and programme of Major Regional Parties
			Assess the electoral process, composition and functions of the Election Commission
			Identify the need for Electoral Reforms
			Explain the methods and procedure for amending the Constitution
			Identify the three types of services in India
			Illustrate the composition ,power and functions of the Union Public Service Commission and the State Public Service Commission
		VPS4C04-Indian Constitution and Politics –Federal dynamics and decentralization	Explain the characteristic features of Indian Federalism
			Examine the Legislative, Administrative and Financial Relations between Centre and State
			Study the constitutional impact of National, State and Financial Emergency
			Discover the significance of the 73rd and 74th Amendment
			Determine the merits and demerits of Reservation policy in India
			Investigate the challenges to Indian Democracy- Communalism, Religious fundamentalism, Criminalization of politics
			List the composition and functions of Finance Commission, NITI AYOG, National Development Council

COMPLEMENTARY COURSE IN POLITICAL SCIENCE FOR
BA ENGLISH LITERATURE & BA SOCIOLOGY PROGRAMME (2019 ADMISSION)

PSO1	Understand the process through which the constitution of India came into existence, its salient features, its philosophical base, fundamental rights, fundamental duties and directive principles of state policy
PSO2	Understand the structure and functions of different organs of governments in India; legislature, executive and judiciary,
PSO3	Understand the main features of Indian federal system, centre state relations and three tier system of decentralization ,procedure of amendment
PSO4	Understand about party system, regionalism, challenges to Indian Democracy

Course Outcomes

Programme	Programme Specialization	Course Code and Name of Course	Course Outcomes
BA	Complementary Course- Political Science	(ICP1 (2) CO1)Indian Constitution and Politics: Basic Features and Governmental Structures	Define Constitution and its importance Trace the history of the Constitutional Development –Acts of 1909 1919 ,1935 &1947
			List the characteristic features of the Indian Constitution, Explain the key words and objectives of the Preamble
			Assess the Fundamental Rights ,Fundamental Duties Directive Principles of State Policy
			List the power and functions of the President, Vice President, Council of Ministers, Prime Minister
			Explain the composition, powers and functions of Lok Sabha and Rajya Sabha, Outline the functions and role of the Speaker
			List the power and functions of the Governor and Chief Minister Understand the composition, powers and functions of Legislative Assembly and Legislative Council
			Identify the three types of services in India Illustrate the composition ,power and functions of the Union Public Service Commission and the State Public Service Commission
			Examine the composition, jurisdictions and functions of Supreme Court and High Court Appraise the concept of Judicial Review

			and Judicial Activism
		VPS4 (3) CO2) Indian Constitution and Politics: Federalism, Decentralization and Political Dynamics	Explain the characteristic features of Indian federalism ;Examine the legislative, administrative and financial relations between centre and state
			Examine the composition and functions of Finance Commission, NITI AYOG, GST Council National Development Council
			Challenges to Indian federalism
			Explain the significance of the 73rd and 74th amendment with reference to Kerala
			Explain the 3 types of amendments of the Constitution Major Amendments to the Constitution
			Explain the features of the Indian Party System; Analyse the growth, ideology and programmes of 7 national parties ;
			Examine ideology and programmes of major regional parties: Scrutinize the reasons for the growth of regionalism
			Examine the Constitutional provisions to protect human rights – Civil and Political rights, Socio Economic and Cultural rights Protection of minorities – religious, linguistic and sexual minorities, Right to Information Act

PSYCHOLOGY (AS COMPLEMENTARY COURSE FOR BA SOCIOLOGY)

PSO1	Understand the nature of basic concepts and theories of Psychological Processes
PSO2	Understand the nature of abnormal behavior
PSO3	Understand the nature of social behavior

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
Complementary program in	Psychology	VPY3C03 Abnormal psychology	Understand the meaning and classification of mental disorders

Psychology for BA sociology		(s3 sociology)	Identify the clinical features and types of anxiety disorders
			Identify the clinical features and types of somatoform disorders
			Identify the clinical features and types of dissociative disorders
			Identify the signs,symptoms and clinical features of schizophrenia
			Identify the signs,symptoms and clinical features of mood disorders
		VPY4C04 Psychology of Social Behavior(S4 Sociology)	Understand the definition , nature and scope of social psychology
			Identify the components and characteristics of attitude
			Identify the factors influencing attitude formation and attitude change
			Understand the aspects of social perception-nonverbal communication, attribution, impression formation and impression management
			Understand the aspects of social cognition-schema, heuristics, priming, automatic and controlled

			processing
			Evaluate the potential sources of error in social cognition
			Understand the nature, functions and concepts of group –social facilitation, social loafing, deindividuation
			Understand the process of decision making in groups
			Understand the aspects of social influence-conformity, compliance techniques, obedience to authority
			Understand the theoretical perspectives and features of prosocial behavior
			Understand the theoretical perspectives, features ,prevention and control of aggression

COMPLEMENTARY COURSE IN PSYCHOLOGY FOR BA SOCIOLOGY PROGRAMME (2019ADMISSION)

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the nature of basic concepts and theories of Psychological Processes
PSO2	Understand the nature of abnormal behavior and social behavior

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
Complementary Program in Psychology for BA Sociology	Psychology	PSY1C05 /PSY2C05 Psychological Processes (for S2 Sociology)	Understand the meaning, historical background and research methods of Psychology
			Explain the basic processes in

			sensation, attention and perception
			Understand the theoretical perspectives of learning
			Understand the key processes in memory, theories of Forgetting and strategies for remembering
			Understand the thought processes
			Understand the motivational processes, types of motives
			Evaluate the theories of emotion
			Evaluate the theories of intelligence
			Understand the assessment of intelligence
			Understand the concept of emotional intelligence
			Evaluate the nature, determinants and theories of personality
			Understand the assessment of personality

M.Sc MATHEMATICS

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the relation between different branches of Mathematics like Real analysis, Complex analysis and Functional Analysis
PSO2	Understand the various Mathematical structures using Topology, Abstract Algebra, Differential Geometry and Discrete Mathematics.
PSO3	Understand Number system in Number Theory and Algebraic Number theory.
PSO4	Solve real life problems using Differential equations, Graph theory and Opeartions research.

COURSE OUTCOMES

PROGRAMME	PROGRAMME	COURSES	OUTCOME

	SPECIALIZATION		
M.Sc	MATHEMATICS Semester 1	MTH1C01 - ALGEBRA - I	Understand the concept of Groups
			Apply group action on a set
			Understand the basics of Rings and Fields
		MTH1C02 - LINEAR ALGEBRA	Understand vector spaces and linear transformations
			Application of inner product spaces
		MTH1C03 - REAL ANALYSIS - I	Understand the definition and basic concept Topology
			Analyselimits and continuity of Real numbers
			Apply methods of differentiation
			AnalyseSequences and Series of Functions - Discussion of Main problem, Uniform convergence, Uniform convergence and continuity, The Stone –Weierstrass Theorem.
		MTH1C04 - NUMBER THEORY	Analyse and understand the Arithmetical Functions and Dirichlet Multiplication
			Understand the basic concepts and levels of Congruences, Quadric Residues and Quadratic Reciprocity Law.
			Study of Cryptography, Public Key and apply in real life problems.
		MTH1C05 -DISCRETE MATHEMATICS	Study of Order Relations, Lattices; Boolean Algebra – Definition and Properties, Boolean Functions.
			Understand Graph
			Design grammars and automata for different language.
	Semester 2	MTH2C06 - ALGEBRA – II	Understand the concept of prime and maximal ideals.
			Understand finite fields and automorphism of fields
			Understand splitting fields and separable

			extensions
			Understand Galois theory, cyclotomic extension and insolvability of the Quintic
		MTH2C07 - REAL ANALYSIS - II	Understand the concepts of Lebesgue Outer measure, measurable sets and functions, Borel and Lebesgue measurability.
			Understand the concepts of functions of Bounded Variations. Lebesgue Differentiation theorem.
			Understand the concepts Signed measures, Hahn Decomposition, Jordan decomposition.
			Understand Riesz Representation Theorems
		MTH2C08 - TOPOLOGY	UNDERSTAND TOPOLOGICAL SPACES
			UNDERSTAND CONTINUOUS FUNCTIONS AMONG TOPOLOGICAL SPACES AND QUOTIENT SPACES
			UNDERSTAND THE CONCEPT OF SEPARATION AXIOMS
			UNDERSTAND URYSOHN CHARECTERISATION OF NORMALITY
		MTH2C09 - ODE AND CALCULUS OF VARIATIONS	Interpret and analysePower Series Solutions and Special functions
			Understand Systems of First Order Equations; Non linear Equations
			Understand and Analysethe Existence and Uniqueness of Solutions, The Calculus of Variations.
		MTH2C10- OPERATIONS RESEARCH	Apply the method of minimum spanning tree in solving minimum path problems
			Apply Simplex method or Dual Simplex Method to solve linear programming problems

			Applying graphical method in solving problems of game theory
			Apply Kuhn-Tucker theory to solve convex and non linear programming problems
	Semester 3	MTH3C11- MULTIVARIABLE CALCULUS AND GEOMETRY	Understand the concept of functions of several variables, the concept of their differentiation and linear transformation
			Understand the concept of curve and their properties. Find curvature and torsion of curves.
			Understand the concept of surfaces and their properties
		MTH3C12 -COMPLEX ANALYSIS	Understand Conformality, Linear Transformations, Elementary Conformal Mappings, Fundamental Theorems.
			Understand Cauchy's Integral Formula, Local Properties of Analytic Functions, The General Form of Cauchy's Theorem, Calculus of Residues.
			Analyse Harmonic functions, Power series Expansions, Maximum principle.
		MTH3C13 - FUNTIONAL ANALYSIS	Understand Metric spaces and Continuous Functions
			AnalyseInner product spaces
			AnalyseBanach spaces
		MTH3C14 - PDE AND INTEGRAL EQUATIONS	Understand and analyseFirst Order PDE .
			Analyse and solving Second Order PDE
			Study of Integral Equations.
		MTH3E03- MEASURE AND INTEGRATION	Define and understand basic notions in abstract integration theory.
			Describe and apply the notion of

			measurable functions and sets
			Describe the notion of absolute continuity and apply Lebesgue's decomposition theorem
	Semester 4	MTH4C15-ADVANCED FUNCTIONAL ANALYSIS	Understand the concept of spectrum and their properties, compact operators and self adjoint operators.
			Understand the properties of orderings.
			Study the fundamental theorems and basic results.
		MTH4E06-ALGEBRAIC NUMBER THEORY	Understand the concept of algebraic numbers and algebraic integers.
			Understand the concept of factorization.
			Understand the concept of lattices and their properties.
		MT4E09 - DIFFERENTIAL GEOMETRY	Analyze vector fields on surfaces
			Understand Geodesics and parallel transport
			Understand the concept of curvature and use this to find Arc length and line integrals.
			Understand local equivalence of surfaces and parametrized surfaces
		MTH4C11-GRAPH THEORY	Know some important classes of graph theorectc problems,
			Identify induced subgraph, clique, matchings
			Use graph theory as a modeling tool

B.Sc MATHEMATICS-2019-20

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the foundations of mathematics and the importance of logic.
PSO2	Solve problems using differentiation, Linear algebra, Vector algebra and Numerical methods.
PSO3	Understand Abstract algebra, real number system , complex number system and natural number system.
PSO4	Solve real life problems using Differential equations and Linear programming.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B.Sc	MATHEMATICS (Core Courses) Semester 1	MTS1B01 –Basic Logic and Number Theory	Proves results involving divisibility, greatest common divisor, least common multiple and a fewapplications.
			Understands the theory and method of solutions ofLDE.
			Understands the theory of congruence and a fewapplications.
			Solves linear congruentequations.
			Learnsthreeclassicaltheorems*viz*.Wilson's theorem,Fermat'slittletheoremandEuler's theorem and a few important consequences
	Semester 2	MTS2B02 – Calculus of Single variable - 1	Introduces the fundamental ideas of limit, continuity and differentiability
			Understands basic theoremsof*differentialcalculus*
			Applies of differential calculus in real life situations
			Understands integral calculus
	Semester 3	MTS3B03– Calculus of Single variable - 2	Understands Exponential and Logarithmic functions
			Understands improper integrals their convergence and evaluation.
			Studies of convergence of a *series*, which is practically done by applying

			several different tests such as integral test, comparison test and so on
			A detailed study of plane and space curves
			Applies*vectors* in dealing with the problems involving geometry of lines, curves, planes and surfaces in space and have acquired the ability to sketch curves in plane and space given in vector valuedform.
	Semester 4	MTS4B04 – Linear Algebra	Discusses a number of methods for solving a system of linear equations
			Understands the modern view of a matrix as a linear transformation
			Enables the student to understand the relationship among the solutions of a given system of linear equations and some important subspaces associated with the coefficient matrix of thesystem.
			Discusses practical method of finding out the eigenvalues from the characteristic equation and the corresponding eigenvectors.
			Learns a few fundamental results involving diagonalization and eigenvalues which enable them to check whether diagonalization is possible
			Study of *spectral decomposition* of a symmetric matrix. In this process , students realise that every symmetric matrix is diagonalizable and that this diagonalization can be done in a special way ie., by choosing an *orthogonal matrix* to perform the diagonalization
			Understands Gram-Schmidt process
			Learns the fundamentals of linear algebra by capturing the ideas geometrically, by justifying them algebraically and by preparing them to apply it in several different fields such as data communication, computer graphics, modelingetc.

	Semester 5	MTS5 B05 - THEORY OF EQUATIONS AND ABSTRACT ALGEBRA	Derives formulae for the solutions of third and fourth degree polynomial equations given by Carden and Ferrari
			Learns the relationship between the roots and coefficients of an nth degree polynomial and an upper and lower limit for the roots of such a polynomial.
			Locates the region of solutions for a general polynomial
			Learns methods to find out integral and rational roots of a general nth degree polynomial with rational coefficients.
			Understands the abstract notion of a group, with several examples,
			Learns to check whether an algebraic system forms a group or not and some fundamental results of group theory.
			Explores the idea of structural similarity, the notion of cyclic group, permutation group , various examples and very fundamental results in the areas
		MTS5 B06 - BASIC ANALYSIS	Learns and deduces rigorously many properties of real number system by assuming a few fundamental facts about it as axioms.
			Understandssequences ,their limits, several basic and important theorems involving sequences and their applications .
			Learns to prove Archimedean property, density theorem, existence of a positive square root for positive numbers and so on
			Understands some basic topological properties of real number system such as the concept of open and closed sets, their properties, their characterization and so on.
			Understands algebraic, geometric and topological structures of complex number system, functions of complex variable, their limit and continuity and so on.
		MTS5 B07-	Understands several methods such as

		NUMERICAL ANALYSIS	bisection method, fixed point iteration method, regulafalsi method etc. to find out the approximate numerical solutions of algebraic and transcendental equations with desired accuracy.
			Understands the concept of interpolation and also learns some well known interpolation techniques.
			Understands a few techniques for numerical differentiation and integration and also realizes their merits and demerits.
			Applies numerical approximations to solutions of initial value problems and also to understand the efficiency of various methods.
		MTS5 B08 - LINEAR PROGRAMMING	Solves linear programming problems geometrically and understands the drawbacks of geometric methods.
			Solves LP problems more effectively using Simplex algorithm via. the use of condensed tableau of A.W. Tucker
			Converts certain related problems, not directly solvable by simplex method, into a form that can be attacked by simplex method
			Understands duality theory, a theory that establishes relationships between linear programming problems of maximization and minimization
			Solves transportation and assignment problems by algorithms that take advantage of the simpler nature of these problems
			Understands game theory
		MTS5 B09 - INTRODUCTION TO GEOMETRY 3 hours/week 3 Credits 75 Marks	Understands several basic facts about parabola, hyperbola and ellipse (conics) such as their equation in standard form, focal length properties, and reflection properties, their tangents and normal.
			Understands affine transformations, the inherent group structure, the idea of parallel projections and the basic properties of parallel projections
			Realises the basic difference in identifying two geometric objects in

			Euclidean and affine geometries.
			Understands the idea of homogeneous coordinate of a point in projective plane and write down the equation of a line in projective plane passing through two homogeneous coordinate
			Appreciates the advantage of interpreting a Euclidean theorem as a projective theorem by learning a simpler proof for Desargues and Pappu'stheorem.
			Applies cross ratio in the context of aerial photography
	Semester 6	MTS6 B10 - REAL ANALYSIS	States the definition of continuous functions, formulate sequential criteria for continuity and proves or disproves continuity of functions using this criteria.
			Understands the significance of uniform continuity in continuous extension theorem.
			Formulates Cauchy criteria for integrability and a few applications of it. In particular using Cauchy criteria in proving the non integrability of certain functions.
			Understands two forms of fundamental theorem of calculus and their significance in the practical problem of evaluation of an integral.
			Understands the difference between pointwise and uniform convergence of sequences and series of functions
			Learns the properties of and relationship among two important improper integrals namely beta and gamma functions that frequently appear in mathematics, statistics, science and engineering
		MTS6 B11- COMPLEX ANALYSIS	Understands the difference between differentiability and analyticity of a complex function and constructs examples.
			Understands definition of complex integral, its properties and evaluation. Few fundamental results on contour integration theory such as Cauchy's

			theorem, Cauchy-Goursat theorem and their applications.
			Applies Cauchy's integral formula in the derivation of power series expansion of an analytic function.
			Applies residue theory in locating the region of zeros of an analytic function.
		MTS6 B12 - CALCULUS OF MULTI VARIABLE 5	Understands several contexts of appearance of multivariable functions and their representation using graph and contour diagrams and formulates and works on the idea of limit and continuity for functions of several variables
			Understands the notion of partial derivative, their computation and interpretation.
			Calculates the maximum and minimum values of a multivariable function using second derivative test and Lagrange multiplier method.
			Applies double and triple integral in the problem of finding out surface area ,mass of lamina, volume, centre of mass and so on.
			Learns three major results viz. Green's theorem,Gauss's theorem and Stokes' theorem of multivariable calculus and their use in several areas and directions.
		MTS6 B13- DIFFERENTIAL EQUATIONS	identifies a number of areas where the modelling process results in a differential equation
			Learns to solve DEs that are in linear, separable and in exact forms and also to analyse the solution
			Learns the theory and method of solving a second order linear homogeneous and nonhomogeneous equation with constant coefficients.
			Acquires the knowledge of solving a differential equation using Laplace method which is especially suitable to deal with problems arising in engineering field.
			Applies the technique of solving partial differential equations using the method of separation of variables

	ELECTIVE COURSE Semester 6	MTS6 B14 (E01)- GRAPH THEORY	Learns the definition of a graph, Graphs as models, Vertex degrees, Sub graphs, Paths and Cycles, Matrix representation of a graph
			Understands Bridges, Spanning Trees Cut Vertices and Connectivity and applies in solving problems
			Learns and applies Euler Tour, Hamiltonian Graphs,Plane and Planar graphs and Euler's Formula
	OPEN COURSE Semester 5	MTS5 D01- APPLIED CALCULUS	Understands the fundamental ideas of limit, continuity and differentiability
			Understands basic theoremsof*differentialcalculus*
			Applies differential calculus in real life situations
			Understands integral calculus
			AppliesIntegrals to Business , Economics, Life and Social Sciences

B.Sc	MATHEMATICS (COMPLEMENTARY COURSE) Semester 1	MTS 1 CO1- Mathematics - 1	Understand Limits, concepts, continuity, derivative and linear approximation of curves
			Understands basic theorems of differentiation and integration.
			Applies the concepts in solving optimisation problems in real life.
			Understands the concepts of maximum and minimum values of functions using graphs.
			Applies integral calculus in finding areas, surface areas, volume of solids.
	Semester 2	MTS2C02- MATHEMATICS - 2	Understands the concepts of polar coordinates, trigonometric functions, hyperbolic functions, inverse hyperbolic functions.
			Understands the parameterisation of curves and applies the concept of polar coordinates in finding areas, arc length and area between curves

			Understands the ideas of improper integrals, their convergence, convergence of series and Taylor's formula
			Understands the concepts of vector space and examples of vector space.
			Applies the concepts of eigen values and eigen vectors in diagonalisation
	Semester 3	MTS 3 CO3- Mathematics - 3	Understands the fundamental ideas of limits, continuity, differentiability of vector valued functions.
			Understands the concepts of curl and divergence of vectors
			Applies the concepts of multiple integrals in finding surface area, volume, flux
			Understands the concepts of complex number system, analyticity and differentiability.
			Applies the concepts of complex and contour integration
	Semester 4	MTS4 CO4- Mathematics - 4	Understands the ODE, its solutions, Initial value problem and different types of ODE.
			Applies Laplace transforms and inverse transform for solving ODE
			Understands the concepts of Fourier series and its convergence
			Understand the methods of solving partial differential equations.

B Sc STATISTICS

PROGRAMME SPECIFIC OUTCOMES

PSO1	Demonstrate the ability to apply fundamental concepts in exploratory data analysis.

PSO2	Design studies for obtaining data whilst avoiding common design flaws that incur bias, inefficiency and confounding.
PSO3	Demonstrate an understanding of the basic concepts of probability and random variables.
PSO4	Understand the concept of the sampling distribution of a statistic, and in particular describe the behaviour of the sample mean.
PSO5	Apply inferential methods relating to the means of Normal distributions.

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
B.Sc.	STATISTICS (CORE COURSE)	VST1B01-Basic Statistics and Probability	To understand various approaches to probability & compute probabilities.
		VST2B02-Bivariate Random Variable and Probability Distributions	To understand the applications of theoretical discrete distributions
		VST3B03-Statistical Estimation	To equip the students with the theory essential for estimation of unknown parameters
		VST4B04-Testing of Hypothesis	Identify a suitable test of significance to test a given hypothesis -large sample test/small sample test for testing different parameters
		VST5B05-Mathematical Methods in Statistics	To introduce the mathematical concepts required to learn theoretical statistics.
		VST5B06-Statistical Computing	To gain scientific and experimental skills of the students
		VST5B07-Sample surveys	To equip students with Sampling Techniques used in conducting sample surveys
		VST5B08-Operations Research and Statistical	To provide an insight into quality assessment techniques

		Quality Control	
		VST6B09-Time Series and Index Numbers	To expose statistics students to the areas of time series and index numbers
		VST6B10-Design of Experiments	To discuss the analysis of data relating to agriculture, biological sciences and industry
		VST6B11-Population Studies and Actuarial Science	To impart basic concepts in population studies, actuarial science and vital statistics
		VST6B12-Linear Regression Analysis	Describe the concepts of correlation & regression and perform regression analysis for the given data
		VST6E01-Reliability Theory-Elective Paper	Compute reliability and life time or survival time of different real life systems
		ST5 D02-Economic Statistics-open course	To expose statistics students to the areas of time series and index numbers
B.Sc.	MATHEMATICS/COMPUTER SCIENCE (COMPLIMENTARY COURSE)	VST1C01-Basic Statistics And Probability	To understand various approaches to probability & compute descriptive statistics of data
		VST2C02-Probability Distributions	To understand the applications of theoretical discrete& continuous distributions
		VST3C03-Statistical Inference	To equip the students with the theory essential for estimation of unknown parameters and testing of hypothesis
		VST4C04-Applied Statistics	To expose students to the areas of time series and index numbers, Statistical Quality control and Analysis of Variance
B.Sc.	STATISTICS (COMPLIMENTAR	VME1C01-Mathematical	To understand the students to identify statistical tools to solve

	Y COURSE)	Economics	economic problems
		VME2C02-Mathematical Economics	To expose statistical tools to students to solve economic problems
		VME3C03-Mathematical Economics	To equip the students to identify statistical tools to solve economic problems
		VME4C04-Mathematical Economics	To equip the students to identify statistical tools to solve economic problems

M.Sc PHYSICS

PROGRAMME SPECIFIC OUTCOMES

Program Specific Outcomes	
PSO1	Gain theoretical, mathematical , computational and experimental knowledge in Physics
PSO2	Understand material properties and matter energy interactions at macroscopic and microscopic levels
PSO3	Expertise in the areas of Material science ,Experimental Techniques and Modern optics.
PSO4	Carry out quality research in Physics resulting in original scientific project works.

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
M .Sc.Physics	Material Science		
M .Sc.Physics First Semester		PHY1C01 Classical Mechanics	Understand the formalism of Lagrangian and Hamiltonian mechanics.
			Understand the classical background of quantum mechanics.
			Understand and analyze the Kinematics and Dynamics of Rigid Bodies:
			Formulation of the problem involving small oscillations
			Understand the concepts of nonlinear equations and chaos
		PHY1C02 Mathematical Physics – I	Understand the generalized orthogonal curvilinear coordinate

			system and apply it to various 3-D Coordinate Systems
			Understand the concept of matrices and tensors and how to apply them in various contexts of Physics
			Understand different methods of solving second order differential equations
			Understand various special functions and polynomial solutions of specific second order differential equations
			Understand to analyze periodic functions using Fourier series
			Understand and apply Fourier and Laplace transforms
		PHY1C03 Electrodynamics and Plasma Physics	Apply phasor formulation into Maxwell's equations, field and potential functions
			Apply the concept of phasors into em wave propagation in lossless and lossy media
			Develop the basic characteristics of TEM waves guided by transmission lines
			Develop the basic theories of em wave propagation in waveguides and cavity resonators
			Apply relativistic concepts to electrodynamics via tensor formulation
			Develop a basic knowledge of plasma physics
		PHY1C04 Electronics	Understand the concepts of Field Effect Transistors and Metal Oxide Semiconductor FET
			Understand the principle, working and application of microwave and Photonic devices
			Understand the internal architecture and the frequency response of Operational Amplifier
			Identify the use of Operational Amplifier in various electronic application
			Understand the working of various logical processing devices

M .Sc.Physics Second Semester		PHY2C05 Quantum Mechanics-I	Understand the basic concepts of linear vector spaces, operators and matrix representation of quantum mechanics and uncertainity principle.
			Understand the quantum dynamics and the evolution of a quantum mechanical system.
			Understand the concepts of angular momentum and Pauli's spin matrices.
			Solve problems involving central potential using Schrödinger equation
			Identify the symmetries and conservation laws and Understand the symmetric and anti-symmetric wavefunctions
		PHY2C06 Mathematical Physics-II	Understand the basic concepts regarding complex variables and functions
			Understanding of complex integration and use it to evaluate definite integrals
			Understand the fundamentals of group theory
			Understanding the significance of group representations in physics
			Use Green's functions as a tool to solve differential equations
			Understand the various methods to solve integral equations
			Understand Euler's equation and apply variational principles as a mathematical tool to study problems n physics
		PHY2C07 Statistical Mechanics	Understand the fundamental relation between statistics and thermodynamics
			Understand the statistics and fluctuations of microstates in microcanonical, canonical and grand canonical ensembles
			Understand the fundamental knowledge of quantum statistical mechanics

			Solve problems in classical and quantum statistical mechanics
			Understand the thermodynamics of black body radiation and sound waves applying the statistics of ideal Bose system
			Understand magnetism and electron gas applying the statistics of an ideal Fermi system
		PHY2C08 Computational Physics	Understand the basics of Python Language
			Understand the methods of creating arrays and matrices using Python to perform their basic operations
			Understand the methods of plotting using matplotlibfunctions in Python
			Understand the various numerical method s and computational formulism involved in solving mathematical problems
			Solve familiar problems in physics using numerical methods in Python Language.
M .Sc.Physics Third Semester		PHY3C09 Quantum Mechanics –II	Understand the WKB approximation technique and apply it in problems.
			Understand time independent perturbation theory for degenerate and non degenerate systems and apply it in problems.
			Understand the technique of variational method and solve helium atom problem.
			Understand time dependent perturbation theory and apply it in problems.
			Understand the relativistic formulation of quantum mechanics.
			Understand the theory of scattering by partial wave analysis.
		PHY3C10 Nuclear and Particle Physics	Understand the basic static nuclear properties and their measurement techniques
			Understand the characteristics from deuteron theory and theory of nucleon nucleon scattering

			Understand the theory of alpha decay,beta decay and gamma decay
			Apply the single particle shell model and collective model to estimate the spin ,parity ,electromagnetic moments of nuclides
			Understand the different types of nuclear reaction ,Nuclear fission ,Nuclear Fusion and the energetics
			Understand the instrumentation, principle and working of Nuclear Detectors and Nuclear electronics
			Identify the nature and theory of particle interactions using conservation laws
		PHY3C11 Solid State Physics	Understand the Crystal Structure and binding
			Understand the concept of Phonons and influence of lattice vibration on physical properties
			Understand the electronic states of materials and behavior of electrons and holes in semiconductors
			Understand the theories of dielectric , ferroelectric and magnetic properties of materials
			Understand the theories of superconductivity
			Solve analytical problems based on material properties
		PHY3E05 Experimental Techniques	Understand the construction and working of various instruments for creation and measurement of vacuum
			Learn the concept of thin films and various fabrication and thickness measurement techniques for thin films
			Understand the principle, working and merits and demerits of various particle accelerators
			Learn the various nuclear techniques used for material characterisation
			Understand the X-Ray diffraction techniques for material analysis

M .Sc.Physics Fourth Semester		PHY4C12 Atomic and Molecular Spectroscopy	Understand the concept of atomic energy level, atomic spectra and the effects of the magnetic and electric field on atomic spectra.
			Understand the theory and applications of Microwave and Infrared spectroscopy of molecules.
			Understand the theory and applications of Raman spectroscopy of molecules.
			Understand the theory and applications of electronic spectroscopy of molecules
			Understand the theory and applications of Spin Resonance Spectroscopy of molecules
		PHY4E11 Material Science	Estimate the type, number and energy associated with crystal imperfections
			Determine the phase compositions of binary alloy systems using phase diagrams, lever rule and tie-line rule
			Calculate the diffusion coefficient and activation energy of diffusing atoms using the laws and theory of atomic diffusion.
			Determine the yield strength and fracture strength of a plastically deformed material, creep and fracture
			Understand the structure, properties and applications of polymer materials and ceramic materials.
			Familiarise with the different techniques for the synthesis of nanoparticles and thin films .
			Understand the instrumentation, principle and working of Tools for Nanomaterial Characterisation
		PHY4E18 Modern Optics	Understand the electric field interaction with isotropic and anisotropic media
			Understand the principle of magneto-optic, electro-optic and non-linear optical effects

			Understand the basic concept of coherence
			Solve problems in Fresnel and Fraunhoffer diffraction using Fresnel Kirchoff formula
			Understand the basic theory of multilayer films
			Represent optical phenomena in matrices using Jone's calculus
			Understand the use of Fourier transform techniques in diffraction .

B.Sc PHYSICS

PROGRAMME SPECIFIC OUTCOMES

Program Specific Outcomes	
PSO1	Understand the basic concepts of methodology of science and the fundamentals of mechanics, properties of matter and electrodynamics
PSO2	Understand the theoretical basis of quantum mechanics, relativistic physics, nuclear physics, optics, spectroscopy, solid state physics, astrophysics, statistical physics, photonics and thermodynamics
PSO3	Understand and apply the concepts of electronics in the designing of different analog and digital circuits
PSO4	Understand the basics of computer programming and numerical analysis
PS04	Apply and verify theoretical concepts through laboratory experiments

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
B.Sc. Physics Core Programme			
B .Sc.	Physics (I Semester)	PHY1B01: METHODOLOGY OF SCIENCE AND BASIC MECHANICS	Understand the features, methods and limitations of science
			Understand and apply the basic concepts of Newtonian Mechanics to physicalsystems
			Understand and apply the basic idea of work-energy theorem to physical systems
			Understand and apply the rotational dynamics of rigid bodies
			Understand the basic ideas of elasticity

B .Sc.	Physics (II Semester)	PHY2B02: MECHANICS	Understand the features of non-inertial systems and fictitious forces
			Understand and analyze the features of central forces with respect to planetarymotion
			Understand the basics ideas of harmonic oscillations
			Understand and analyze the basics concepts of wave motion
B .Sc.	Physics (III Semester)	PHY3B03: ELECTRODYNAMICS I	Understand and apply the fundamentals of vector calculus
			Understand and analyze the electrostatic properties of physical systems
			Understand the mechanism of electric field in matter.
			Understand and analyze the magnetic properties of physical systems
B .Sc.	Physics (IV Semester)	PHY4B04: ELECTRODYNAMICS II	Understand the basic concepts of electrodynamics
			Understand and analyze the properties of electromagnetic waves
			Understand the behavior of transient currents
			Understand the basic aspects of ac circuits
			Understand and apply electrical network theorems
B .Sc.	Physics (V Semester)	PHY5B06: COMPUTATIONAL PHYSICS	Understand the Basics of Python programming
			Understand the applications of Python modules
			Understand the basic techniques of numerical analysis
			Understand and apply computational techniques to physical problems
	Physics (V Semester)	PHY5B07: QUANTUM MECHANICS	Understand the particle properties of electromagnetic radiation
			Describe Rutherford – Bohr model of the atom
			Understand the wavelike properties of particles
			Understand and apply the Schrödinger equation to simple physical systems
			Apply the principles of wave mechanics to the Hydrogen atom
	Physics (V Semester)	PH5B08: OPTICS	Understand the fundamentals of Fermat‟s principles and geometrical optics
			Understand and apply the basic ideas of interference of light

			Understand and apply the basic ideas of diffraction of light
			Understand the basics ideas of polarization of light
			Describe the basic principles of holography and fibre optics
	Physics (V Semester)	PHY5B09: ELECTRONICS (ANALOG & DIGITAL)	Understand the basic principles of rectifiers and dc power supplies
			Understand the principles of transistor
			Understand the working and designing of transistor amplifiers and oscillators
			Understand the basic operation of Op – Amp and its applications
			Understand the basics of digital electronics
B .Sc.	Physics (VI Semester)	PHY6B10: THERMODYNAMICS	Understand the zero and first laws of thermodynamics
			Understand the thermodynamics description of the ideal gas
			Understand the second law of thermodynamics and its applications
			Understand the basic ideas of entropy
			Understand the concepts of thermodynamic potentials and phase transitions
	Physics (VI Semester)	PHY6B11: STATISTICAL PHYSICS, SOLID STATE PHYSICS, SPECTROSCOPY & PHOTONICS	Understand the basic principles of statistical physics and its applications
			Understand the basic aspects of crystallography in solid state physics
			Understand the basic elements of spectroscopy
			Understand the basics ideas of microwave and infra-red spectroscopy
			Understand the fundamental ideas of photonics
	Physics (VI Semester)	PHY6B12: NUCLEAR PHYSICS AND PARTICLE PHYSICS	Understand the basic aspects of nuclear structure and fundamentals of radioactivity
			Describe the different types of nuclear reactions and their applications
			Understand the principle and working of particle detectors
			Describe the principle and working of particle accelerators
			Understand the basic principles of elementary particle physics

	Physics (VI Semester)	PHY6B13: RELATIVISTIC MECHANICS AND ASTROPHYSICS	Understand the fundamental ideas of special relativity
			Understand the basic concepts of general relativity and cosmology
			Understand the basic techniques used in astronomy
			Describe the evolution and death of stars
			Describe the structure and classification of galaxies
B.Sc.	Physics (VI SemesterElective)	PHY6B14 (EL1): BIOMEDICAL PHYSICS	Understand the basic principles of biophysics
			Understand the fundamentals of medical instrumentation
			Understand the principles of ultrasound and x-ray imaging
			Understand the basic principles of NMR
	Physics (VI Semester Elective)	PHY6B14 (EL2): NANOSCIENCE AND TECHNOLOGY	Understand the elementary concepts of nanoscience
			Understand the electrical transport mechanisms in nanostructures
			Understand the applications of quantum mechanics in nanoscience
			Understand the fabrication and characterization techniques of nanomaterials
			Enumerate the different applications of nanotechnology
	Physics (VI SemesterElective)	PHY6B14 (EL3): MATERIALS SCIENCE	Understand the basic ideas of bonding in materials
			Describe crystalline and non-crystalline materials
			Understand the types of imperfections nad diffusion mechanisms in solids
			Describe the different properties of ceramics and polymers
			Describe the different types of material analysis techniques
B.Sc.	Physics Practical I	PHY4B05: PRACTICAL I	Apply and illustrate the concepts of properties of matter through experiments
			Apply and illustrate the concepts of electricity and magnetism through experiments
			Apply and illustrate the concepts of optics through experiments

			Apply and illustrate the principles of electronics through experiments
B.Sc.	Physics Practical II	PHY6B15: PRACTICAL II	Apply and illustrate the concepts of properties of matter through experiments
			Apply and illustrate the concepts of electricity and magnetism through experiments
			Apply and illustrate the concepts of optics and spectroscopy through experiments
			Apply and illustrate the principles of heat through experiments
B.Sc.	PhysicsPractical III	PHY6B16: PRACTICAL III	Apply and illustrate the principles of semiconductor diode and transistor through experiments
			Apply and illustrate the principles of transistor amplifier and oscillator through experiments
			Apply and illustrate the principles of digital electronics through experiments
			Analyze and apply computational techniques in Python programming
B.Sc.	Physics Project	Course: PHY6B17(P) – PROJECT	Understand research methodology
			Understand and formulate a research project
			Design and implement a research project
			Identify and enumerate the scope and limitations of a research project
B.Sc.	Physics (In lieu of Project)	PHY6B17(R): RESEARCH METHODOLOGY	Understand research methodology
			Understand the concept of measurement in research
			Understand the significance and limitations of experimentation in research
			Understand and formulate a research project, ethics and responsibility of scientific research
B. Sc.	Physics (Open Course)	PHY5D01(1): NON CONVENTIONAL ENERGY SOURCES	Understand the importance of non-conventional energy sources
			Understand basic aspects of solar energy
			Understand basic principles of wind energy conversion
			Understand the basic ideas of geothermal and biomass energy and recognize theirmerits and demerits
			Understand the basic ideas of oceans and chemical energy resources and recognize their merits and demerits

	Physics (Open Course)	PHY5D01(2): AMATEUR ASTRONOMY AND ASTROPHYSICS	Describe the history and nature of astronomy as a science
			Understand the motion of earth in space and the cause of seasons
			Understand the basic elements of solar system
			Understand the elementary concepts of solar system
	Physics (Open Course)	PHY5D01(3): ELEMENTARY MEDICAL PHYSICS	Understand the basic aspects of physics of nuclear medicine
			Recognize different bioelectric signals and their instrumentation
			Understand the basic elements of X-ray imaging
			Understand the basic elements of ultrasound imaging and its advantages and disadvantages
B.Sc. Physics Complementary Programme for B.Sc. Mathematics and Chemistry			
B.Sc.	I Semester	PHY1C01: Properties of matter & Thermodynamics	Understand the basic principles of elasticity
			Understand the concepts of surface tension
			Understand the aspects of viscosity
			Understand the basic principles of thermodynamics
B.Sc.	II Semester	PHY2C02: Optics, Laser & Electronics	Understand the basic concepts of interference and diffraction
			Understand the concepts of polarization
			Understand the fundamentals of electronics
			Understand the important principles of laser physics
B.Sc.	III Semester	PHY3C03: Mechanics, Relativity, Waves and Oscillations	Understand the basic ideas of frames of reference and the principles of conservation of energy and momentum
			Understand the concepts of relativity
			Understand the basic ideas of oscillations and waves
			Understand the basic ideas of modern physics
B.Sc.	IV Semester	PHY4C04: Electricity, Magnetism and Nuclear physics	Understand the basic ideas of static and current electricity
			Understand the concepts of magnetism
			Describe the fundamental concepts of nuclear physics

			Understand the basic ideas of cosmic rays and elementary particles
B.Sc.	IV Semester	PHY4C05: PRACTICALS I	Apply and illustrate the concepts of properties of matter through experiments
			Apply and illustrate the concepts of electricity and magnetism through experiments
			Apply and illustrate the concepts of optics through experiments
			Apply and illustrate the principles of electronics through experiments

M.Sc CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Built firm foundation in the fundamentals of current chemical and scientific theories in analytical ,inorganic ,organic and physical chemistries
PSO2	Gain research experience via participation in a research project
PSO3	Understand safe handling of chemicals ,environmental issues and key issues facing our society in energy ,health and medicines

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.SC	CHEMISTRY	CHE1C01- Quantum Chemistry and Computational Chemistry	Study the postulates of quantum mechanics
			Acquire knowledge about the systems 1-D box, 3-D box and simple harmonic oscillator
			Generate idea about particle on a ring and sphere
			Evaluate the Eigen function and Eigen value of hydrogen like atoms
			Analyse approximate methods of quantum mechanics
			Summarise many electron system and antisymmetry principle
			Compare the elementary concepts of MO and VB theories
			Illustrate Huckel theory for conjugated pi-electron systems

			Understand the hybridization in molecules
			Explain the calculations using Gaussian programme
		CHE1C02- Elementary Inorganic Chemistry	Acquire proficiency in nanochemistry and nanomaterials
			Obtain an overall idea about synthesis of nano structures
			Acquire knowledge about major acid-base concepts
			Evaluate electron deficient boron compounds based on Wade's rule
			Understand about structure, bonding and synthesis of P-N,P-S,S-N compounds
			Draw the Ellingham, Latimer,Frost and Poubaix diagrams
			State the various theories to explain the structure of nucleus
			Describe the interaction of radiation with matter
		CHE1C03- Structure and Reactivity of Organic Compounds	Understand about hydrogen bonding and its effect on organic compounds
			Construct MO's of simple molecules based on Huckel method
			Study of aromaticity,antiaromaticity and homoaromaticity with MO description
			Acquire knowledge about basic concepts in the study of organic reaction mechanism
			Describe the factors affecting conformational stability of molecules
			Analyse the effect of conformation on the course and rate of reaction in various systems
			Evaluate optical and geometrical isomerism of organic compounds
			Summarise the chiral pool concept, chiral auxiliaries and chiral reagents
		CHE1C04- Thermodynamics, Kinetics and Catalysis	Analyse third law of thermodynamics to determine absolute and residual entropy
			Acquire knowledge about thermodynamics of solutions,ideal,real gases and gaseous mixtures

			Generate idea about excess functions such as excess free energy,excess entropy,excess enthalpy, excess volume
			Evaluate Validity and verification of Onsager theory and its application to theory of diffusion
			Summarise the kinetics of chain reactions,fast reactions and solution kinetics
			Understand molecular reaction dynamics using molecular beams
			Study Langmuir theory of adsorption,BET equation and experimental methods for topology analysis
			Compare homogenous and heterogeneous catalysis
		CHE2C05- Group Theory and Chemical bonding	Explain the similarity transformation
			Describe the molecular symmetry
			Compare the elementary concepts of MO and VB theories
			Illustrate Huckel theory for conjugated pi-electron systems
			Understand the hybridization in molecules
			Construction of SALC using projection operator
			Classify atomic orbitals involved into symmetry species.
			Evaluate IR and RAMAN active modes of molecules
			Elaborate the great orthogonalitytheorem
			Construction of character tables of point groups
		CHE2C06- Coordination Chemistry	Understand the basic factors the affect the stability of coordination compounds.
			Study the bonding in coordination complexes by VBT,CFT,MOT
			Draw the MO diagram of several complexes
			Acquire knowledge about Orgel diagram, Tanabe –Sugano diagram

			Determine the magnetic properties of coordination complexes
			Characterize a given coordination complex by various spectroscopic techniques
			Evaluate actual reaction mechanisms exhibited by metal complexes
			Compare outer sphere and inner sphere redox reactions in coordination complexes
		CHE2C07- Reaction Mechanism in Organic Chemistry	Understand aliphatic and aromatic,nucleophilic and electrophilic substitution with mechanism.
			Study the reaction mechanism involving addition and elimination reaction with electrophiles and nucleophiles.
			Compare the stability, geometry and reactions of reactive intermediates.
			Analyse several nucleophilic reactions of carbonyl compounds.
			Understand the different mechanisms of ester hydrolysis and evidence.
			Apply the basic concepts and theory of pericyclic reactions.
			Summaries the principles and applications of photochemicals in organic chemistry
			Compare and classify natural products
		CHE2C08- Electrochemistry,Solid State Chemistry and Statistical Thermodynamics	Describe Debye-Huckel equation – limiting and extended forms.
			Study the efficiency of electrochemical cells with heat engines.
			State the different theories of hydrogen overvoltage
			Acquire knowledge about polarography and DME
			Evaluate the crystal structures , Bragg's law and applications
			Compare electrical,thermal,magnetic and optical properties of solid
			Evaluate partition functions and their relation to thermodynamic quantities
			Compare M-B,B-E and F-D statistics

		CHE3C09-Molecular Spectroscopy	Understand the basic fundamentals of microwave spectroscopy
			Analyse the vibrational spectra of polyatomic molecules
			Compare the classical and quantum theory of Raman effect
			Evaluate Kramer's theorem in ESR spectroscopy
			Analyse Nuclear Overhauser Effect in FTNMR spectroscopy
			Understand the basic principles and applications of Mossbauer spectroscopy
			Analyse the structure of organic compounds by spectrometric methods
			Understand the basic principles of EIMS
		CHE3C10-Organometallic and Bioinorganic Chemistry	Evaluate 18 and 16 electron rule by neutral atom method and oxidation state method
			Acquire knowledge about synthesis,structure,bonding and reactions of metal carbonyls,nitrosyl,dihydrogen and dinitrogen complexes
			Study organometallic compounds of linear and cyclic pi systems
			Understand about oxidative addition,reductive elimination,insertion reactions
			Compare homogenous and heterogeneous catalysis by organometallic compounds
			Analyse metal-metal bond and metal clusters
			Describe oxygen transport by heme proteins
			Summaries metallo enzymes and electron carrier metallo proteins
		CHE3C11-Reagents & Transformations in Organic Chemistry	Understand different oxidation methods in organic chemistry
			Analyse synthetic reagents for organic transformation
			Study different reduction methods in organic chemistry
			Analyse classification of polymers

			Study the structure, synthesis and reactions of heterocyclic compounds
			Understand several molecular rearrangements and transformation
			Study the mechanism of different rearrangement reaction
			Implement concepts and language of supramolecular chemistry
		CHE3E01-Synthetic Organic Chemistry (Elective)	Understand the reagents for oxidation and reduction
			Analyse homogeneous and heterogeneous catalytic hydrogenation
			Evaluate synthetic applications of organometallic and organo-nonmetallic reagents
			Understand the chemistry and reactivity of carbonyl compounds
			Study the mechanism and synthetic applications of coupling reactions
			Evaluate the methods involved in multistep synthesis
			Analyse aspects of retrosynthetic analysis
		CHE4C12-Instrumental Methods of Analysis	Acquire proficiency in statistical analysis and error estimation
			Analyses how health, disease and modern medicine are all rooted in biological chemistry
			Explain the principles of gravimetric inorganic precipitating agent like NH_3,H_2S,$(NH_4)_2MoO_2$and NH_4SCN
			Describe neutron activation analysis with quantitative analysis
			Understand the capabilities and limitations of optical instrumental methods
			Explain the instrumental component and principals of operation
			Built knowledge on chromatographic method, detectors and CHN analysis by GC
			Describe TGA,DTA,DSE and their

			instrumentation
			Describe amperometry,coulometry, chronopotentiometry, anodic stripping voltametry
		CHE4E05- Industrial Catalysis (Elective)	Compare physisorption and chemisorption
			Analyse kinetics of heterogeneous catalysis.
			Explain Langmuir, BET and Freundlich isotherms
			Describe the different methods for the preparation and deactivation of catalysts.
			Understand the basic principles of phase transfer catalysed reactions.
			Discuss the biocatalysts and their immobilization.
			Built knowledge on the catalysts used for environmental protection
			Describe the role of heterogeneous catalysts
		CHE4E06- Natural products & Polymer chemistry (Elective)	Classify natural products
			Build knowledge about terpenoids and steroids
			Discuss about alkaloids and anthocyanins
			Describe the role of dyes, pigments and supramolecules
			Understand the basic principles of polymerization process
			Analyse characterization and stereochemistry of polymers
			Study about polymer solutions, industrial polymers and copolymers
			Summarieses speciality polymers

B.Sc CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the fundamentals of physical, organic, inorganic and theoretical chemistry and its applications in daily life.
PSO2	Inculcate research aptitude and analytical skills through qualitative and quantitative analysis.
PSO3	Inculcate research aptitude and analytical skills through qualitative and quantitative analysis.
PSO4	Application of polymer chemistry and organic chemistry in industries.

COURSE OUTCOMES

SEMESTERI
CourseCode:CHE1B01
CoreCourseI:TheoreticalandInorganicChemistry-I
TotalHours:32;Credits:2;Hours/Week:2;TotalMarks75(Internal15&External60)

Objective(s)	Togaindetailedknowledgeoftheprincipleofvolumetricanalysisandpropertiesofsa nd*p*blockelements.Toprovidethebasicgroundworkforaresearchproject.Students willbeabletoanalysebasictheoryofacidbaseconcept.
Courseoutcome(s)	
CO1	Toapplythemethodsofaresearchproject.
CO2	Tounderstandtheprinciplesbehindvolumetry.
CO3	Toanalysethecharacteristicsofdifferentelements.
CO4	Todistinguishbetweendifferentacidbaseconcepts.
CO5	Toanalysethestabilityofdifferentnuclei.

SEMESTERII
CourseCode:CHE2B02
CoreCourseII:TheoreticalandInorganicChemistry-II
TotalHours:32;Credits:2;Hours/Week:2;TotalMarks75(Internal15&External60)

Courseoutcome(s)	
CO1	Tounderstandtheimportanceandtheimpactofquantumrevolutionin science.
CO2	Tounderstandandapplytheconceptthatthewavefunctionsofhydrogenatomarenothingbutato micorbitals.

CO3	Tounderstandthatchemicalbondingisthemixingofwavefunctionsofthetwocombiningatoms.
CO4	Tounderstandtheconceptofhybridizationaslinearcombinationoforbitalsofthesameatom.
CO5	Toinculcateanatomic/molecularlevelphilosophyinthemind.

SEMESTERIII
CourseCode:CHE3B03
CoreCourseIII:PHYSICALCHEMISTRY-I
TotalHours:48;Credits:3;Hours/Week:3;TotalMarks75(Internal15&External60)

Courseoutcome(s)	
CO1	Tounderstandthepropertiesofgaseousstateandhowitlinkstothermodynamicsystems.
CO2	Tounderstandtheconceptsofthermodynamicsandit'srelationtostatisticalthermodynamics.
CO3	Toapplysymmetryoperationstocategorizedifferentmolecules.

SEMESTERIV
CourseCode:CHE4B04
CoreCourseIV:ORGANIC
CHEMISTRY–I

Courseoutcome(s)	
CO1	Toapplytheconceptofstereochemistrytodifferentcompounds.
CO2	Tounderstandthebasicconceptsofreactionmechanism.
CO3	Toanalysethemechanismofachemicalreaction.
CO4	Toanalysethestabilityofdifferentaromaticsystems.

SEMESTERV
CourseCode:CHE5B06
CoreCourseVI:INORGANICCHEMISTRY–III

Courseoutcome(s)	
CO1	Tounderstandtheprinciplesbehindquanlitativeand quantitative analysis.
CO2	Tounderstandbasicprocessesofmetallurgyandtoanalysethemeritsofdifferentalloys.
CO3	Tounderstandtheapplicationsofdifferentinorganicpolymers.
CO4	Toanalysedifferentpollutingagents.
CO5	Toapplytheprinciplesofsolidwastemanagement.

SEMESTERV
CourseCode:CHE5B07
CoreCourseVII:ORGANICCHEMISTR–II

Courseoutcome(s)	
CO1	Tounderstandthedifferencebetweenalcoholsandphenols.
CO2	Tounderstandtheimportanceofethersandepoxides.
CO3	Toapplyorganometalliccompoundsinfunctionalgroupspreparationofdifferent
CO4	Toapplydifferentreagentsfortheinterconversionofaldehydes,carboxylicacidsandacidderivatives.
CO5	Toapplyactivemethylenecompoundsinorganicpreparations.

SEMESTERV
CourseCode:CHE5B08
CoreCourseVIII:PHYSICALCHEMISTRY- II

Courseoutcome(s)	
CO1	Toapplytheconceptofkinetics,catalysisandphotochemistrytovariouschemicalandphysicalprocesses.
CO2	Tocharacterisedifferentmoleculesusingspectralmethods.
CO3	Tounderstandvariousphasetransitionsanditsapplications.

SEMESTERV
CourseCode:CHE5D02
OpenCourse2:CHEMISTRYINDAILYLIFE

CO1:Understandthebasicsofpolymerchemistry.
CO2:Explainthefunctionsofbiomolecules,vitamins,enzymes,hormonesandnucleicacid.
CO3:Describefoodadditivesandfoodhabits.
CO4:Explaintheusesofpesticidesandfertilizersandtheirimpactsontheenvironment.
CO5:Understandadvantagesanddisadvantagesofcleansingagentsandcosmetics.
CO6:Recognizethecommonclassesofdrugsinpharmaceuticalindustryandtheirapplication.
CO7:Understandthebasicconceptsandprocessesinpetroleumindustry.

SEMESTERVI
CourseCode:CHE6B09
CoreCourseIX:INORGANICCHEMISTRY–IV

Courseoutcome(s)	
CO1	Tounderstandtheprinciplesbehinddifferentinstrumentalmethods.
CO2	Todistinguishbetweenlanthanidesandactinides.

CO3	ToappreciatetheimportanceofCFT.
CO4	Tounderstandtheimportanceofmetalsinlivingsystems.
CO5	Todistinguishgeometriesofcoordinationcompounds.

SEMESTERVI
CourseCode:CHE6B10
CoreCourseX:ORGANICCHEMISTRY–III

Courseoutcome(s)	
CO1	Toelucidatethestructureofsimpleorganiccompoundsusingspectral techniques.
CO2	Tounderstandthebasicstructureandtestsforcarbohydrates.
CO3	TounderstandthebasiccomponentsandimportanceofDNA.
CO4	Tounderstandthebasicstructureandapplicationsofalkaloidsandterpenes.
CO5	Todistinguishdifferentpericyclicreactions.

SEMESTERVI
CourseCode:CHE6B11
CoreCourseXI:PHYSICALCHEMISTRY-III

Courseoutcome(s)	
CO1	Tounderstandthebasicconceptsofelectrochemistry.
CO2	Tounderstandtheimportanceofcolligativeproperties.
CO3	Torelatethepropertiesofmaterials/solidstothegeometricalpropertiesandchemicalcompositions.

SEMESTERVI
CourseCode:CHE6B12
CoreCourseXII:AdvancedandAppliedChemistry

Courseoutcome(s)	
CO1	Tounderstandtheimportanceofnanomaterials.
CO2	Toappreciatetheimportanceofgreenapproachinchemistry.
CO3	Tounderstandtheusesandimportanceofcomputationalcalculationsinmoleculardesign.
CO4	Tounderstandtheroleofchemistryinhumanhappinessindexandlifeexpectancy.

SEMESTERVI
CourseCode:CHE6B13(E1)
CoreCourseXIII:Elective1.INDUSTRIALCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandtheimportanceofpetrochemicals.
CO2	Toappreciatetheimportanceandtofamiliarisetheopportunitiesofpharmaceutical,leatherandsugarindustries.
CO3	Toanalysetheroleofcatalystsinindustrialprocesses.

SEMESTERVI
CourseCode:CHE6B13(E2)
CoreCourseXIII:Elective2.POLYMERCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandvariousclassificationofpolymersandtypesof polymerisationmethods.
CO2	Tounderstandtheimportantcharacteristicsofpolymerssuchasaveragemolecular weight,glasstransitiontemperature,viscoelasticityanddegradation.
CO3	Toappreciatetheimportanceofprocessingtechniques.
CO4	Tocharacterisedifferentcommercialpolymersandtounderstandthesignificanceofrecycling.

SEMESTER I
CourseCode:CHE1C01
ComplementaryCourseI:GENERALCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandandtoapplythetheoriesofquantitativeandqualitativeanalysis.
CO2	Tounderstandthetheoriesofchemicalbonding.
CO3	Toappreciatetheusesofradioactiveisotopes.
CO4	Tounderstandtheimportanceofmetalsinbiologicalsystems.

SEMESTER II
CourseCode:CHE2C02
ComplementaryCourseII:PHYSICALCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandtheimportanceoffreeenergyindefiningspontaneity.
CO2	Torealisethetheoriesofdifferentstatesofmatterandtheirimplication.
CO3	Tounderstandthebasicprinciplesofelectrochemistry.

SEMESTER III
CourseCode:CHE3C03
ComplementaryCourseIII:ORGANICCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandthebasicconceptsinvolvedinreactionintermediates.
CO2	Torealisetheimportanceofopticalactivityandchirality.
CO3	Toappreciatetheimportanceoffunctionalgroupsandaromaticstability.
CO4	Tounderstandthebasicstructureandimportanceofcarbohydrates,nucleicacids,alkaloidsandterpenes.

SEMESTER IV
CourseCode:CHE4C04
ComplementaryCourseIV:PHYSICALANDAPPLIEDCHEMISTRY

Courseoutcome(s)	
CO1	Tounderstandthebasicconceptsbehindcolloidalstateandnanochemistry.
CO2	Tounderstandtheimportanceofgreenchemistryandpollutionprevention.
CO3	Toappreciatetheimportanceofdifferentseparationmethodsandspectraltechniques.
CO4	Tounderstandtheextentofchemistryindailylife.

M.SC BOTANY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand fundamental concepts of diversity of plant kingdom
PSO2	Develop laboratory skills for undoing research
PSO3	Identification and naming of plants
PSO4	Apply basic principles of plant breeding in crop improvement

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
M.SC	BOTANY	BOT01CT01 Phycology, Bryology,	The identification of native species of Algae, Bryophytes,Pteridophytes and

		Pteridology and Gymnosperms	Gymnosperms
		BOT01CT02 Mycology, Lichenology, Microbiology and Plant pathology	Identification of pathogens causing plant diseases
		BOT01CT03 Angiosperm anatomy, Angiosperm embryology, Palynology & Lab techniques	Understand fundamental concepts of structure and function of plant tissues
			Develop the laboratory skills sectioning of plant tissues
			Understand the development of a flowering plant
		BOT02CT06 Cell Biology, Molecular Biology and Biophysics	Understanding the basic cellular components, interactions and events in the life cycle of a cell.
			Develop practical skills in mitosis and meiosis and understand the basic structure and changes in chromosomes.
			Understand the general mechanisms and events involved in cell which can lead to ageing and development of cancer.
		BOT02CT07 Cytogenetics, Genetics, Biostatistics, Plant Breeding and Evolution	Understand the principle of molecular cytogenetics
			Apply the basic principles of plant breeding for genetic improvement of plants
		BOT02CT08 Plant ecology, Conservation biology, Phytogeography and Forest botany	Understand the structure of an ecosystem and energy flow
			Identification of the challenges faced by various ecosystems in terms of human population and pollution
			To understand Phytochoria of world and India
			To know more about various forest types and the forest products
		VPBO3C07 Plant Physiology, Metabolism and Biochemistry	Understanding the development and metabolism of plants
			Understand the commercial importance of secondary metabolites
			Develop the practical skill in biological processes
		VPBO3C08- Angiosperm	Identify and classify plants based on

		morphology, Taxonomy and Plant resources	taxonomic disciples.
			Develop the skill of scientific imaging of plants.
			Realize importance of field study
		VPBO3C09 Biotechnology and Bioinformatics	To understand the basic principles of tissue culture
			To know more about biological databases and tools used for protein structure prediction.
		VPBO4E01 Environmental biology and Biodiversity conservation	Understand the types of interactions and concepts of habitat in ecosystem
			Understand biodiversity and its conservation
			Develop and apply knowledge and skills on climate change, soil quality and disaster management
		VPBO4E02 Plant tissue culture	Hands on experience in the preparation of culture medium from stock solutions prepared using reagent grade chemicals
			Empowering students in culture initiation, clonal multiplication, rooting, hardening and field transfer of plants
		VPBO4E03 Genetics and Crop improvement	Create an aware about IPR in protection of medicinal plant varieties
			Awareness about farmer's rights in agriculture sector

B.Sc BOTANY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand scope and importance of Botany in every field especially in dealing with societal and environmental issues, agriculture, ethics andhealthcare.
PSO2	Understand the and the role of plants in sustaining life on earth and the interrelationship between human beings and nature, create awareness on natural resources and their importance in sustainable development, analyze the importance of biodiversity conservation, estimate biodiversity loss and develop conservationstrategies.
PSO3	Develop scientific temper and undertake scientificprojects.
PSO4	Identify and classify plants according to the principles of plant systematics, apply techniques like plant propagation methods, organic farming, mushroom cultivation, preparation of biofertilizers, biopesticides etc. in dailylife.

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
B.SC	BOTANY	BOT1B01T Angiosperm Anatomy, Reprod. Botany & Palynology	Demonstrate the ability to differentiate plant organs by observing anatomicalfeatures.
			Understand the non-living inclusions of plants and theirsignificance.
			Differentiate tissues and theirfunctions.
			Illustrate primary and secondary (normal and anomalous) structures of plantorgans
			Explain various developmental details of angiosperms. 6. Realize the significance and applications of palynology.
		BOT1B02T Microbiology, Mycology, Lichen. & Plant Pathology	Understand basics of microbial life and their economic importance.
			Develop general awareness on the diversity of microorganisms, fungi and lichens.
			Analyze the ecological role played by bacteria, fungi and lichens
			Identify plant diseases and find out control measures.
			Realize the significance of plant diseases as far as crop production is concerned.
		VBO3B03 Microbiology, Mycology, Lichenology and Plant Pathology	Understand basics of microbial life and their economicimportance.
			Develop general awareness on the diversity of microorganisms, fungi andlichens.
			Analyze the ecological role played by bacteria, fungi and

			lichens
			Identify plant diseases and find out controlmeasures.
		VBO4B04 Phycology, Mycology and Pteridology	Appreciate the diversity and evolutionary significance of lower plantgroups.
			Classify algae, bryophytes andpteridophytes.
			Understand the economic and ecological importance of lower plant groups.
		VBO5B05 Gymnosperms, Palaeobotany, Phytogeography and Evolution	Understand the role of gymnosperms as a connecting link between pteridophytes and angiosperms
			Appreciate the process of organicevolution.
			Realize the importance of fossilstudy.
			Understand the climatic conditions of the past and realize the changeshappened
		VBO5B06 Angiosperm Morphology & Systematics	Appreciate the diverse morphology ofangiosperms.
			Identify and classify plants based on taxonomicprinciples.
			Make scientific illustrations of vegetative and reproductive structures ofplants.
			Develop the skill of scientific imaging ofplants.
			Realize the importance of fieldstudy.
			Change their attitude towards over exploitation of rare/endemicplants.
		VBO5B07 Embryology, Palynology, Horticulture, Economic Botany and Ethnobotany	Critically evaluate the advantages of tissue culture and horticulture over conventional methods ofpropagation.
			Apply various horticultural practices in thefield.
			Experiment on the subject and try to becomeentrepreneurs.
			Identify the economically importantplants

		VBO5B08 General & Bioinformatics, Introductory Biotechnology and Molecular Biology	Analyze the role of biotechnology in dailylife.
			Understand the basic aspects ofbioinformatics.
			Explain the concepts in molecularbiology.
		VBO5D01 Basic Tissue Culture	Understand plant tissue culture as a rapid propagationmethod.
			Explain the steps involved in tissueculture.
			Realize the applications of plant tissueculture
		VBO6B09 Genetics and Plant Breeding	Appreciate the facts behind heredity andvariations.
			Understand the basic principles ofinheritance.
			Solve problems related to classical genetics.
			Predict the pattern ofinheritance.
			Understand various plant breedingtechniques.
			Realize the role of plant breeding in increasing cropproductivity
		VBO6 B10 Plant Physiology and Metabolism	Identify the physiological responses ofplants.
			Analyze the role of external factors in controlling the physiology ofplants.
			Explain the metabolic processes taking place in eachcell.
			Appreciate the energy fixing and energy releasing processes taking place incells
		VBO6 B11 Cell Biology and Biochemistry	Appreciate the ultra-structure of a plantcell.
			Enumerate the functions of each cellorganelle.
			Draw and explain the structure ofbiomolecules
		BO6 B12 nvironmental Science	Realize the importance of ecologicalstudies.
			Develop environmental concern

			in all their actions and practise Reduce, Reuse and Recycle.
			Try to reduce pollution and environmental hazards and change their attitude towards throwing away plasticwastes.
			Spread awareness of the need of conservation of biodiversity and naturalresources.
			Analyze the reasons for climate change and find out ways to combatit
		VBO6E02 Genetics and Crop Improvement	Understand various techniques employed for increasing cropproductivity.
			Identify diseases affecting cropplants.
			Attain general awareness on various crop research stations of the country
	B.SC BOTANY (COMPLEMENTARY COURSES)	VBO1C01 Angiosperm Anatomy and Microtechnique	Explain the types, structure and functions of planttissues.
			Explain primary and secondary (normal and anomalous) structures of plantorgans.
			Identify plant organs by observing anatomicalfeatures.
			Illustrate primary and secondary (normal and anomalous) structures of plantorgans.
		VBO2C02 Cryptogams, Gymnosperms and Plant Pathology	Analyze the role of the lower plants in the process ofevolution.
			Explain the ecological significance of lowerplants.
			Identify plant diseases and take remedial measures to controlthem
		VBO3C03 Morphology, Systematic Botany, Economic Botany, Plant Breeding and Horticulture	Appreciate the diverse morphology ofangiosperms.
			Identify and classify plants based on taxonomicprinciples
			Make scientific illustrations of vegetative and reproductive structures ofplants
			Identify the economically importantplants
			Understand the basic principles of

			plantbreeding
			Apply various horticultural practices in thefield.
		VBO4C04 Plant Physiology, Ecology and Genetics	Explain the physiological processes inplants.
			Understand the basic principles of heredity andvariation.
			Realize the importance ofecology.
			Spread awareness of the necessity of conservation of biodiversity and naturalresources

M.SC ZOOLOGY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the various biochemical aspects of cell including molecular level regulation
PSO2	Analyse the developmental stages of organisms connecting their physiological reactions and immunological advancements
PSO3	Interpret the various interactions on ecological and ethological level; assess and classify them with biostatistical methods
PSO4	Identify and evaluate the growth and developmental aspects of microbes and utilize them in biotechnology through biophysical methods
PSO5	Develop knowledge in fishes by understanding their ecological habitats and culture practices.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.Sc	ZOOLOGY	ZOL1C01- Biochemistry and Cytogenetics	Analyze and understand the chemistry and functions of biomolecules
			Understand the metabolism and biosynthesis of biomolecules
			Understand the basic cellular, molecular and genetic concepts of development.
			Understand the structural organization and function of intra cellular organelles
		ZOL1C02- Biophysics	Observe and understand the matter and

		and Biostatistics	mechanism of cells and study of functional systems, structural organization and physical basis of sound transmission in the ear
			Observe and understand the working principle of different separation techniques, biophysical methods, electrophysiological methods and microscopy
			Analyze and understand the applications of biostatistics in research and study about the various type of statistical methods
			Understand the basic concept of gravitation force, nanotechnology and radiation biology
		ZOL1C03- Ecology and Ethology	Analyze and understand the natural history of Indian subcontinent, various terrestrial biomes, biogeographical zones and island biogeography
			Understand the basic concepts and levels of organisation in ecology
			Study of animal behaviour and its evolution
			Observe and understand social behaviour of termites and primates
		ZOL2C04- Physiology	Interpret and analyse nutrition and utilization of energy from biomolecules
			Study of functional systems and disorders of nervous and cardiovascular systems
			Understand the structure and functions of sense organs
			Understand the thermoregulation mechanisms and acclimatization
		ZOL2C05- Molecular Biology	Understand the basic cellular, molecular and genetic concepts of development.
			Analyze and understand the developmental stages of various organisms along with the factors influencing them.
			Understand the structure of endocrine glands, synthesis and secretion of hormones, mode of action, control
			Understand the pathophysiology of hypo and hyper secretions of endocrine

			glands
		ZOL2C06- Systematics and Evolution	Understand the definition and basic concept of taxonomy, classification, procedures, species concept and different type of taxonomic characters of organisms.
			Study the zoological nomenclature, newer systematic trends, ethics in taxonomy and taxonomic impediments.
			Understand natural selection , mechanisms and tempo of evolution
			To study molecular evolution and evolutionary trends of organisms
		ZOL3C07 - Immunology	Explain the role of molecules involved in immune mechanism
			Understand maturation of immunological cells leading to immune response.
			Analyze the role of MHC in immune response.
			Explain immunological disorders
		ZOL3C08- Developmental Biology and Endocrinology	Understand the basic cellular, molecular and genetic concepts of development.
			Analyse and understand the developmental stages of various organisms along with the factors influencing them.
			Understand the structure of endocrine glands, synthesis and secretion of hormones, mode of action, control
			Understand the pathophysiology of hypo and hyper secretions of endocrine glands
		ZOL3E09- Fishery Science 1: Taxonomy, Biology, Physiology & Ecology	understand fish taxonomy
			Understand the fish biology
			Explain the physiology of fish
			Understand the ecology of sea
			Study on brackish and inland water
		ZOL4C10- Biotechnology and Microbiology	Study of history and scope of Microbiology and its taxonomy

			Understand bacteria, virus,its pathological effects and their control measures
			Understand bacterial metabolism
			Understand the role of microbes in fermentation, waste water treatment, bioremediation biogas plant and generation of energy sources
			Understand DNA sequencing, Genetic Engineering, gene silencing and cloning techniques
			Interpret biotechnology in animal health care and environment
		ZOL4E11- Fishery Science II: Capture & Culture Fisheries	Understand the capture and culture fishes, Designing of aqua farms
			Understand the nutrition of fishes and water quality management
			Understand the reproduction and genetic selection
			Explain different aqua cultural practices
			Study on aquarium and major fish diseases
		ZOL4E12-Fishery Science III: Harvesting, Post-harvesting Technology & Marketing	Understand commercial fishing methods
			Understand the nutritional value of fin fish and shell fish , its preservation and processing techniques
			Explain the post mortem changes and spoilage.
			Explain the role of fishery institutes in education, research, development , export and quality control
			Study on fishery management and international marketing.

B.Sc ZOOLOGY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the biological diversity and grades of complexity of various animal

	forms through their systematic classification and process
PSO2	Understand the roles of plants, animals and microbes in the sustainability of the environment and their interaction among themselves and deterioration of the environment due to anthropogenic activities
PSO3	Understand the concepts and principles of biochemistry, immunology, physiology, ethology, endocrinology, developmental biology, cell biology, genetics, molecular biology and microbiology and develop technical skills in biotechnology, bioinformatics and biostatistics
PSO4	Perform laboratory procedures as per standard protocols in the areas of animal diversity, systematics, cell biology, genetics, biochemistry, molecular Biology, developmental environmental biology, ethology, evolution and Science methodology

COURSE OUTCOMES

Programme	Programme Specialization	Course code and Name of course	Courses outcomes
B.Sc	Zoology	ZOL1B01T Animal diversity: Non-Chordata Part- I	Describe the principles of classification and nomenclature
			Explain the five kingdom classification of living organisms
			Understand the concepts of classification of animal s
			Explain the classification with examples and characteristic features of kingdom Protista and describe the morphology and structural organization of *Paramecium*
			Explain the classification of phylum Porifera and elucidate the salient features of each class
			Describe the characteristic features of phylum Cnidaria and Ctenophora,Ilustrate the classification of phylum Cnidaria down to classes
			Explain the salient features of phylum Platyhelminthes and illustrate its classification down to classes
			Explain the characteristic features and classification of super Phylum Aschelminthes and phylum Nematoda
			Elucidate the characters of Pseudocoelomate minor

			phyla Rotifera and Gastrotricha
		ZOL2B02T Animal Diversity-Non-Chordata Part II	Explain the classification with examples and characteristic features of phylum Annelida and describe the morphology and structural organizatio n of *Neanthes*
			Describe the distribution, peculiarities and affinitie s of phylum Onychophora
			Explain the classification of phylum Arthropoda; elucidate the salient features of each class and describe the morphology and structural organizati on of *Penaeus*
			Describe the characteristic features of phylum Mollusca, illustrate its classification down to classes and explain the structural organization of *Pila globosa*
			Explain the salient features of phylum Echinodermata and illustrate its classification down to classes
			Understand the salient features and affinities of phylum Hemichordata
			Elucidate the characters of coelomate minor phyla Phoronida, Ectoprocta and Echiura
		ZOL3B03T Animal diversity: chordata Part-I	Explain the characteristics of chordates and outline classification of the phylum Chordata
			Describe the salient features and affinities of subphylum Urochordata and its classification down to classes; elucidate the morphology and structural organization of *Ascidia*
			Explain the salient features and affinities of subphylum Cephalochordata with reference to *Branchiostoma*
			Describe the salient features of subphylum Vertebr ata, illustrate its classification down to classes and elucidate the characteristics of division Agnatha
			Enumerate the salient features of superclass Pisce s and illustrate its classification down to orders an d the morphology and structural organization of *Mugil cephalus*

			Describe the salient features and affinities of class Amphibia and its classification up to orders; explai n the morphology and organ systems of *Hoplobatrachus tigerinus*
			Elucidate the characteristic features of the class Reptilia and its classification down to orders; describe the morphology and organ systems of *Calotes versicolor*
		ZOL4B04T Animal diversity: chordata part-II	Describe the classification of class Aves down to orders, salient features of each order with suitable examples
			Describe the external characters and functional systems of *Columba livia*
			Enumerate the salient features and classification of class Mammalia down to orders with suitable examples
			Elucidate the external characters and functional systems of *Oryctolagus cuniculus*
			Compare the circulatory, excretory and nervous systems of vertebrates
		ZOL4B05P Zoology corec ourse practical I: Animal diversity (Practical I*A + I*B+ I*C+ I *D)	Identify and describe specified protists and acoelomate & pseudocoelomate non-chordates and perform the culture of selected protists; understand the histological features of coelenterate, platyhelminth and nematode
			Identify and describe specified coelomate non-chordates and the transverse sections of annelids; Perform mounting of the specified organs of selected non-chordates
			Identify and describe specified chordates and specified bones of chordates; Prepare key for identification of venomous snakes; Perform mounting and dissection of specified organ systems of chordates
			Identify and describe selected vertebrates and specified bones of vertebrates
		ZOL5B06T Cell biology and Genetics	Understand the principles and applications of various types of light microscopes, electron, scanning tunnelling and Atomic force microscope

			and illustrate histological and histochemical processing of tissues
			Explain the basic structure of a eukaryotic cell an d the structure and functionsof plasma membrane, mitochondria, lysosome,cytoskeletal elements and interphase nucleus
			Illustrate the nucleosome organization of chromati nand Illustrate the nucleosome organization of chromatin
			Enumerate eukaryotic cell cycle and cell division b yamitosis, mitosis and meiosis
			Explain the causes of transformation, characteristi cs of transformed cells role of protooncogenes and tumor suppressor genes in malignant transformatio mechanism and significance of apoptosis
			Enumerate allelic and nonallelic gene interactions; supplementary, complementary,polymeric, duplicat e and modifying genes and polygenic inheritance
			Illustrate multiple allelism and solve problems related to blood group inheritance
			Explain characteristics of linkage groups and linka ge map; crossing over sex-linked, sex-influened and sex-limited, sex differentiation and disorders of sexual development
			Describe the mechanisms of sex determination including chromosomalgenic, haploidiploid mecha nisms; the hormonal and environmental influenceg enic, haploidploid mechanisms; the hormonal and environmental influence.
			Explain mutagenesis, mutagens and chromosomal and gene mutations
			Explain mutagenesis, mutagens and chromosomal and gene mutations, human autosomal and sex chromosomal anomalies; polygenic human traits and genetic counseling
		ZOL5B07T Biotechnolo gy, Microbiolog y, Immunology	Illustrate the steps in genetic engineering and animal cell culture
			Explain transfection methods, transgenic animals and ethical issues of transgenic animals
			Enumerate the applications of biotechnology
			Understand the biological diversity of microbial for

			ms and the various techniques for handling microbes in the laboratory
			Enumerate the basic structure and life cycle of bacteria and virus
			Understand the industrial and medical importance of microorganisms
			Describe different types of immunity and the cells and organs of the immune system
			Explain antigen, antibody, immunity and major histocompatibility complex
			Enumerate autoimmune and immunodeficiency diseases and immunology of tumor and organ transplantation
		ZOL5B08T Biochemistry and Molecular Biology	Understand the elements of biological importance and the non-ovalent interactions that stabilize biomolecules
			Describe the classification, types, structure, reactions and biological roles of carbohydrates, and diabetes Type I and II
			Enumerate the properties and classification of ami no acids andtheir standard abbreviations; hierarchial levels of protein structure, classification, separatio n, purification and sequencing of proteins
			Explain the classification and functions of lipids and fatty acids; chemistry and structure of nucleic acids and sequencing of DNA
			Understand the classification, nomenclature and properties of enzymes; enzyme action, cozymes, cofactors, isozymes, ribozymes and allosteric enzymes
			Explain glycolysis, Kreb's cycle, glycogenesis, glycogenolysis, gluconeogenesis, HMP pathway; amino acid and fatty acid oxidation and oxidative phosphorylation
			Describe the mechanism of DNA duplication and the role of enzyme
			Understand the concept of gene and gene expressio ngenetic code and wobble hypothesis
			Explain the mechanism of transcription and post-transcriptional modification of hnRNA
			Enumerate the processes of translation and post-

			translational modification and targeting of peptides
			Describe the regulation of *trp* operon, C-value, repetitive DNA, satellite DNA selfish DNA, overlapping genes, pseudogenes, cryptic genes, transposons and retro transposons
			Explain the structure and life cycle of bacteriophages and the gene transfer mechanisms in bacteria
		ZOL5B09T Methodology in Science, Biostatistics and informatics	Explain science, its importance, disciplines and the major steps in formulating a hypothesis, various hypothesis models, theory, law and importance of animal models, simulations and virtual testing
			Illustrate the principles and procedures in designing experiments and elaborate the requirements for carrying out experiments
			Describe the ethical concerns in practicing science
			Understand the Scope and role of statistics; methods and procedures of sampling; Construction of tables, charts and graphs
			Calculate central tendency and measures of dispersion and application of its Knowledge on hypothesis testing as well as in problem solving
			Enumerate major biological databases and database search engines
			Perform DNA and protein sequence analysis, including sequence alignment and sequence similarity search using BLAST, FASTA, CLUSTAL W and CLUSTAL X
			Understand molecular phylogenetics and tools and methods for construction of phylogenetic trees
			Explain genome sequencing technologies, functional genomics, proteomic technologies and molecular docking and drug design
		ZOL5D01T Reproductive Health and sex education	Understand the reproductive health, and importance of sex education for teen and youth
			Explain the chromosomal mechanism of sex determination and sex chromosomal anomalies
			Explain fertilization, implantation, pregnancy, gestation, placenta, parturition and lactation

			Explain the scope of reproductive technologies in fertility management and the assisted reproductive techniques
			Understand the different methods of prenatal diagnosis and associated ethical issues
			Describe the different methods of fertility control
			Understand the symptoms, mode of transmission, diagnosis and treatment of different sexually transmitted diseases and their socio economic dimensions
			Describe sexual orientation,sexual abuse and myth s
			Understand the ethical aspects of sex
		ZOL6B15P Zoology [core course] practical – II (Practical II* A + Practical II*B)	Perform experiments in cell biology and genetics including demonstration of Barr body in buccal epithelial cells of man, polytene chromosome in the salivary glands of *D. Melanogaster* larva, mitotic division in onion root tip cells, micrometry of microscopic objects, prepare whole mounts of microscopic objects, and calculate mitotic and metaphase index from slides
			Enumerate the inheritance of major human genetic traits, pedigree chart, normal and abnormal human karyotypes, phenotypic differences of male and female Drosophila and solve problems on Monohybrid, dihybrid crosses, blood groups and sex-linked inheritance
			Understand electrophoresis, PCR, Northern blottin gSouthern blotting and Western blotting, DNA sequencing and fingerprinting and isolation of genomic DNA
			Perform gram staining and preparation of culture media for bacteria and demonstrate bacterial motili ty by standard laboratory protocols
			Understand the detection of human blood groups and organs of immune system
			Perform standard biochemical tests for the detectio n of reducing and nonreducing sugars, polysacchar ides, proteins and lipids
			Understand the staining of mitochondria, tissue homogenization and isolation of nuclei, effect of

			colchicines of cell division, extraction of DNA and polyacrylamide and agarose gel electrophoresis
			Solve basic problems in biostatistics and Bioinformatics
		ZOL6B10T Physiology and Endocrinology	Describe the regulation of digestion in man, nutrition in pregnancy and infancy, nutritional disorders, balanced diet, starvation, fasting and obesity
			Describe functions, composition, coagulation, transfusion, agglutination clinical analysis of blood, haemoglobinopathies, types of heart and common cardio-vascular problems
			Understand the osmoregulatory mechanisms in animals; excretion and its hormonal control and commonrenal disorders in man
			Explain the ultrastructure of skeletal muscles and biochemical events and energetics of muscle Contraction.
			Understand the different types of nerve cells, glial cells and nerve fibres, and the mechanism of nerve impulsetransmission
			Understand the types, physiology and significance of bioluminescence, and the structure and functions of electric organs
			Describe invertebrate neuroendocrine system and endocrine glands, their hormones and functions
			Understand the concept of neurosecretion and the mode of action of peptide and steroid hormones
		ZOL6B11T Reproductive and developmental biology	Explain the reproductive strategies in invertebrates and vertebrates and structural and functional features of human reproductive system
			Describe process of fertilization, pregnancy, gestation, placentation, parturition and lactation in humans
			Explain the scope of reproductive technologies infertility management; prenatal diagnostic techniques and methods of fertility control
			Understand the phases and theories of development,and classification of eggs
			Enumerate the types of cleavage, arrangement of blastomeres, germ layers and their derivatives, cell lineage in Planocera and different types of blastula

			Illustrate the early developmental process of egg in *Amphioxus*, frog, chick and man
			Explain the basics of cell differentiation and it s genetic control, stem cells and applications of stem cell technology
			Describe parthenogenesis, types, and significance
			Explain fate map construction, Spemann's constriction experiments on amphibian embryos, organizers in development,embryonic induction, gradient experiments in sea urchin eggs, cloning experiments in sheep and teratogenesis
		ZOL6B12T Environmental and conservation Biology	Explain the structure of ecosystem and its functioning through energy flow and nutrient cycling
			Enumerate biogeochemical cycles and understand the concept of limiting factors
			Describe the ecology of population, community an d habitat as a self regulating system
			Understand various types of population interaction s and appraise the co-evolution
			Comprehend the diverse environmental and sustain ability challenges ranging from local to global and the establishment of perfect harmony between economic development, social issues and environmental conservation
			Enumerate the several tools and techniques employed for studies on populations, communities and ecosystems
			Understand the threats to biodiversity, and strategies adapted for the conservation of diversity of organisms
			Describe the various international strategies for conserving biodiversity
			Describe the toxic chemicals, their toxicity levels and the health hazards caused by them
		ZOL6B13T Ethology, Evolution and Zoogeography	Describe the patterns and mechanisms of animal behavior
			Illustrate biological rhythms and the chemical basi s of communication
			Identify major evolutionary transitions over time, and explain the tools and evidences that support

			current hypotheses of the history of life on earth
			Describe the evidences for evolution and its required corollaries
			Explain the various theories of evolution
			Describe the mechanisms by which evolution occurs
			Recognize the significance of reproductive isolation in reducing gene flow between populations, biological and morphological species concepts and distinguish between prezygotic and postzygotic barriers to reproduction
			Review the events in human evolution
			Explain ecological and historical foundations for understanding the distribution and abundance of species, and their changes over time and comprehend the basic principles of biogeography as a discipline
		ZOL6B14BE02T Aquaculture Animal Husbandry and Poultry Science	Explain aquaculture and the process of prawn, mussel and pearl culture
			Illustrate the methodology of pisciculture and understand common culture fishes and ornamental fishes
			Identify major fishing crafts and gear and enumerate fish utilization and preservation
			Enumerate the poultry rearing techniques and understand major breeds of fowl
			Understand the major breeds of cattle, cattle feeds and diseases of cattle
			Illustrate the steps in dairy processing and identify the role of dairy development in rural economy
		ZOL6B16P Zoology [core course] practical -III (Practical III*A + Practical III*B)	Perform standard laboratory experiments for the estimation of Hb, presence of hCG/abnormal constituents in urine, detection of blood pressure, bleeding and clotting time and identification of formed elements in blood
			Carry out experiments of laboratory standards to

			estimate water quality parameters including, dissolved Oxygen, Carbon dioxide, hardness and pH; determination of adulteration of selected food items and identify marine planktons and soil organisms
			Demonstrate the behavioural response of earthworm/dipteran larva to selected stimuli
			Describe homologous , analogous and vestigial organs, connecting links, adaptive radiation and evolution of man
			Illustrate zoogeographical realms, Wallace line, Weber line, Wallacea and the distribution of *Peripatus*, lung fishes, *Sphenodon*, monotremes and marsupials
			Identify the normal and selected abnormal human karyotypes and inheritance of chosen traits from pedigree charts, ornamental and other culture fishes and chosen beneficial and harmful insects
B.Sc	Zoology	Complementary course	
		ZOL1C01T Animal diversity and wildlife conservation	Describe the general characters of protists and salient features of phylum Rhizopoda, Ciliophora, Dinoflagellata and Apicomplexa
			Enumerate the salient features and examples of Phylum – Porifera, Coelenterata, Platyhelminthes, AschelminthesAnnelida, Arthropoda, Onychophora, Mollusca and Echinodermata, and the structural organization of *Peneaus* sp
			Describe the characteristic features and classification of phylum Chordata with examples and, structural organization of *Oryctolagus cuniculus*
			Describe the characteristic features and classification of phylum Chordata with examples and structural organization of *Oryctolagus cuniculus*
		ZOL2C02T Economic Zoology	Explain parasitism and the major protist, cestode, trematode and nematode parasites of man and major insect vectors of human diseases and their control

			Understand major beneficial and harmful insects, damages caused to host plants and their control measures
			Understand pisciculture, prawn, mussel and pearl culture
		ZOL3C03T Physiology and Ethology	Describe the structure of plasma membrane and th e various trans-membrane transport mechanisms
			Enumerate the constituents of normal diet and the mechanism of digestion and absorption of carbohydrates, proteins and lipids an d the regulation of gastrointestinal function
			Explain the mechanism of transport of respiratory gases, control of respiration, respiratory problems and artificial ventilation
			Explain the structure and working of human heart and mechanism of regulation of heart beat; constituents of human blood and blood transfusio n and cardiovascular problems
			Illustrate the structure of human kidney, the mechanism of urine formation, hormonal control o f kidney function and kidney disorders; osmoregulati on and urea cycle
			Enumerate the structure of myofibrils and myofila ments; muscle contractile and regulatory proteins a nd mechanism of muscle contraction
			Explain different types of nerve cells and glial cells , maintenance of resting membrane potential, generation and propagation of action potential and synaptic transmission
			Describe innate behavior, learned behavior, patterns of behavior and factors that affect behavio r
			Enumerate biological rhythms, communication in a nimals and social organization in mammals
		ZOL4C04T Genetics and Immunology	Describe human karyotype , chromosomal anomalies and polygenic inheritance
			Explain the mechanisms of sex determination
			Enumerate the concept of genes, gene expression, genetic code, transcription and translation

			Illustrate the mechanism of recombinant DNA technology and its practical applications
			Explain the types of cancer, causes of transformation and characteristics of transformed cells
			Identify the cells and organs of immune system, antigens and antibodies
			Enumerate antigen-antibody interaction, generation of B-cell and T-cell response and major immuno-techniques

MSC TEXTILES & COSTUME SCIENCE

PROGRAMME SPECIFIC OUTCOMES

Program Specific Outcomes	
PSO1	Understand the awareness of marketing & advertisement.
PSO2	Understand the methods & techniques used to analyze textile fibres, yarns& fabric& its end use performance
PSO3	Understand & develop the skill ability to draft patterns for different garment
PSO4	Understand & analyze the different types of looms, weaving techniques & weave patterns
PSO5	Understand the principles of Quality assurance, chemical processing, finishing of textiles, fundamentals of dyeing, eco- friendly practices
PSO6	Understand the techniques of research and develop skills in conducting research and applying statistical procedures
PSO7	Understand color theories, color order specifications and develop sketching skills
PSO8	Understand the global costumes of the world
PSO9	Understand the draping procedures

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.SC	TEXTILES & COSTUME SCIENCE	HTC1C01 HISTORIC COSTUMES	Compare the different costumes of India

			Build up an idea about couture from middle age period
			Understand and discuss the garments and ,accessories including headgear and foot wear of various regions
			Analyze the fashion trends in 18^{th} century
			Explain the evolution of costumes
			Understand the information regarding the costumes orgin, fabrics, colours and accessories
		HTC1C02 FASHION MARKETING	Recognize the importance of aesthetics and principles of design in the seasonal fashion world
			Evaluate the trends in the fashion industry and their impact on overall business operations and strategy
			Assess social, cultural and economic factors and their impact on the global consumer and market place
			Perceive the skill of inspirational and innovative techniques to implement in apparel merchandise
			Plan and budget sales for a seasonal range
			Determine a commercially appropriate product range for a retailer
			Create a sales forecast for a retail store
			Analyze the fashion industry's activities to develop/implement a marketing strategy
		HTC1C03 COSTUME DESIGN AND ILLUSTRATION	Adapt their artistic abilities to support their future design careers
			Develop sketching skills
			Build the practical knowledge of fashion sketches, illustration, mediums, rendering, fashion details
			Design costumes according to various body shapes
			Identify the human figure, construction, anatomy of men, women & child
			Influence the students to inspire to develop fashion collection (portfolio)

		HTC1C04 INTRODUCTION TO FASHION DESIGN CONCEPT	Analyze and use color units effectively in their design process.
			Identify and discuss concepts related to the historical back ground of textiles and fashion.
			Identify and discuss concepts related to the design, production and evaluation of textiles and apparel products.
			Identify and discuss concepts related to the management, marketing, and consumption of textile and apparel products.
			Evaluate trends in the fashion industry and their impact on overall business operation and strategy.
			Utilize applied management topics to manage, control, and improve industry environment
		HTC1C05 RESEARCH METHODOLOGY AND STATISITICS	Outline of research concepts
			Compare different types of research methods
			Construct research design or proposal for future project works
			Examine various sampling techniques and measurement scales
			Develop report writing or presentation skills
			Choose right statistical techniques to be used with various research methods
			Interpret statistical literature, research articles, the claims made on the basis of statistics
		HTC2C06 QUALITY ASSURANCE AND TEXTILE TESTING	Understand the method of testing textile fibers, yarns and fabrics
			Analyze and interpret the results of fabric testing from testing equipments
			Apply statistical techniques for analyzing test results
			Identify various fabric defects and their causes and remedies

			Explain the principle of total quality management of textiles(TQM)
			Develop innovative tools to implement TQM in the textile industry
			Measure the quality particulars of textile material at different stages of production and know the standards
			Identify quality deviations of fabrics
			Understand and evaluate quality assessment of final product
			Identify aspects of quality in the design and construction of textile items
		HTC2L01 FASHION DRAPING (P)	Develop skills to build up the basic dress foundation
			Develop skills to design the bodice style
			Analyze and understand the dart equivalents and dart manipulations
			Develop skills to adapt the different neckline variations
			Explain the draping principles and techniques
			Develop skills to create skirt variations
			Understand the fabric characteristics and terms for draping
		HTC2C07 VISUAL RETAILING AND ENTREPRENEURSHIP MANAGEMENT	Evaluate the relationship between creativity and marketing.
			Entrepreneurship development and understand various strategies to choose fashion as a career
			Understand the global fashion business, the differences between business models that regulate the industry and the key issues that are recurrent in the world of fashion.
			Understand the history of retailing to inform development of contemporary retail strategy.
			Develop a merchandise plan and budget it
			Understand and apply the promotional

			elements of retailing.
			Identify the environmental factors that impact retailing and develop short and long-term plans to address existing and emerging issues.
		HTC2 L02 ADVANCED PATTERN ADAPTATION AND CONSTRUCTION TECHNIQUES (PRACTICAL)	understand pattern making tools & techniques
			understand the different methods of pattern drafting
			understand the basic pattern to develop pattern adaptation
			Develop skill and ability to design draft patterns for different garments based on body measurements and adaptation
			Develop skills to draft adult basic block and adaptations
			Develop the skill to design garments according to the theme
			Develop the garment construction skills according to the pattern
			Assess, propose, & apply various techniques related to drafting, draping and constructing of garments
		HTC2 C08 TECHNICAL TEXTILES	Identify the opportunities to develop a product on a market.
			Analyses various technical textile products in order to recognize the manufacturing process.
			Understand the impact of the fibre characteristics and used technologies on the technical textile products.
			Select the textile elements and manufacturing processes to design the final product for end use
			Identifying major segments of the textile industry and distribution channel.
		HTC3C09 FABRIC	Demonstrate the weaving, weaving loom, weaving mechanism & different

		CONSRUCTION AND ANALYSIS	weaving machineries.
			Identifying & applying the weave pattern – design, draft, peg plan, denting order
			Analyze the weaving calculations and different types of weave pattern
			Create different weave effects in weaving
			Understand basic weaves & fancy weaves
			Identify different woven samples
		HTC3C11 TEXTILE CHEMISTRY	Recall fundamental organic chemistry
			Estimate different types of chemicals used in textile wet processing
			Identify dyes and estimate purity of dye solution and explain the mechanics of dyeing
			Identify various machinery used for printing & finishing of fabrics which would help them in working in dyeing/printing industry
			Understand color theories, different measures of color and specifications
			Understand the coloration of synthetic/ natural fibers
			Infer the principle and method of application of various types of special finishes on textile fabrics
			Recommend eco-friendly practices in textile processing
			Apply sustainable practices related to textile issues
			Propose research and development in the field of textile auxiliaries/dyeing/printing
		ELECTIVE COURSES HTC3E0I FASHION CHOREOGRAPHY	Understand various steps in planning a show

			Understand the technical framework and sound check of fashion show
			Organize fashion show
			Understand different techniques for advertising and promotional activities
			Develop the fashion presentation skill
			Develop the managerial skills
		ELECTIVE COURSES HTC3 E01 FASHION COMMUNICATION	Understand various media in communication
			Understand the technical framework and need for fashion communication
			Develop skills in fashion writing
			Understand different techniques of visual communication
			Develop the fashion communication skill
			Identify the media ethics for better work culture
		ELECTIVE COURSES HTC3E01 SOCIOLOGY OF CLOTHING	Categorize the evolution of clothing through the theories
			Discover the sociological aspects of clothing
			Compare the personality factors and choices of clothing
			Develop the skills in selecting clothing for different age group
			Distinguish the fashion and social visibility and Outlining the theoretical perspectives of fashion
		ELECTIVE COURSES HTC3E02(1) TEXTILES AND ENVIRONMENT	Identify the Indian textile industry

			Analyze the environmental impacts of Indian textile Industry
			Explain the use of Biotechnology in textile wet processing
			Classify the types of Eco labels
			Identify the ecofriendly fibres and analyze the ecofriendly practices for fabric care
			Understand the various novel fibres
			Compare the difference between organic and conventional textile fibres
		ELECTIVE COURSES HTC3E02(2) SCIENCE OF CLOTHING COMFORT	Understand the importance of clothing comfort
			Understand the factors affecting clothing comfort
			Identify the neuropsychological factors related to clothing comfort
			Establish the relationship between garment fit and clothing comfort
			Develop a scientific approach towards selection of clothing
			Understand the psychological aspects of clothing in relation to its comfort
		ELECTIVE COURSES HTC3E02(3) TESTING OF FUNCTIONAL AND TECHNICAL TEXTILES	Understand the properties of functional and technical textiles
			Understand the objectives of testing functional textiles
			Understand the finishing procedures used to treat technical textiles
			Understand the various test methods used for technical textiles
			Identify the end use of functional textiles
			Understand the principles of testing
		ELECTIVE COURSES HTC4E03(1) HOME TEXTILES	Understand various types of Home Textiles
			Understand the need of Home Textiles

			in different settings
			Identify the recent trends in Home Textiles
			Understand the properties of home textile products
			Develop innovative home textile products
			Develop entrepreneurial skills in this field
		ELECTIVE COURSES HTC4E03(2) COMPUTER APPLICATION IN FASHION DESIGNING	Illustrate accurate representations of garment specifications for communication purposes
			Develop skills to choose a variety of design softwares for visual communication of designs
			Design and produce innovative designs using CAD softwares
			Determine suitable file formats for digital outputs
			Develop skills to Construct digital files using appropriate processes and techniques
			Make use of audio/visual aids to popularize the work done in designing
			Construct innovative garment designs
			Infer the advantages of 3D techniques in designing and production processes
		ELECTIVE COURSES HTC4E03(3) KNIT WEAR TECHNOLOGY	Understand various knitting procedures
			Understand the working of knit machines
			Identify the different types of knit structures
			Understand the finishing of knit fabrics
			Identify the applications of knitted fabrics
			Understand the properties of knitted fabrics

B.SC. TEXTILES AND FASHION TECHNOLOGY

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the basics of textile science , apparel production, fashion marketing, costumes, home science and visual merchandising
PSO2	Create an aesthetic sense towardsfashion
PSO3	Equip with entrepreneurial skill in various fields in the fashion industry
PSO4	Train young minds create sustainable fashion ideas
PSO5	Develop productive design thinking for the betterment of the society
PS06	Build attitudes and values promoting good citizenship
PS07	Create knowledge and skill for community development

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B.SC	Textiles and fashion technology	HTF1B01 Historic costumes	Understand the history of origin of clothing
			Understand the material content of various ages
			Understand the basic functions and uses of clothing
			Discuss the global perspective of costumes and accessories
			Identify the diversity of Indian costumes
		HTF2B02 Fashion marketing and shop floor management	Recognize the importance of aesthetics and principles of design in the seasonal fashion world
			Evaluate the trends in the fashion industry and their impact on overall business operations and strategy
			Assess social, cultural and economical

			factors and their impact on the global consumer and market place
			Perceive the skill of inspirational and innovative techniques to implement in apparel merchandise
			Plan and budget sales for a seasonal range
			Determine a commercially appropriate product range for a retailer
			Create a sales forecast for a retail store
			Analyze the fashion industry's activities to develop/implement a marketing strategy
		HTF3B03 Computer aided fashion design	Illustrate accurate representations of garment specifications for communication purposes
			Develop skills to choose a variety of design software for visual communication of designs
			Design and produce innovative designs using CAD software
			Determine suitable file formats outputs
			Develop skills to Construct digital filesusing appropriate processes and techniques
			Make use of audio/visual aids to popularize the work done in designing
			Construct innovative garment designs
			Infer the advantages of 3D techniques in designing and production processes
		HTF4B04 Garment construction and pattern making	Interpret a design with practical understanding of garment construction
			Develop designs prior to production of garments
			Analyze the designs by draping different fabrics to achieve the difficult designs.

			Identify the features of garment, characteristic postures and harmony between draped fabric and wearer.
			Develop the appearance of construction and neatness of workmanship
			Make use of basic pattern adaptations to enable a design to fit a person
			Develops skills to create patterns for garments
		HTF5B05 Garment costing	Develop the elements of basic cost sheet of garment.
			Discover the control of cost when decided to start a business.
			Make a use of proper decision in the production of garment
			Organize a budget for an industry.
			Explain the productivity of material and labour in a garment industry.
			Determine the budgeting principles for the apparel industry
			Construct the cost plus pricing method
			Analyze the accounting for factory overhead
		HTF5B06 Fashion presentation	Apply designing and illustrating using various mediums
			Distinguish the fashion accessory designing
			Build the theme based illustrations
			Examine the basic aspects of fashion show
			Categorize the survey boards
			Explain creating lines
			Design a portfolio
			Evaluate designing skills
		HTF5B07 Traditional Indian textiles and surface ornamentation	Develop the different hand and machine embroidery stitches.
			Develop creative designs in embroidery and prepare garments by using this embroidery.
			Identify the various color schemes and their applications in surface ornamentation.
			Identifying new opportunities in craft, art,

			Fashion and markets.
			Understand the richness of the Indian embroidered textiles.
			Create unique design using traditional embroidery patterns and stitches.
			Build operation of tools and instruments.
		HTF5B08 Concepts of fashion design	Analyze basic elements of design.
			Analyze the designing principles in a garment.
			Assess body figures and dress details
			Categorize the use of elements and principles of design in designing garments
			Analyze the wardrobe planning.
			Explain fashion terms.
			Examine the colour theory
			Experiment with basic croqui for female, male and child
			Organize live model drawing
			Apply the rendering techniques & Construct the paintings using different mediums
		HTF5D02 Interior Decoration (OPEN COURSE)	Understand the elements and principles of design to create harmonious and balanced interior
			Explain the properties of colour and its effects on the intended style
			Discover the effect of natural and artificial light on colour and surface texture
			Discover the importance of ensuring quality finishes on floor and walls to create professional and enduring interior space
			Create striking and functional backdrop for furnishings and window treatments
			Apply knowledge of design elements to the reality of placing objects in perfect manner
			Create visual ideas about functional

			aspects of housing
			Plan creative kitchen design by adapting principles
			Summarise the elements of design in floral arrangement

M Sc. NUTRITION AND DIETETICS

PROGRAMME SPECIFIC OUTCOMES

Program Specific Outcomes	
PSO1	Understand the functioning of various organ systems in human body and study the importance of nutrition during various developmental stages of lifecycle.
PSO2	Understand the role and metabolism of nutrients and the relevance of various food groups and functional foods.
PSO3	Understand the dietary management and principles of diet counselling , and biochemical changes during various therapeutic conditions.
PSO4	Understand the relevance of nutrition in relation to community and understand various strategies developed in overcoming malnutrition.
PSO5	Understand the techniques of research and develop skills in conducting research and applying statistical procedures.
PSO6	Understand the various aspects of quantity food production and service in various institutions.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.SC	NUTRITION AND DIETETICS	HND1 C01 HUMAN PHYSIOLOGY	Understand structure, component and functions of all systems of the human body
			Explain how to cope with disorders and other environmental factors
			Elaborate on common tests used to analyze different disorders
			Outline the role of central nervous system in controling voluntary and involuntary activities of the human

			body
			Illustrate the role of endocrine system in the regulation of body activities
			Identify the causes of Infertility and Methods of contraception
			Comprehend blood group system and common facts related to the same
			Apply resuscitation methods in emergency situations
			Illustrate the mechanism to maintain normal water, electrolyte and pH balance
			Understand the adaptation of the body to unfavourable condition, stresses, physical activity and diseases
		HND1 C02 NUTRITION THROUGH LIFE CYCLE	Understand the role of food in daily life.
			Compare the nutritional requirement in different age groups.
			Understand nutrition related problems in life cycle.
			Understand national and international health programmes to prevent malnutrition.
			Plan balanced diets for different age groups.
			Develop competency in planning diets to meet the nutritional requirements of different socio economic levels.
			Understand the need of nutrition in special events.
			Understand Growth monitoring and immunization schedule.
		HND1 C03 ADVANCED FOOD SCIENCE	Understand the structure and composition of different foods
			Assess the functional properties of food
			Compare the methods of cooking
			Analyse the reasons and prevention of browning in vegetables and fruits
			Develop different nutritious recipes with different foods

			Judge the organoleptic evaluation of foods
			Detect adulterants present in foods
			Discuss the emerging trends in food science
		HND1 C04 MACRO NUTRIENTS	Understand the concepts of Sports Nutrition
			Analyze nutrient requirement of an athlete
			Explain the importance of Nutrition among Sports Personnels
			Comprehend changes in food after consumption
			Determine nutritional status of individuals with varying activity levels
			Apply knowledge of metabolism and nu
			Understand the need and benefits of nutrients present in the food
			Apply the benefits of non nutritional components of food in different stages of life
			Analyze caloriemetry, work capacity and its efficiency
			Explain control of food intake and metabolic consequences of starvation
		HND1 C05 RESEARCH METHODS AND STATISITICS	Outline of research concepts
			Compare different types of research methods
			Construct research design or proposal for future project works
			Examine various sampling techniques and measurement scales
			Develop report writing or presentation skills
			Choose right statistical techniques to be used with various research methods
			Interpret statistical literature, research articles, the claims made on the basis of statistics
		HND2 C07 FOOD SERVICE MANAGEMENT	Apply best practices and standards related to protocol and promotion in the food service industry

			Develop organization chart to change and enhance wellness in diverse individuals and groups
			Identify use and operation of major food service equipment and relationship for efficient product flow
			Apply the principles of human resource management to different situations in Hospitality Industry
			Construct management and business theories and principles for the development of programs or services.
			Evaluate budget, food cost control and interpret financial data
			Use effective and professional oral and written communication and documentation.
			Study hygiene and sanitation in the food service industry
			Build a kitchen layout using the available physical facilities
			Ensure the patients receive their best possible nutritional intake whilst in hospital
		HND2 C08 CLINICAL AND THERAPEUTIC NUTRITION	Discuss the nature and scope of Clinical and therapeutic nutrition and identify circumstances where diet may need modifications
			Take part in supervised practical activities like diet plan that addresses a select client's disease that incorporate the client's cultural preferences.
			Understand the physiology, metabolism and special requirements of critically ill patients.
			Explain different types of Food allergy and intolerance and provide information on diagnosis, clinical symptoms and appropriate dietary modifications
			Develop professional ethics of dietitian in different situations
			Demonstrate sufficient problem – solving skills to assess multifactorial

			aspects of nutritional care and organize and prioritize necessary tasks within time constraints
			Illustrate the effect of various metabolic disorders on nutritional status and its dietary adjustments.
		HND2 C09 NUTRITIONAL MANAGEMENT IN LIFE STYLE DISEASES	Understand the risk factors associated with life style diseases
			Understand the symptoms associated with life style diseases
			Explain the management of life style disorders
			Develop skills to plan appropriate diet for life style disorders
			Develop the capacity of health professionals in management of the life style diseases
			Understand the complications of life style diseases
			Understand the foods which helps to reduce degenerative diseases
			Discuss modification in life style with patients to reduce the complications in future
		HND3 C10 VITAMINS AND MINERALS	Understand the chemistry of minerals & vitamins
			Understand the food sources and factors affecting absorption of vitamins and minerals
			Understand the functions of vitamins and minerals
			Understand the metabolism of vitamins and minerals
			Understand the nutritional requirement of various vitamins & minerals
			Study the states of deficiency & toxicity of vitamins & minerals
			Understand the interrelationship between various micronutrients
			Estimate the levels of nutrients in

			various food sources
		HND3 C11 COMMUNITY NUTRITION	Identify nutrition assessment techniques
			Recall the nutrition status of the country
			Apply nutrition intervention programmes
			Construct tools for the conduct of nutrition education programmes
			Recall various food production methods
			Understand the role of various organizations in compacting malnutrition
		HND3 E01 PAEDIATRIC NUTRITION	Demonstrate a thorough knowledge of the theory of human nutrition and dietetics as it applies to paediatrics.
			Understanding the aetiology, pathophysiology and clinical features of paediatric diseases and conditions that require dietary modifications.
			Apply knowledge of food, health, nutrition and dietetics to the nutritional care of children.
			Identify resources for promoting good nutrition for children in the community.
			Identify newborns with abnormalities.
			Understand the need for immunization during various life stages.
		ELECTIVE COURSES HND3 E03 FUNCTIONAL FOODS AND NEUTRACEUTICALS	Understand the concept of nutraceuticals, probiotics and prebiotics
			Discover different foods which have nutraceutical properties
			Identify nutraceuticals that have effect on human health
			Discuss marketing and regulatory issues for Nutraceuticals
			Analyse the opportunity for functional food market growth
		ELECTIVE COURSES	Define counseling and nutritional

		HND3 E06 NUTRITIONAL COUNSELLING AND EDUCATION	counselling
			Classify types of counselling
			Interpret different theories of counselling
			Identify the person who needs counselling
			Take part in nutrition education
			Interview persons who needs counselling
		HND4 L03 METABOLIC AND BIOCHEMICAL CHANGES IN CLINICAL DISEASES-PRACTICAL	Outline advanced integrated knowledge and understanding normal cell processes and physiologic effects adapting general principles.
			Explain the role of drug, food and nutrient interactions in human body.
			Utilize the underlying principles of inherited or other metabolic disorders with special references.
			Discuss the influence of dietary factors on the developments of diseases and methods of detection.
			Predict how metabolic changes in both physiological and pathological states may affect human nutritional requirements.
			Analyze informations from relevant scientific literature on the applications of biophysics relevant to nutrition.
			Estimate clinical diagnosis methods for endocrinological abnormalities by examining mode of action, enzymes and hormones.
		ELECTIVE COURSES VPND 4 E07 DIABETIC CARE AND MANAGEMENT	Understand the prevalence of Diabetes Mellitus
			Understand the anatomy and physiology

			of pancreas
			Understand the pathological changes in Diabetes Mellitus
			Understand the symptoms and diagnosis of Diabetes Mellitus
			Understand the micro and macro vascular complications of Diabetes Mellitus
			Understand the co –morbid conditions of Diabetes Mellitus
			Understand the management of Diabetes Mellitus
			Plan diets according to the insulin requirement

B Sc FAMILY AND COMMUNITY SCIENCE

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the basics of Nutrition, Textiles, Human Physiology, Microbiology, Interior decoration and Family relation with regard to community living.
PSO2	Equip with skills to manage resources in a dynamic way.
PSO3	Train young minds improve every facet of family and social living- food, clothing, health and child care
PSO4	Build attitudes and values promoting good citizenship.
PSO5	Inculcate keen interest and curiosity in developing research culture.
PSO6	Create knowledge and skill for societal development

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B.SC	FAMILY AND COMMUNITY SCIENCE	FCS1B01 FUNDAMENTALS OF NUTRITION	Understand the basics of nutrition, health and malnutrition
			Understand the nutritional status and nutritional classification of foods
			Summarize the ICMR Recommended Allowances for Indians (RDA)
			Understand the classification, functions, digestion, absorption, metabolism, sources, requirements and deficiency of macronutrients
			Understand the functions, sources, deficiency and requirements of fat soluble vitamins and water soluble vitamins
			Understand the functions, sources, deficiency and requirements of minerals like Calcium, Iron, Iodine, Fluorine
			Determine the energy value of food, Total energy requirements and BMR
			Understand the requirements of water and maintenance of water balance in the body
		FCS2B02 HUMAN DEVELOPMENT	Understand stages of human development.
			Understand the needs and problems of

			exceptional children.
			Develop skills in organizational behaviour and generate solutions to situational problems
			Interpret the values and role of play in child's development.
			Develop knowledge of children's laws and rights
		FCS3B03 - RESEARCH METHODOLOGY AND BIOINFORMATICS	Understand research concepts
			Compare different types of research methods
			Construct research design or proposal for future project works
			Examine various sampling techniques and measurement scales
			Develop report writing and data presentation skills
			Outline of bioinformatics and statistics
			Enable students to reflect knowledge & skills in bioinformatics and to apply it in various aspects of Home Science
		FCS4B04 FOOD SCIENCE	Understand structure, functions and classification of foods and different food groups
			Understand the nutritional and anti-nutritional factors of various foods
			Assess the effect of heat on foods and compare different methods of cooking
			Understand food additives and different preservation methods for food processing
			Evaluate organoleptic qualities of food
			Estimate content of carbohydrate, Vitamin C and reducing sugars in food
			Detection of adulterants in food
			Develop different recipes and evaluate its nutritional content
			Understand structure, functions and classification of foods and different food groups
		FCS5B05 HUMAN PHYSIOLOGY AND	Understand about the anatomyof human body

		MICROBIOLOGY	
			Understand the various organ systems and its functioning
			Understand the morphology of microorganisms and their role in health and diseases
			Understand the factors affecting growth of microorganisms and mode of transmission
			Understand the types of immunity and methods of sterilization
			Understand the mechanism of spoilage of food and etiology of food infections
		FCS5B06 DIET IN HEALTH	Understand the role of food in daily life.
			Compare the nutritional requirement in different age groups.
			Understand nutrition related problems in life cycle.
			Understand national and international health programmes to prevent malnutrition.
			Plan and prepare balanced diets for different age groups.
			Develop competency in planning diets to meet the nutritional requirements of different socio economic levels.
			Understand the need of nutrition for sports persons.
		FCS5B07 FAMILY RESOURCE MANAGEMENT	Understand the process of management in family living
			Develop wise decisions in personal life and make use of given resourses
			Apply the principles of Ergonomics after critically analyzing one's work habits
			Understand the functions of house and the principles for planning a house
			Develop a creative sense in interior decoration by applying the elements and principles of design
			Improve the standard of living utilizing family resources
		FCS5B08 TEXTILE	Develop strong knowledge base in the

		SCIENCE	production of fibres and yarns
			Identify textile fibres and apply it to various end uses
			Understand about woven and nonwoven fabrics
			Develop ethical values concerning production and finishing of textiles
			Illustrate different methods and mechanism of dyeing and printing
			Create awareness on green textiles
		FCS6B09 DIETETICS	Understand the role and work ethics of dietitian
			Understand the principles of diet therapy
			Understand and plan the routine hospital diets
			Understand the various deficiency diseases
			Understand the risk factors of various therapeutic conditions
			Plan and prepare diet during various deficiency diseases
			Plan & prepare diet for therapeutic conditions
			Understand the management of various lifestyle diseases
		FCS6B10 FABRIC CARE AND APPAREL DESIGNING	Explain different laundering techniques
			Apply principles of laundering on different fabrics
			Understand traditional Indian textiles and embroideries of India
			Design garments keeping the elements and principles of design
			Find out latest fashion trends in India
			Create flat patterns and adapt them to specific styles
		FCS6B11 CONCEPTS IN FAMILY RELATION	Develop healthy attitude towards marriage and interpersonal relationships
			Understand the importance of family in today's social context
			Solutions to thrive different circumstances in stages of life cycle
			Solving critical family situations

			Develop sound knowledge on methods of family planning
			Improve the knowledge regarding legal issues concerning women
		VI FCS6B12 (E2)-QUANTITY FOOD PREPARATION TEXCHNIQUES	Identify the scope of food service industry
			Using different types of menu
			Analyze menu pricing and evaluation
			Apply different techniques in food purchasing
			Identify and develop receiving procedure and storage of food items
			Build standardized recipes and portion control techniques
			Understand the product standards for purchasing and selling food items
			Construct different styles of food service system
			Evaluate budget, food cost control and interpret financial data
			Ensure the patients receive their best possible nutritional intake whilst in hospital
		FCS5D02 INTERIOR DECORATION (OPEN COURSE)	Understand the elements and principles of design to create harmonious and balanced interior
			Explain the properties of colour and its effects on the intended style
			Discover the effect of natural and artificial light on colour and surface texture
			Discover the importance of ensuring quality finishes on floor and walls to create professional and enduring interior space
			Create striking and functional backdrop for furnishings and window treatments
			Apply knowledge of design elements to the reality of placing objects in perfect manner
			Create visual ideas about functional aspects of housing
			Plan creative kitchen design by adapting principles

			Summarise the elements of design in floral arrangement

M.COM (FINANCE)

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand the major theories and models which are applicable to an organisation at a national and global level.
PSO2	Ability to apply Information Technology and skills in Financial Management, Costing, and Management Accounting, of an organisation
PSO3	Equip the students to calculate tax for organisations and strengthen their ability to recognize potential opportunities for tax savings and tax planning.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M.Com	Finance	MCM1C01 Business Environment & Policy	To understand the concept of business environment and its factors affecting businessdecisions. To understand government policies and regulations affecting businessoperations.
		MCM1C02 Corporate Governance & Business Ethics	Provide a range of definitions of corporategovernance Identify issues usually addressed by corporate governancestructures Summarise recent scandals and abuses and the regulatoryreaction Explain and evaluate the roles and responsibilities of executive directors, non-executive directors, auditors and company secretaries in ensuring effective corporategovernance.
		MCM1C03 Quantitative Techniques for Business Decisions	Identify the source of a quantifiable problem, recognize the issues involved and produce an appropriate actionplan Carry out a simple sample survey, analyze the results and present the findings to theclass.
		MCM1C04 Management Theory and Organizational Behaviour	Demonstrate the applicability of the concept of organisational behaviour to understand the behaviour of people in theorganisation.

			Better understanding of the complexities associated with management of group behaviour in the organisation.
		MCM1C05 Advanced Management Accounting	Explain the nature and significance of management accounting, various emerging costing approaches, analyse risk and uncertainty, and devise strategies for dealing with risk and uncertainty indecision-making. Understand the nature of standard costing and demonstrate the necessary skills to calculate advancedvariances. Understand and critique both the theoretical issues and influences on practical decisions associated with cost volumeanalysis.
		MCM2C06 Advanced Corporate Accounting	Understand the techniques of restructuring and liquidating the corporateentities. Understand the basic accounting standards relating to revenue andleases Familiarize with modern concepts inaccounting.
		MCM2C07 Advanced Strategic Management	Understand the basic concepts and principles of strategic management to analyse the internal and external environment of business Develop and prepare organizational strategies that will be effective for the current business environment.
		MCM2C08 Strategic Cost Accounting	To understand the applications of cost accounting tools, techniques and concepts in managerial decisionmaking. To understand emerging cost concepts and its applications in strategic costmanagement.
		MCM2C09 International Business	Explain the key legal issues related to businesses operating in othercountries Students are expected to enhance their cognitive knowledge of global issues; interpersonal skills with individuals from various cultures, and social responsibility awareness on globalissues.
		MCM2C10 Management Science	Translate a problem into a simple mathematical model to allow easier understanding and to aid problemsolving Employ appropriate mathematical tools to solveproblems
		MCM3C11	Students will be able to evaluate, synthesise

		Financial Management	and apply the contemporary theories and empirical evidence concerning FinancialManagement Demonstrate and apply knowledge for taking investment decisions, financing decisions and dividend decisions.
		MCM3C12 Income Tax Law, Practice and Tax Planning I	To describe how the provisions in the corporate tax laws can be used for taxplanning To explain different types of incomes and their taxability and expenses and theirdeductibility To learn various direct and indirect taxes and their implication in practicalsituations To state the use of various deductions to reduce the taxableincome
		MCM3C13 Research Methodology	Search for, select and critically analyse research articles andpapers Gain experience with instrument development and data collectionmethods
		MCM3E01 Investment Management	Students will understand the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financialmarkets. Students will understand the benefit of diversification of holding a portfolio of assets, and the importance played by the marketportfolio. Students will know how to apply different valuation models to evaluate fixed income securities, stocks, and how to use different derivative securities to manage their investmentrisks.
		MCM3E02 Financial Markets & Institutions	Sound knowledge of the broad framework of financial markets andinstitutions. Better understanding of the characteristics of various financial market instruments and the regulatory environment inIndia.
		MCM4C14 Financial Derivatives & Risk Management	Analyse and price diverse derivatives products to generate an optimal risk managementstrategy. Demonstrate critical thinking, analytical and problem solving skills in the context of derivatives pricing and hedgingpractice.

			Explain the binomial model and its extension in continuous time to the Black-Scholesmodel. Demonstrate an understanding of pricing forwards, futures and optionscontracts
		MCM4C15 Income Tax Law, Practice and Tax Planning II	Students will apply critical thinking and problem-solving skills related to taxation of individuals, flow-through entities, and corporations. In addition, students will recognize potential opportunities for tax savings and taxplanning.
		MCM4E03 International Finance	Demonstrate the ability to select global financing strategies and propose solutions that will take advantage of opportunities in the global financial markets to the benefit of relevantstakeholders Explain exchange rate determination, and how firms can manage their exchange rate risk and capitalize on anticipated exchange ratemovements
		MCM4E04 Advanced Strategic Financial Management	Students will be able to understand concepts, tools and techniques used for financialdecision Learners will be equipped with the skills to apply financial principles relevant to strategic financial management in organisationalcontexts

B.COM (FINANCE)

PROGRAMME SPECIFIC OUTCOMES

PSO1	Apply basic statistical and analytical skills necessary for investigating a range of problems in Commerce and Economics
PSO2	Exhibit knowledge in all areas of accounting and finance to generate realistic solutions as an Entrepreneur/ Business Executive.
PSO3	Equip Students with solid foundation to pursue professional careers such as CA, ICWA, CFA, ACS and MBA as well as research.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
B.Com	Finance (Core Courses)	BCM1B01 Business Management	Explain relevant theories and principles associated with the environment of business
			Evaluate legal and ethical principles in business and apply them to organizational decision making
			To acquire a basic knowledge about the emerging trends in business
		BCM2B02 Financial Accounting	Acquire conceptual knowledge of basics of accounting
			Develop the skill of recording financial transactions and preparations of reports in accordance with accounting standards
		BCM3B03 Business Regulations	Demonstrate an understanding of the Legal Environment of Business
			Understand the fundamental legal principles behind contractual agreements
			Understand various modes of dispute resolution in business transactions
			Understand the rules related to sale of goods act
			Understand the LLP act 2008, LLP agreement and its formation, registration and dissolution
		BCM3B04 Corporate Accounting	The ability to prepare consolidated accounts for a corporate group
			Demonstrate a thorough knowledge of

			Important Disclosure based accounting standards and the ability to apply them to solve practical problems .
			A comprehensive understanding about the preparation of accounts for banking and insurance companies
		BCM4B05 Cost Accounting	Describe the cost concepts, cost behaviors, and cost accounting techniques that are applied to manufacturing and service businesses
			Determine the costs of products and services
		BCM4B06 Corporate Regulations	Know about the concept of company and shares
			Know about the company law in the.
			Understand the use of the memorandum of association and article of association in a company, and the legal provisions relating to documents of a company.
			Understand the legal provisions relating to the management of a company.
			Understand the various modes of winding up of a company
		BCM5B07 Accounting for Management	On the completion of the course the participants will be able to Analyze and Interpret the financial statements of a company
			As the course unfolds, participants will develop a skill in interpreting the financials of the company, and this ability of analyzing will enable the¬ participants to deal more effectively with strategic options for their businesses with the help of cost volume profit analysis.
			Understand the nature and role of the four principal financial statements (i.e., the Income Statement, the Statement of Financial Position, the Statement of Cash Flows, and the Statement of Changes in Equity)
			Ability to read, interpret and analyse financial statements; combine financial analysis with other information to assess the

			financial performance and position of a company through ratio analysis.
		BCM5B08 Business Research Methods	To understand basic knowledge required for carrying out business researches.
			To understand various styles of report writing to be used in business researches
		BCM5B09 Income Tax Law and Accounts	Students will be able to solve their own tax payment calculations easily
			Students will be capable of advising tax saving methods by applying the different loopholes within the law, which will the main demand by the companies
		BCM6B12 Income Tax and GST	Gain an insight on the recording and analyzing the transactions for compliance under GST especially in supply chain & distribution
			Students will be able to explain different types of incomes and their taxability and expenses and their deductibility
			Students will be able to learn various direct and indirect taxes and their implication in practical situations.
		BCM6B13 Auditing and Corporate Governance	Understand the concept of auditing and its classifications
			Understand the concept of vouching and verification
			Understand the concept of internal check and internal control
			Analyse the conceptual framework of corporate governance
			Evaluate the major corporate governance failures
		BCM5B10 Financial Markets and Services	Understand the role and function of the financial system in reference to the macro economy.
			Demonstrate an awareness of the current structure and regulation of the Indian financial services sector.
			Evaluate and create strategies to promote financial products and services
		BCM5B11 Financial Management	Understand the concept, tools and practices of financial management
			Demonstrate and apply knowledge for taking investment decisions, financing decisions and dividend decisions

		BCM6B14 Fundamentals of Investments	Students will understand the characteristics of different financial assets.
			Demonstrate and apply knowledge for taking investment decisions
		BCM6B15 Financial Derivatives	To give an account of the derivative market in general
			To give a detailed idea about derivative instruments prevailing in the market
		BCM1C01 Managerial Economics	Understand the concept of economics and its relation with other discipline and role of managerial economist in business decisions.
			Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of a good produced
			Understand the various theories of consumer behaviour
			Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve
			Understand the characteristics of Indian economy, issues and concept of parallel economy.
		BCM2C02 Marketing Management	Understand the characteristics of Indian economy, issues and concept of parallel
			Understand the concept of product management, branding and pricing of products
			Understand the concepts of distribution-marketing channels
			Understand the concepts of marketing communication and sales promotion
			Understand the concept of E-Commerce , Electronic payment system and security issues in E commerce
		BCM3C03 Human Resources Management	Better understanding of the concept of human resource management and its relevance in organizations.
			Increased understanding of the role, functions and functioning of human resource department of organizations.

		BCM4C04 Quantitative Techniques for Business	Identify the source of a quantifiable problem, recognize the issues involved and produce an appropriate action plan
			Carry out a simple sample survey, analyze the results and present the findings to the class
		BCM3A11 Basic Numerical Methods	Employ appropriate mathematical tools to solve problems
			Calculate and interpret numerous statistical values and appreciate their value to the business manager
		BCM3A12 Professional Business Skills	Make the students familiar with the mechanism of conducting business transactions through electronic media
			Able to create a structured digital marketing plan and budget
		BCM4A13 Entrepreneurship Development	Understand the function of the entrepreneur in the successful commercial application of innovations.
			Understand entrepreneurship assisting agencies.
		BCM4A14 Banking and Insurance	A knowledge of the economic roles and structure of banks in our economy;
			Knowledge and understanding of the different types of monetary measures that banks take to control money flow;
			Knowledge and understanding of banking concepts;
			Demonstrate knowledge of the operation and management of insurance entities, and the economic implications of organizational design and structure.
			Develop skills to facilitate insurance product cost and pricing, marketing, and distribution.

(For UG students from other departments)	Open Course	BCM5D03 Basic Accounting	Develop the ability to use basic accounting system to create the data needed to solve a variety of business problems
			Develop the ability to use accounting concepts, principles and frameworks to analyse and effectively communicate information to a variety of audiences
	Open course	BCM5D02 Basics of	Understand the concept of business and social responsibilities of business

		Entrepreneurship and Management	Understand the concept of entrepreneur and registration procedure of Sole proprietorship and partnership units.
			Understand the concept of management ,principles and functions of management

M.S.W

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understand and incorporate core values of social work practice
PSO2	Analyse social realities and social problems
PSO3	Provide social work interventions to individuals, groups and communities

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
M S W	SOCIAL WORK	SOW 1 C 01: History, Philosophy and Fields of Social Work (Core Paper)	Understand the history of Social work and Social Work education and its place in the context of other related concepts
			Understand the philosophical assumptions and values of Social Work and the sources of Social work Philosophy
			Apply social work values while working with various client groups
			Analyse ethical dilemmas in practice situations and develop solutions to deal with them
			Understand the different perspectives in Social Work and evaluate their relative relevance/applicability in different practice contexts
			Understand the basic concepts, methods and functions of Social Work and roles and skills of a professional social worker
			Understand and apply the Code of Ethics and understand the attributes of Social Work as a profession

			Understand the various fields of Social Work
		SOW I C 02 : Sociology and Economics for Social Work Practice (Core Paper)	Describe the important sociological perspectives
			Outline the contributions of major theorists
			Identify various sociological concepts present in contemporary society
			Examine the impact of social problems existing in the Indian Society
			Recall the basic concepts of Economics
			Elaborate on present-day economic systems
			Explain the concept of economic planning for development
			Determine the impact of the New Economic Policy on the Indian economy
			Analyze the challenges faced by the Indian economy
		SOW1 C 03: Human Growth and Development (Core Paper)	Understand the definition, nature and scope of Psychology
			Understand the structure and functions of nervous and endocrine system
			Understand the process of genetic transmission
			Understand the definition, nature and scope of Social Psychology
			Evaluate the theories and principles of development
			Understand the life span approach
			Understand the prenatal period
			Understand the infancy, early childhood and late childhood period
			Understand the personal, vocational, marital and vocational adjustments of early adulthood
			Understand the personal, vocational, marital and vocational adjustments of middle age
			Understand the personal, vocational, marital and vocational adjustments of old age

			Evaluate the dying process
		SOW I C 04: Professional Skills for Social Workers (Core Paper)	Understand the concepts of self
			Study the various techniques of understanding oneself
			Understand the relationship skills required for Social Workers
			Understand and demonstrate the communication skills required for social workers
			Understand the leadership skills required for social workers
			Understand the application of ICT in social work practice
		SOW I C 05: Social Legislation and Human Rights (Core Paper)	Understand the Legal system in India and the process of making social legislation
			Understand Social Legislation as an instrument for Social Control, Social Security, Social change, Social justice and Social Policy
			Understand human rights and organizations to protect human rights
			Understand the legislations for the protection of Children and women and statutory bodies involved in their implementation
			Understand the legislations for the protection of Aged, Disabled and other vulnerable groups, their social relevance, implications, and remedies
			Understand the role of Social Workers in the field of Social legislation and Human rights
			Understand the provisions of Legal Aid and Public Interest Litigation.
		SOW I C 06: Concurrent Field Work (Core Paper)	Exposure to the problems of marginalized individuals, groups and communities Get an hands on exposure to working with rural/tribal community
			Exposure and understanding of the functioning of governmental and non-

			governmental organizations involved in welfare and developmental activities for marginalized such as aged, destitute, children etc.
			Develop sensitivity towards the needs and problems of different target groups.
			Develops the skills of Observation, reporting and presentation of observed realities.
		SOW2 C07: Social Case Work (Core Paper)	Understand the theoretical framework and core values for the practice of social case work
			Acquire knowledge to assess and diagnose the problems of individuals
			Develop skills to plan intervention for individuals with problems
			Develop competence to provide intervention for the management of interpersonal problems
			Acquire ability in Laisioning, networking and mobilizing resources for the rehabilitation of individuals with problems
			To understand the various tools to assess individuals with problems
			Develop competence to provide intervention for the management of interpersonal problems
			Acquire ability in Laisioning, networking and mobilizing resources for the rehabilitation of individuals with problems
			Acquire skills for recording and documentation of individual and group interventions
		SOW2 C 08: Social Group Work (Core Paper)	Develop an understanding of various types of group, their processes and dynamics, stages of development and models of interventions
			Learn theoretical approaches that inform group work practice
			Gain insight into dimensions of group processes and group work practice
			Develop skills to work with different stages and record the process
			Understand of group work as a method

			of professional social work
		SOW2 C 09: Community Organisation and Social Action (Core Paper)	Understand the basic concepts of community, community functions and community dynamics
			Understand the values and process of community organization as a method of social work
			Analyse and evaluate the significance of models of community organization and social action proposed by Jack Rothman, Alinsky, Freire and Gandhi
			Use strategies and skills in community organization and social action
			Practice community organization in different contexts
			Understand the values and process of social action as a method of social work
		SOW2 C 10: Psychology for Social Work (Core Paper)	Understand the definition , nature and scope of Social Psychology
			Identify the components, characteristics, formation and modifiability of attitude
			Understand the aspects of social perception-Nonverbal communication, Attribution, Impression formation and Impression management
			Understand the aspects of social cognition-Schema, Heuristics, Priming, Automatic and Controlled Processing
			Understand the aspects of social cognition-Schema, Heuristics, Priming, Automatic and Controlled Processing and sources of error in social cognition
			Understand the nature, functions and concepts of group –Social facilitation, Social loafing, Deindividuation, Decision making
			Understand the aspects of social influence-Conformity, Compliance techniques, Obedience to authority
			Understand the theoretical perspectives and features of prosocial behaviour and Aggression

			Evaluate the relevance of propaganda and collective behavior
			Understand the concept of mental health, mental health issues and Biopsychosocial model of mental health
			Understand the mental disorders- Schizophrenia, mood disorders, anxiety disorders, Somatoform disorders, childhood disorders, Dissociative disorders
		SOW2 C 11: Theory and Practice of Counselling (Core Paper)	Understand the concept of counselling and its elements
			Differentiate counselling from Social Case Work, Guidance and Psychotherapy
			Understand the process of counseling
			Demonstrate the ability to use techniques of counseling
			Determine the application of theories in counselling
			Identify the contexts in which counselling can be practiced
			Practice counselling in contexts including Marriage and Family, Career, Crisis and trauma, Genetic Issues, Grief, Stress management, HIV/ AIDS, Services for children and adolescents, Elderly, Workplace, and Substance abuse and Addiction
		SOW2 C 12: Concurrent Field Work (Core Paper)	Learn to practice social case work and will develop expertise in psycho social study diagnosis and treatment on an individual level.
			Learn to conduct, practice and record the method of social group work.
			Observe and practice community organization and other macro level interventions.
			Improve skills in reporting, documentation and dissemination.
			Develop skills in working on micro, Meso and macro level.
		SOW3 C 13: Quantitative and	Understand the significance and characteristics of social work research

		Qualitative Methods for Social Work Research (Core Paper)	
			Understand the process of social work research
			Differentiate quantitative research from qualitative research
			Demonstrate the ability to use various quantitative and qualitative research methods
			Understand the meaning of descriptive and inferential statistics
			Determine the application of statistical techniques in social work research
			Demonstrate the ability to undertake research projects in social sciences and prepare scientific reports
		SOW3 C 14: Participatory Project Planning and Training (Core Paper)	Learn relevant theoretical frame work and skills for project preparation and its various stages
			Demonstrate skills to work during various phases of Development projects
			Acquire skills in preparing developmental projects
			Develop scientific temperament in preparation and management of projects at micro and macro levels
			Develop skills in designing and implementing participatory training programmes
			Use participatory training methodologies for social work interventions
		SOW3 C 15: Community Health (Core Paper)	Understand the concept of Community health and related terminologies
			Understand the concept of health and integrated approach to health in the context of Development
			Analyze plans and policies/legislations in health and implications for social

			work practice
			Learn the public health issues and needs facing the country and design social work interventions
			Examine the Health Care system in India and its administration pattern
		SOW3 E1 01 :Health Care Social Work Elective I -Medical and Psychiatric Social Work	Understand the history and scope of Health Care social Work
			Demonstrate the ability to do psycho-social assessment of persons with health issues
			Identify the contexts in which health care social work can be practiced
			Understand the role and functions of social workers in the health care settings.
			Determine the application of theories and approaches in health care social work
			Identify the ethical practice in healthcare social work
		)W3 E 2 01 : Rural Community Development and Governance ective II – Rural and Urban Community Development	Understand the condition of rural and tribal communities in India in terms of social and economic development
			Analyse the challenges faced by the rural and tribal communities.
			Understand the concept, philosophy and principles of Rural Community development
			Understand the programmes and services in the governmental and voluntary sector for rural communities
			Understand the structure and functions of PRIs in community development
			Analyse the role of PRIs in bringing about transformation in rural and tribal communities
			Understand the scope of social work

			interventions in rural communities
		SOW3 E102: Social Work in Mental Health Settings Elective I -Medical and Psychiatric Social Work	Learn psychiatric interviewing and assessment in Psychiatry
			Learn Classification in Psychiatry
			Understand Epidemiology, Clinical Manifestation, treatment and outcome of major psychiatric disorders
			Understand the role of psychiatric social worker in psycho social interventions
			Learn Psycho Social Interventions and Multidisciplinary team approach in the field of mental health
			Understand the significance of psycho social interventions in psychiatric rehabilitation.
			Learn programmes and policies for mental health in India
			Develop the skills to apply social work methods in mental health settings
		SOW E202: Urban Community Development and Governance ective II – Rural and Urban Community Development	Understand the urban communities and the processes like urbanization and its impact on social conditions
			Analyse the challenges faced by urban communities with focus on vulnerable populations
			Understand the concept, philosophy and principles of Urban Community development
			Understand the programmes and services in the governmental and voluntary sector for urban communities
			Understand the structures and institutions for urban governance
			Understand the scope of social work interventions in rural communities
		SOW3 C 16:Concurrent	Learn practice of social work in

		Field Work (Core Paper)	medical and psychiatric social work
			Learn practice of social work in the context of urban/ rural community on meso level.
			Develop skills in observing, analyzing, evaluating and creating innovative social work intervention.
			Develop Documentation and reporting skills
		SOW4 C 17 : Administration of Human Service Organizations (Core Paper)	Understand the concepts in administration and administration as a method of Social work
			Understand the procedure of registering trust, society, CBO, NGO and NPO.
			Understand social welfare programmes of Ministry of women and child development, Ministry of rural development, Ministry of urban development, Panchayati Raj, Central social welfare board and State social welfare board.
			Understand HRM and its process
			Understand and use the concept of organizational behavior and theories of motivation and leadership.
			Understand the problems in organizations and use grievance redressal mechanisms
		SOW4 C 18 : Social Work with Vulnerable groups (Core Paper)	Understand the concepts-Vulnerability, Exclusion, Marginalisation, At-risk, disadvantaged and Stigmatisation
			Identify vulnerability in children in various circumstances and interventions
			Understand the major gender issues and vulnerabilities faced by women and the policies and programmes for women's welfare
			Practice women centered social work to address the vulnerabilities experienced

			by women
			Understand the major vulnerabilities faced by elderly and the policies and programmes for elderly
			Practice social work for enabling active ageing and enhancing quality of life
			Understand the major vulnerabilities faced by differently abled persons and the policies and programmes for elderly and the role of social workers in working with them
			Understand the vulnerabilities and oppressive practices faced by the Scheduled Caste and Scheduled Tribe communities, policies and welfare programmes and the approaches and strategies of social work with them
		SOW E 1 03 : Therapeutic Approaches in Medical and Psychiatric settings Elective 1 - Medical and Psychiatric Social work	Understand the concept of psychotherapy and different types of therapies
			Understand Cognitive and behaviour therapies and techniques
			Understandthe Humanistic and existential therapies and techniques of practice
			UnderstandFamily Therapy and techniques of practice used in family therapy
			Understand Other psychosocial therapies like
			Occupational therapy, Play therapy, Crisis intervention, Therapeutic community, Art therapy, Music therapy, Dance movement therapy, Laughter therapy, Neuro linguistic programming. And Solution focused therapy,
		SOW4 E 2 03: Environmental Studies and Disaster Management Elective 2 - Rural and Urban Community Development	Understand the basic concepts in environment studies.

			Understand the policies and approaches in the management of natural resources
			Learn the problems in the management of natural resources and efforts in sustainable natural resource management
			Understand the environment problems and impact of development initiatives.
			Understand the national and international measures to deal with environment issues
			Understand the process of disaster management
			Practice social work in dealing with environmental problems and in disaster management.
		SOW 4 E1 04 :Social Work Practice with Families Elective 1 - Medical and Psychiatric Social work	Understand conceptual framework related to marriage and family
			Understand characteristics of family life cycle
			Identify models of family dynamics and family assessment
			Understand the process of family social work
			Understand the history, concepts and techniques of family therapy
			Practice family therapy in contexts including Family Counselling Centres, Family Courts, Family welfare Clinics, Adoption and Foster Care Agencies, and Family Violence
		SOW4 E2 04 : Social Work Practice and Gender Elective 2 - Rural and Urban Community Development	Understand concepts and theories related to gender
			Understand the status of women with respect to health, education, political participation, representation in media and law and appreciate the gaps therein

			Understand gender based violence, and measures to combat violence
			Analyse gender issues using gender analysis frame woks
			Understand the theoretical frame work for feminist social work
			Practice social work with women in different contexts using Gender Aware therapy, Feminist counselling, building collectives, education, advocacy and assertiveness training
		SOW4 C 19 :Concurrent Field work (Core Paper)	Apply social work methods in specialized settings.
			Skill in documentation, dissemination and recording of social work intervention
			Develop innovative models for social work interventions
		SOW4 C 20 :Concurrent Field work (Core Paper)	Apply social work methods in specialized settings
			Develop innovative models for social work interventions
			Develop independent practicing competency to work as professional social worker

OPEN COURSE IN PHYSICAL EDUCATION

PHYSICAL ACTIVITY HEALTH AND WELLNESS

PROGRAM SPECIFIC OUTCOMES

PSO1	Understand Physical Education and basic concept of physical fitness components.
PSO2	Understand the basics of exercise principles.
PSO3	Analyze different postural deformities and measures to correct the deformities
PSO4	Understand lifestyle diseases and its management.

COURSE OUTCOMES

PROGRAMME	PROGRAMME SPECIALIZATION	COURSES	OUTCOME
BA, B Sc, B Com	**Physical Education**	**VPE5D03 Physical Activity Health and Wellness**	To introduce the Fundamental concepts of Physical Education, Health, and Fitness.
			To provide a general understanding of exercise principals, Nutrition and First aid.
			To familiarize the students regarding Yoga, Stress management and the measures to correct postural deformities.
			To create awareness regarding hypo-kinetic diseases and various measures of fitness and health assessment.