



**VIMALA COLLEGE (AUTONOMOUS), THRISSUR**



**POs, PSO and COs**  
**(Academic Year 2019-2020)**



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES& COURSE OUTCOMES

2019-2020

### **Programme Outcome for PG students**

***At the end of the PG programme, students will have (been)***

1. Acquired core knowledge, both enduring and contemporary.
2. Cultivated an aptitude for research and passion for lifelong learning.
3. Sufficiently Informed to respond pragmatically and judiciously to current developments / issues-  
- be it local, regional, national or global.
4. Internalized the ability to source and utilize information.
5. Moulded for the spontaneous expression of creativity to connect, modify, expand and develop.
6. Acquired the expertise to apply knowledge for environmental sustenance.
7. Incorporated disciplinary, interdisciplinary and supra-disciplinary fields of study to understand, analyze and solve problems.
8. Equipped with the competencies to respond to one's calling, be it employment, entrepreneurship, self-engagement, service, or any other.
9. Procured empowerment for self enhancement and betterment of others, for common good and social welfare.
10. Discerned the precepts of professionalism and professional ethics.

### **Programme Outcome for UG students**

***At the end of UG programme, students will have (been)***

1. Acquired good subject knowledge.
2. Cultivated intellectual curiosity and love for learning.
3. Acquired a sound foundation for student progression.
4. Comprehended the nuances of research and research ethics.
5. Obtained fluency in language and ability for effective communication.
6. Obtained problem solving and analytical skills.
7. Explored multidisciplinary domains for proficiency (communication, dependability, team work).



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8. Imbibe sound values and principles.
9. Explored knowledge and learning for environment sustenance.
10. Ability to collaborate for common good and social welfare.

### **Additional Institutional outcomes**

#### ***At the end of the programme a Vimalite will have***

- Comprehended the rights and responsibilities of good citizenship
- Acquired life skills, values and competence to meet the demands and challenges of everyday life.
- Demonstrated the employment of various literacies like textual, literary, scientific, artistic, numerical, technological.
- Explored the path of self-discovery for the expression of one's own talents, passion and dedication
- Demonstrated logical decision making and prudent reasoning when challenged with ethical problems

### **MA ENGLISH**

#### **PROGRAMME SPECIFIC OUTCOMES**

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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

COURSES	OUTCOME
<b>ENG1C01</b> 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.
<b>ENG1C02</b> 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
<b>ENG1C03</b> 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.
<b>ENG1C04</b> Indian Literature In English	Understand the history and evolution of Indian English Literature



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	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
<b>ENG2CO5</b> 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
<b>ENG2CO6</b> 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.
<b>ENG2CO7</b> 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 different literature an overview genre of the American
<b>ENG2CO8</b> Postcolonial Writings	Analyse the history, geography, language and culture that shaped the postcolonial texts



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	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
<b>VPEG3C06</b> 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 pronunciation and perceive different types of Grammar
<b>ELECTIVE 1</b> 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
<b>ELECTIVE 2</b> Film Studies	Classify major movements of world cinema
	Distinguish major film genres
	Analyse selected film texts



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	Appraise case studies of classic cinema
	Appraise case studies of classic cinema
<b>VPEG4CO7</b> 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
<b>ELECTIVE 1</b> 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.
<b>ELECTIVE 2</b> 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



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	Evaluate the religious and cultural aspects prominent in the American writings
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### **B A ENGLISH**

#### **PROGRAMME SPECIFIC OUTCOMES**

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

#### **COURSE OUTCOMES**

<b>COURSES</b>	<b>OUTCOME</b>
<b>ENG1B01</b> 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
<b>ENG2B02</b> 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





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<b>VEG3B03</b> Reading Drama	Develop taste with theoretical basis For drama
	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
<b>VEG3B04</b> 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- historical 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
<b>VEG4B05</b> 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



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	Comprehend the inter relationship between language, culture and identity
	Examine social realities through discourses and ideologies
<b>VEG5B07</b> 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
<b>VEG5B08</b> 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.
<b>VEG5B09</b> 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.
<b>VEG5B10</b> 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
<b>VEG5DO1</b> Film Studies	Classify major movements of world cinema



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	Distinguish major film genres
	Analyse selected film texts
	Appraise case studies of classic cinema
<b>VEG6B12</b> 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.
<b>VEG6B13</b> 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.
<b>VEG6B14</b> 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
<b>VEG6B15</b> 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
<b>VEG6E01</b> World	Introduce literatures other than English literature to the students



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Classics in Translation	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 FUNCTIONAL ENGLISH**

#### **PROGRAMME SPECIFIC OUTCOMES**

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

### **COURSE OUTCOMES**

<b>COURSES</b>	<b>OUTCOME</b>
<b>FEN1B01</b> 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 develop 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
<b>FEN2B02</b> Grammar And Usage	Explain the basic concepts of grammar
	Identify the different parts of speech
	Construct different types of sentences



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	Understand the relevance of mechanics and stylistic conventions in academic writing
	Make use of MLA style sheet for writing and documentation in academic papers
<b>VFE3B03</b> English And	Understand the history and types of computers
Communication Technology	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
<b>VFE3BO4</b> 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.
<b>VFE3CO3</b> 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.



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	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.
	Define language and list all its characteristics.
<b>VFE4B05</b> Introduction To Linguistics	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.
<b>VFE4B06</b> 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
<b>VFE4CO4</b> 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
<b>VFE5B07</b> 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



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<b>VFE5B08</b> 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
<b>VFE5B09</b> 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 theatre and conventions
<b>VFE5B10</b> 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.
<b>VFE6B11</b> 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



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<b>VFE6B12</b> 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
<b>VFE6B13</b> 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.
<b>VFE6B14</b> Introduction To Film Studies	Classify major movements of world cinema
	Distinguish major film genres
	Analyse selected film texts
	Appraise case studies of classic cinema
<b>VFE6B15</b> Elective 1 – Language for Advertising: Theory And Practice	Understand the techniques and
	procedure involved in advertisement production.
	Identify the role of advertising in the marketing fields.
	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.





# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## M.A MALAYALAM

### PROGRAMME SPECIFIC OUTCOMES

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

### COURSE OUTCOMES

<b>COURSES</b>	<b>OUTCOME</b>
<b>MAL1CO1</b> - 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
<b>MAL1CO2</b> Modern Poetry	Analyze and criticize the periods of Malayalam poetry till the modernization.
	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.
<b>MALC03</b> Kerala Region And Culture	Understand Ancient history/culture of Kerala
	Analyze tribal culture
	Analyze the influence of foreign cultures



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	<p>The influence of sangam age</p> <p>Analyze and criticize the period of Dutch, French, Portuguese and English foreign cultures in Kerala</p> <p>Analyze the renaissance in Kerala history</p>
<b>MAL1CO4</b> Malayalam	Understand the origin of Malayalam grammar. Analyze Malayalam
Grammar	<p>Alphabet and understand different opinions of grammaticians.</p> <p>Compare 'Keralapanineeyam' and 'Vyakaranamithram' two works in grammar.</p> <p>Analyze the discussions on 'Keralapanineeyam', book by A.R.Rajarajavarma</p> <p>Compare different opinions Of grammarians about the process of Malayalam grammar</p>
AEC <b>MAL1A01</b> Audit Course/Book Review	<p>Understand the practical knowledge of various language abilities.</p> <p>Analyse the new books in Malayalam language and literature</p> <p>Evaluate the credit of new books and compare with others in the basis of different ideologies</p> <p>Study the creative works in Malayalam language and literature</p> <p>Analyse the reasons behind the New published works in Malayalam literature.</p>
<b>MAL2CO5</b> Modern Malayalam Prose	<p>Understand the transition period of Malayalam prose from ancient stage.</p> <p>Analyze the modernization process under which the prose has to be changed</p> <p>Familiar the different prose texts in the Modern period</p> <p>Criticize the modern Malayalam</p> <p>Understand the cultural background of Malayalam modern poetry.</p>
<b>MAL2CO6</b> History of Language And Planning	<p>Understand the history and development of Malayalam language and literature</p> <p>Understand the different modes of Language planning and modernization</p>



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	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.
<b>MAL2CO7</b> 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
<b>MAL2CO8</b> 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
<b>MAL2A02</b> 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



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	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
<b>MAL3C10</b> 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.
<b>MAL3E</b> Eco Feminist- Dalit Literature	Understand the definitions of feminine, Dalit and ecology in the background of literature.
	Analyze the literary works on the basis of feminist, dalit and ecoaesthetic theories.
	Understand the technique language patterns that represent peculiar ideologies.
	Read the literary works on the basis of new critical approaches.
<b>MAL3E</b> Film Studies	Understand The Film As A Medium Of Contemporary Society
	Study The History and Development of Film Art
<b>MAL3E</b>  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
<b>MAL4C15</b> Literary Theories Western	Aware and Analyze The Criticism and Study of Films.
	Co4 Aware How to Create A Short Film-Campus Film-Documentary
	Introduce the western and modern literary theories
<b>MAL4E</b> Folklore	Understand The Folk Tradition, Culture, And History.



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	Examine The Relation andRelation-Morality to Literacy And Literacy to Morality.
	Identify the' TheCollective Identity'.
	Trace The History And
	Development Of Folklore Studies.
	Understand The Origin OfFolkloristic 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

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

COURSES	OUTCOME
<b>MAL1B01</b> Navothana Malayalakavitha	General Awareness aboutModern Malayalam poetry.
	Introduce the history & development of modern Malayalam poetry.
	Understand new narratives ofmodern Malayalam poetry.
	Introduce the new perspectives of modernMalayalam poetry.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>MAL2B02</b> 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
<b>MAL2B03</b> Naveena Malayalakavita	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
<b>MAL3B004</b> 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
<b>MAL4B05</b> 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.
<b>MALB06</b> 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
<b>MAL5B07</b> Malayalam Grammar	Understand The Theories of Malayalam Grammar.



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	Analyze Malayalam Language Usages.
	Create Own Conclusions About
	Malayalam Grammatical Usages
	Compare Different Grammatical Theories with Kerala panineeyam.
<b>MAL5B08</b> 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.
<b>MAL5B09</b> Malayalam Thyavimarsanam	General Awareness About Malayalam Criticism
	Introduce The History Of Malayalam Criticism.
	Understand Different Theories Of Criticism.
	Apply The Theories to The Literary Works.
<b>MAL5B10</b> 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.
<b>MAL5D01</b> Chalachithra Padanam	Understand The Film as A Medium of Contemporary Society
	Study The History And Development Of Film Art
	Aware and Analyze the Criticism and Study Of Films.
	Co4 Aware How to Create A Short Film-Campus Film-Documentary
<b>MAL6B11</b> Linguistics and	Understand The Theories of Linguistics



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History Of Language	Analyze Different Discourse of Malayalam Language.
	Understand The History and Development of Malayalam Language
	Compare Language And Society
<b>MAL6B12</b> Course Title- Gadhyasahith YaM	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.
<b>MAL6B13</b> 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.
<b>MAL6B14</b> 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
<b>MAL6B16</b> Methodology Research	Of
	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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the knowledge levels of Malayalam language literature through different research approaches
<b>MAL6B17</b> Elective Sthreepadana Ngal	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 technique Language patterns that represent peculiar ideologies.
	Read the literacy works on the Basis of new critical approaches.
<b>MAL2[1]CO1,</b> Keralapadan Am- Poorvakalak Eralam, Madhyakalak Eralam.	Understand The Renaissance and Reformation Movements of Kerala
	Analyze The Continuous Developments of Kerala Through Dalit Women Educational and Agricultural Movements
<b>MAL4[3]CO2-</b> Adhiniveshak Alakeralam, - Adhunikaker Alam	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>VMLA01, A02, A03</b> <b>, A04</b> Malayalasahi Thyam 1 2 3 4	General Awareness About Malayalam Literature
	Introduce The Different Literary Forms



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Introduce Malayalam EContent
	Inculcate CreativeSkills

### SANSKRIT UG & PG COMMON & COMPLEMENTARY PROGRAMME

#### PROGRAMME SPECIFIC OUTCOMES (PG)

<b>PSO1</b>	Understand History of Sanskrit Literature
<b>PSO2</b>	Develop The Ability for Translation
<b>PSO3</b>	Cultural Analysis of Indian Society on The Basis of Sanskrit Literature
<b>PSO4</b>	To Develop the Ability for Understand, Analysis and Critical Thinking About Sanskrit Literary Forms.

#### PROGRAMME SPECIFIC OUTCOMES (UG)

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

#### COURSE OUTCOMES

COURSES	OUTCOME
<b>SKT 3E08</b> Basic Sanskrit	To impart general awareness of Sanskrit epic literature to students.
	To enable the student to enjoy and appreciate Katha Literature.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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.
<b>SKT 3A 09 (01)</b> Samskrta sahitya samiksha - 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>SKT 4 (3) C 02</b> Sastra mimamsa-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) Jainism, Buddhism and Carvaka.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 them 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

COURSE	COURSES OUTCOMES
<b>VHD1ACM1 -</b> Prose Forms in Hindi Literature	Develop critical understanding of prose for in Hindi Literature
	Identify the specificities of various types of prose forms
	Prose of eminent authors of different period
	Appraise selected proses
	Understanding origin and development Hindi Poetry
	Introduce the students to the basic elements poetry, including the stylistic and rhetoric devices employed in poetry, and to variogenres of poetry.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Train students in various perspective reading in poetry Subjects like gender, race, cast 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

COURSE	COURSES OUTCOMES
<b>VHD1ACS1-</b> Prose And One Act Plays	Develop critical understanding of different prose forms.
	Acquaint the students with different forms, thoughts and styles used in Hindi prose writing, to make them 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
<b>VHD2ACS2</b> Poetry And Short Stories	Understanding origin and development of Hindi Poetry and short story



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 poetry Subjects like gender, race, caste, ethnicity, religion, region, environment and nation etc. Will be discussed

### DEPARTMENT OF HINDI

#### COURSE OUTCOMES

#### BA/BSc

COURSES	COURSE OUTCOMES
<b>VHD1A01-</b> 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
<b>VHD2A02-</b> Grammar Correspondence and Translation	Make students able to use Hindilanguage correctly and efficiently
	Make them understand various types of letters both personal and business



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Facilitate the use of translation as a tool for communication between different languages
	Evaluate the possibilities of translation
<b>VHD3A03-</b> 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
<b>VHD4A04-</b> 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

<b>PSO1</b>	Understand Partial and General Equilibrium theories in Microeconomics and Macroeconomics
<b>PSO2</b>	Understand Indian Economic Growth and Development in Research perspective
<b>PSO3</b>	Understand Banking, trade and financial systems of Indian and international economy



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PSO4</b>	Analyse research problems using econometric tools
<b>PSO5</b>	To equip the statistical methods and tools that is essential for the empirical and analytical study of economics.

### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSE OUTCOMES</b>
<b>ECO1C01</b> 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 production function
<b>ECO1C02</b> 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 macroeconomic policies
	Discuss the implications of Fiscal and Monetary policy instruments
<b>ECO1C03</b> Indian Economy: Problems and Policies	Examine the contribution Different sectors to GDP employment





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO1C04</b> Quantitative Methods For Economic Analysis	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 its application in Economics
	Describe Rules of Integration and its Economic Application such as Producer's and Consumer's surplus
	Explain Differential and Difference Equation
	Discuss Financial Mathematics
<b>ECO2C05</b> - 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
<b>ECO22C06</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO2C07</b> Public Finance: Theory and Practice	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
<b>ECO2C08</b> Quantitative Methods for Economic Analysis II	Understand the concepts of random experiment and definitions of Probability
	Explain Discrete and Continuous random variables and its probability distribution
	Understand the concept of bivariate random variables and its Probability distribution function
	Discuss Discrete and Continuous Probability 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO3C09</b> 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
<b>ECO3 C10</b> 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
<b>ECO3C11-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Forecasting using estimated models
	Policy analysis using econometric models
<b>ECO3 E01</b> Banking: Theory and Practice	Knowledge about the structure and functions of central banks
	Theoretical and practical knowledge about policies of Reserve Bank of India
	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
<b>ECO4C12</b> - 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
<b>ECO4C13</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO4E01</b> 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
<b>ECO4E10</b> 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
<b>ECO4 P14- Project</b>	Understand different research methods and methodology



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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**

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

<b>COURSE</b>	<b>COURSES OUTCOMES</b>
<b>ECO1 B01</b> 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
<b>ECO1 B02</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ECO3 B03</b> 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.
<b>ECO3 B04</b> Microeconomics II	To understand the basic market structure and perfect competition
	To comprehend the monopoly market
	To examine the pricing and employment of inputs
<b>ECO4B05</b> Quantitative 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.
<b>ECO4B06</b> 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
<b>ECO5B07</b> Fiscal Economics	Understand the meaning and scope of public finance
	Knowing the type of goods specially public goods, private goods, mixed and merit goods



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Discuss the meaning and importance of public expenditures and related theories
	Understand the concept of Project evaluation and CostBenefit Analysis
	Identify the sources of sources of publicrevenue –Impacts, Incidence and Shifting of taxation
	Discuss the concept of public debtand debt management
	Examine the budget and types ofbudgets
	Understand the functioning of the federal finance, Examine the functions of Finance Commission
	Understand the functioning of thelocal finance
<b>ECO5B08</b> India's economic development	Understand the developmentexperience in India during pre and postindependent period
	Analyse the economic reforms since 1991
	Explain the sectoral contributionof Agriculture and Industry
	Explain the trend in agricultureand industrial sector in India
	What are the challenges facing Indian Economy and the remedial measures to overcome the challenges.
	Examine the Kerala Model ofDevelopment
<b>ECO5B09</b> Economics of Capital Market	An understanding about the Characteristics of differentfinancial assets
	Knowledge about the basic concepts, structure and functions of capital market
	An understanding about the capital market instruments andinstitutions
	Understand the role of SEBI incapital market





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO5B10</b> 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 nonlinear 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
<b>ECO5 D01</b> 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
<b>ECO6B11</b> Financial Economics	Familiarize the concepts of financial economics, time value of money and investment criteria
	Identify and analyse different types of risks and return



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ECO6B12</b> 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
<b>ECO6 B13</b> 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 Classical 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
<b>ECO6B14</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand facts about economic growth
	Understand concepts of poverty & inequality and its measurements
	Examine the concepts of sustainable development, models and issues of environment
<b>ECO6B15</b> 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
<b>ECO6B17</b> Behavioural Economics	An awareness about Behavioural Economics
	Examine the Choice Under Risk & Uncertainty
	Gain knowledge about the Inter-temporal Choice
	Familiarize the concept of Behavioural Game Theory

### MA SOCIOLOGY

#### PROGRAMME SPECIFIC OUTCOMES

<b>PSO1</b>	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.
<b>PSO2</b>	Learn about current theoretical tools and develop skills in research and data analysis, which can be used in a range of professional fields.
<b>PSO3</b>	The sociology MA program provides a solid foundation in community studies, family studies, gender, environment, demography, development, kinship, social inequality etc.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PSO4</b>	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
<b>PSO5</b>	The programme is also an excellent basis for pursuing further research in sociology or more specialised or applied subjects.

### **COURSE OUTCOMES**

<b>COURSE</b>	<b>COURSES OUTCOMES</b>
<b>SOCIC01</b> 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.
<b>SOCICO2</b> 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.
<b>SOCICO3</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	society with possible solutions reflecting on Nehru's Constitutional view as well as Nationalistic view of Gandhi, Tagore which is the basis of Indian Society.
<b>SOCI C04</b> Rural And Tribal Societies 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.
<b>SO2 C 05</b> 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.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>S0C2C06</b>  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.
<b>SOC2 C07</b>  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.
<b>SO2 CO8</b>  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.
<b>VPSO3C09</b>  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.
<b>VPS03C10</b>  Sociology of Development: Themes and	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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Perspectives	<p>well as resistant movements against the negative impact of development.</p> <p>Critically understand Kerala Model of Development.</p>
	<p>Direct exposure to the activities of local self-administration by field visit.</p>
<b>VPSO3E01</b> Environmental Sociology	<p>Get familiarized with the major concepts related to environment.</p> <p>Understanding major theoretical perspectives related to Environmental Sociology.</p>
	<p>Analyse the major environmental problems.</p> <p>Trace out the trajectory of environmentalism.</p>
<b>VPSO3E02</b> Project Planning and Preparation	<p>Get familiarized with the basic steps involved in project planning and preparation.</p>
	<p>Get an overview for project implementation and planning.</p> <p>Bring out the ability among students for preparing project report and evaluation. Ability to prepare and present project report.</p>



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VPSO4C11</b> Current Debates in Social Theory	Understand the current debates in social theory Analyse the theories on culture and society
	Understand late modernity theories in Sociology
<b>VPSO4C12</b> 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.
<b>VPSO4E01</b> 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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VPSO4E09</b> Course Title Guidance And Counselling	Understand basic ideas of guidance and counselling Analyse the process and techniques of counselling Understand the areas of counselling Understand the modern trends in counselling
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### BA SOCIOLOGY

#### PROGRAMME SPECIFIC OUTCOMES

<b>PSO1</b>	Understand the relationship between social structure, identities and inequalities.
<b>PSO2</b>	Explore social problems in local, national and global contexts by using research methods of sociology.
<b>PSO3</b>	Creating generalizations or descriptions about the changing social world.

### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>SGY1B01:</b> 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
<b>SGY2B02:</b> 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
<b>SGY1 (2) C01:</b> Principles Of Sociology	Understanding that society can be studied scientifically Recognize the contribution of social sciences in understanding contemporary social realities Develop sociological perspective on current issues



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>SGY1 (2) C01:</b> Principles Of Sociology	Understanding that society can be studied scientifically Recognize the contribution of social sciences in understanding contemporary social realities Develop sociological perspective on current issues
<b>VSO2B03</b> 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
<b>VSO2 B04</b> 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.
<b>VSO2 B04</b> 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.
<b>VSO4B05</b> 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
<b>VSO5 B07</b> Indian Society and Social Change	Understand the sociological perspectives on the study of the dynamics of Indian Society Analyse various institutions in Indian society and its major changes
<b>VSO5B08</b> 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
<b>VSO5B09</b> Social Anthropology	Understand the basic concepts in social anthropology Analyze the anthropological studies on culture and society, tribes in India etc



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VSO5B10</b> Research Methods And Statistics	Understand the basics in social statistics Understand the sampling techniques, data management and presentation Enable to write report
<b>VSO5D01</b> Life Skill Development	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
<b>VSO6B11</b> 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.
<b>VSO6B12</b> 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.
<b>VSO6B13</b> Women And Society	Understand the importance of women studies Analyze gender differences and various gender issues
<b>VSO6 B14</b> Population And Society	Understand the theoretical explanation of population studies and related concepts Analyze various population theories Understand various changes in population in society
<b>VSO6E01</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

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

#### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>HIS1C01</b> – 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 - Recognize 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
<b>HIS2C01</b> – 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	CO6 - Understand the issue of communalism in India after independence.
<b>HIS1C03</b> Social and 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
<b>HIS2C03</b> – 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)

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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

COURSES	COURSES OUTCOMES
<b>VPS3C03-</b> 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
<b>VPS4C04</b> 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 73 <sup>rd</sup> and 74 <sup>th</sup> Amendment
	Determine the merits and demerits of Reservation policy in India
	Investigate the challenges to Indian Democracy- Communalism, Religious fundamentalism, Criminalization of politics



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

List the composition and functions of  
Finance Commission, NITIAYOG,  
National Development Council

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

<b>PSO1</b>	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
<b>PSO2</b>	Understand the structure and functions of different organs of governments in India; legislature, executive and judiciary,
<b>PSO3</b>	Understand the main features of Indian federal system, center state relations and three tier system of decentralization, procedure of amendment
<b>PSO4</b>	Understand about party system, regionalism, challenges to Indian Democracy

#### Course Outcomes

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>(ICP1 (2) CO1)</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

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
<b>VPS4 (3) CO2)</b> 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 AYOOG, GST Council National Development Council
	Challenges to Indian federalism
	Explain the significance of the 73 <sup>rd</sup> and 74 <sup>th</sup> 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)

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





# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>VPY3C03</b> Abnormal psychology	Understand the meaning and classification of mental disorders
(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
<b>VPY4C04</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 (2019 ADMISSION)**

#### **PROGRAMME SPECIFIC OUTCOMES**

<b>PSO1</b>	Understand the nature of basic concepts and theories of Psychological Processes
<b>PSO2</b>	Understand the nature of abnormal behavior and social behavior

#### **COURSE OUTCOMES**

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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

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

#### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>MTH1C01 – Algebra- I</b>	Understand the concept of Groups
	Apply group action on a set



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the basics of Rings and Fields
<b>MTH1C02 –</b> Linear Algebra	Understand vector spaces and linear transformations
	Application of inner product spaces
<b>MTH1C03 -</b> Real Analysis - I	Understand the definition and basic concept Topology
	Analyse limits and continuity of Real numbers
	Apply methods of differentiation
	Analyse Sequences and Series of Functions - Discussion of Main problem, Uniform convergence, Uniform convergence and continuity, The Stone – Weierstrass Theorem.
<b>MTH1C04 –</b> Number Theory	Analyse and understand the Arithmetical Functions and Dirichlet Multiplication
	Understand the basic concepts and levels of Congruences, Quadratic Residues and Quadratic Reciprocity Law.
	Study of Cryptography, Public Key and apply in real life problems.
<b>MTH1C05</b> -Discrete Mathematics	Study of Order Relations, Lattices; Boolean Algebra – Definition and Properties, Boolean Functions.
	Understand Graph
	Design grammars and automata for different language.
<b>MTH2C06 –</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>MTH2C07</b> - 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
<b>MTH2C08</b> - Topology	Understand Topological Spaces
	Understand Continuous Functions Among Topological Spaces and Quotient Spaces
	Understand The Concept Of Separation Axioms
	Understand Urysohn Characterisation Of Normality
<b>MTH2C09</b> – ODE And Calculus Of Variations	Interpret and analyse Power Series Solutions and Special functions
	Understand Systems of First Order Equations; Nonlinear Equations
	Understand and Analyse the Existence and Uniqueness of Solutions, The Calculus of Variations.
<b>MTH2C10</b> - 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Apply Kuhn-Tucker theory to solve convex and nonlinear programming problems
<b>MTH3C11-</b> 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
<b>MTH3C12 –</b> 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, Powerseries Expansions, Maximum principle.
<b>MTH3C13</b> Functional Analysis	Understand Metric spaces and Continuous Functions
	Analyse Inner product spaces
	Analyse Banach spaces
<b>MTH3C14 –</b> PDE And Integral Equations	Understand and analyse First Order PDE
	Analyse and solving Second Order PDE
	Study of Integral Equations.
<b>MTH3E03-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>MTH4C15-</b> 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.
<b>MTH4E06-</b> 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.
<b>MT4E09</b> 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
<b>MTH4C11-</b> Graph Theory	Know some important classes of graph theoretic problems,
	Identify induced subgraph, clique, matchings
	Use graph theory as a modeling tool

### **B.Sc. MATHEMATICS**

#### **PROGRAMME SPECIFIC OUTCOMES**

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



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSE OUTCOMES
<b>MTS1B01</b> – Basic Logic and Number Theory	Proves results involving divisibility, greatest common divisor, least common multiple and a few applications.
	Understands the theory and method of solutions of LDE.
	Understands the theory of congruence and a few applications.
	Solves linear congruent equations.
	Learns three classical theorems viz. Wilson's theorem, Fermat's little theorem and Euler's theorem and a few important consequences
<b>MTS2B02</b> – Calculus of Single variable - 1	Introduces the fundamental ideas of limit, continuity and differentiability
	Understands basic Theorems of <i>differential calculus</i>
	Applies of differential calculus in real life situations
	Understands integral calculus
<b>MTS3B03</b> –	Understands Exponential and Logarithmic functions
Calculus of Single variable - 2	Understands improper integrals their convergence and evaluation.
	Studies of convergence of a <i>series</i> , 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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Applies <i>vectors</i> 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 valued form.
<b>MTS4B04</b> – 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 the system.
	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 <i>spectral decomposition</i> 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 i.e., by choosing an <i>orthogonal matrix</i> 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, modeling etc..
<b>MTS5 B05</b> – Theory Of Equations and Abstract Algebra	Derives formulae for the solutions of third- and fourth-degree polynomial equations given by Cardan and Ferrari



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Learns the relationship between the roots and coefficients of an $n$ th 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 $n$ th 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
<b>MTS5B06 - Basic Analysis</b>	Learns and deduces rigorously many properties of real number system by assuming a few fundamental facts about it as axioms.
	Understands sequences, 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.
<b>MTS5B07-</b>	Understands several methods such as



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Numerical Analysis	bisection method, fixed point iteration method, regula falsi 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.
<b>MTS5 B08 -</b> 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
<b>MTS5B09 -</b> Introduction to Geometry	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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Realizes 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's theorem.
	Applies cross ratio in the context of aerial photography
<b>MTS6 B10 - Real Analysis</b>	States the definition of continuous functions, formulate sequential criteria for continuity and proves or disproves continuity of functions using this criterion.
	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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>MTS6 B11-</b> 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.
<b>MTS6 B12</b> - 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.
<b>MTS6 B13-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>MTS6 B14 (E01)-</b> 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
<b>MTS5 D01-</b> Applied Calculus	Understands the fundamental ideas of limit, continuity and differentiability
	Understands basic Theorems of <i>differential calculus</i>
	Applies differential calculus in real life situations
	Understands integral calculus
	Applies Integrals to Business Economics, Life and Social Sciences
<b>MTS1C01-</b> 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.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Applies integral calculus in finding areas, surface areas, volume of solids.
<b>MTS2C02- Mathematics - 2</b>	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 of improper integrals, idea of convergence, and Taylor's formula of series
	Understands the concepts of vector space and examples of vector space.
	Applies the concepts of eigen values and eigen vectors in diagonalisation
<b>MTS3 Mathematics - 3 CO3-</b>	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
<b>MTS4 CO4- Mathematics - 4</b>	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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Understand the methods of solving partial differential equations.

### B Sc STATISTICS

#### PROGRAMME SPECIFIC OUTCOMES

<b>PSO1</b>	Demonstrate the ability to apply fundamental concepts in exploratory data analysis.
<b>PSO2</b>	Design studies for obtaining data whilst avoiding common design flaws that incur bias, inefficiency and confounding.
<b>PSO3</b>	Demonstrate an understanding of the basic concepts of probability and random variables.
<b>PSO4</b>	Understand the concept of the sampling distribution of a statistic, and in particular describe the behaviour of the sample mean.
<b>PSO5</b>	Apply inferential methods relating to the means of Normal distributions.

#### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>VST1B01-</b> Basic Statistics and Probability	To understand various approaches to probability & compute probabilities.
<b>VST2B02-</b> Bivariate Random Variable and Probability Distributions	To understand the applications of theoretical discrete distributions
<b>VST3B03-</b> Statistical Estimation	To equip the students with the theory essential for estimation of unknown parameters
<b>VST4B04-</b> Testing of Hypothesis	Identify a suitable test of significance to test a given hypothesis -large sample test/small sample test for testing different parameters





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VST5B05-</b> Mathematical Methods in Statistics	To introduce the mathematical concepts required to learn theoretical statistics.
<b>VST5B06-</b> Statistical Computing	To gain scientific and experimental skills of the students
<b>VST5B07-</b> Sample surveys	To equip students with Sampling Techniques used in conducting sample surveys
<b>VST5B08-</b> Operations Research and Statistical Quality Control	To provide an insight into quality assessment techniques
<b>VST6B09-</b> Time Series and Index Numbers	To expose statistics students to the areas of time series and index numbers
<b>VST6B10-</b> Design of Experiments	To discuss the analysis of data relating to agriculture, biological sciences and industry
<b>VST6B11-</b> Population Studies and Actuarial Science	To impart basic concepts in population studies, actuarial science and vital statistics
<b>VST6B12-</b> Linear Regression Analysis	Describe the concepts of correlation & regression and perform regression analysis for the given data
<b>VST6E01-</b> Reliability Theory- Elective Paper	Compute reliability and life time or survival time of different real-life systems
<b>ST5D02-</b> Economic Statistics- open course	To expose statistics students to the areas of time series and index numbers



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VST1C01-</b> Basic Statistics and Probability	To understand various approaches to probability & compute descriptive statistics of data
<b>VST2C02-</b> Probability Distributions	To understand the applications of theoretical discrete & continuous distributions
<b>VST3C03-</b> Statistical Inference	To equip the students with the theory essential for estimation of unknown parameters and testing of hypothesis
<b>VST4C04-</b> Applied Statistics	To expose students to the areas of timeseries and index numbers, Statistical Quality control and Analysis of Variance
<b>VME1C01-</b> Mathematical Economics	To understand the students to identify statistical tools to solve economic problems
<b>VME2C02-</b> Mathematical Economics	To expose statistical tools to students to solve economic problems
<b>VME3C03-</b> Mathematical Economics	To equip the students to identify statistical tools to solve economic problems
<b>VME4C04-</b> Mathematical Economics	To equip the students to identify statistical tools to solve economic problems

### M.Sc. PHYSICS

#### PROGRAMME SPECIFIC OUTCOMES

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



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>PHY1C01</b> 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
<b>PHY1C02</b> 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
<b>PHY1C03</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>PHY1C04</b> 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
<b>PHY2C05</b> Quantum Mechanics-I	Understand the basic concepts of linear vector spaces, operators and matrix representation of quantum mechanics and uncertainty 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY2C06</b> 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 in physics
<b>PHY2C07</b> 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
	Understand the basics of Python Language
<b>PHY2C08</b> Computational	Understand the methods of creating arrays and matrices using Python to perform their basic operations



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Physics	Understand the methods of plotting using matplotlib functions in Python
	Understand the various numerical methods and computational formulism involved in solving mathematical problems
	Solve familiar problems in physics using numerical methods in Python Language.
<b>PHY3C09</b> 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.
<b>PHY3C10</b> Nuclear and Particle Physics	Understand the basic static nuclear properties and their measurement techniques
	Understand the characteristics from deuteron theory and theory of 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>PHY3C11</b> 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
<b>PHY3E05</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY4C12</b> 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
<b>PHY4E11</b> 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 Characterization





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY4E18</b> 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 Fraunhofer diffraction using Fresnel Kirchhoff formula
	Understand the basic theory of multilayer films
	Represent optical phenomena in matrices using Jones's calculus
	Understand the use of Fourier transform techniques in diffraction.

### B.Sc. PHYSICS

#### PROGRAMME SPECIFIC OUTCOMES

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



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>PHY1B01:</b> Methodology of Science and Basic Mechanics	Understand the features, methods and limitations of science
	Understand and apply the basic concepts of Newtonian Mechanics to physical systems
	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>PHY2B02:</b> Mechanics	Understand the features of non-inertial systems and fictitious forces
	Understand and analyze the features of central forces with respect to planetary motion
	Understand the basic ideas of harmonic oscillations
	Understand and analyze the basic concepts of wave motion
<b>PHY3B03:</b> 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>PHY4B04:</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand and apply electrical network theorems
<b>PHY5B06:</b> 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
<b>PHY5B07:</b> 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
<b>PHY5B08:</b> 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 basic ideas of polarization of light
	Describe the basic principles of holography and fibre optics
<b>PHY5B09:</b> 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
	Understand the zero and first laws of thermodynamics



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY6B10:</b> 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
<b>PHY6B11:</b> 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 basic ideas of microwave and infra-red spectroscopy
	Understand the fundamental ideas of photonics
<b>PHY6B12:</b> 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
<b>PHY6B13:</b> 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
	Understand the basic principles of biophysics



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY6B14(E</b> L1): Biomedical Physics	Understand the fundamentals of medical instrumentation
	Understand the principles of ultrasound and x-ray imaging
	Understand the basic principles of NMR
<b>PHY6B14(EL</b> 2): Nanoscience and	Understand the elementary concepts of nanoscience
	Understand the electrical transport mechanisms in nanostructures
Technology	Understand the applications of quantum mechanics in nanoscience
	Understand the fabrication and characterization techniques of nanomaterials
	Enumerate the different applications of nanotechnology
<b>PHY6B14(EL</b> 3): Materials Science	Understand the basic ideas of bonding in materials
	Describe crystalline and non-crystalline materials
	Understand the types of imperfections and diffusion mechanisms in solids
	Describe the different properties of ceramics and polymers
	Describe the different types of material analysis techniques
<b>PHY4B05:</b> 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
	Apply and illustrate the concepts of properties of matter through experiments



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PHY6B15:</b> Practical II	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>PHY6B16:</b> 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
Course: <b>PHY6B17(P)</b> – 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>PHY6B17(R)</b> ): 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>PHY5D01(1)</b> : Non-Conventional Energy	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 their merits and demerits



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Sources	Understand the basic ideas of oceans and chemical energy resources and recognize their merits and demerits
<b>PHY5D01(2)</b> : 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
<b>PHY5D01(3)</b> ): 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>PHY1C01:</b> 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>PHY2C02:</b> 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>PHY3C03:</b> Mechanics, Relativity, Wa	Understand the basic ideas of frames of reference and the principles of conservation of energy and momentum
	Understand the concepts of relativity



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

ves and Oscillations	Understand the basic ideas of oscillations and waves
	Understand the basic ideas of modern physics
<b>PHY4C04:</b> 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>PHY4C05:</b> 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

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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>CHE1C01-</b> 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
<b>CHE1C02-</b> Elementary Inorganic	Acquire proficiency in nano chemistry and nanomaterials



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Chemistry	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
<b>CHE1C03-</b> Structure and Reactivity of Organic Compounds	Understand about hydrogen bonding and its effect on organic compounds
	Construct MOs 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
<b>CHE1C04-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>CHE2C05-</b> 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 orthogonality theorem
	Construction of character tables of point groups
<b>CHE2C06-</b> Coordination Chemistry	Understand the basic factors that affect the stability of coordination compounds.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>CHE2C07-</b> 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.
	Summarize the principles and applications of photochemicals in organic chemistry
	Compare and classify natural products
<b>CHE2C08-</b> Electrochemistry, Solid State Chemistry and Statistical Thermodynamics	Describe Debye-Huckel equation – limiting and extended forms.
	Study the efficiency of electrochemical cells with heat engines.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>CHE3C09-</b> 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
<b>CHE3C10-</b> Organometallic and Bioinorganic Chemistry	Evaluate 18 and 16 electron rules 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

		Analyse metal-metal bond and metal clusters
		Describe oxygen transport by heme proteins
		Summaries metallo enzymes and electron carrier metallo proteins
<b>CHE3C11-</b> Reagents Transformations Organic Chemistry	& in	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
<b>CHE3E01-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>CHE4C12-</b> Instrumental Methods of Analysis	Acquire proficiency in statistical analysis and error estimation
	Analyses how health, disease and modern medicine is all rooted in biological chemistry
	Explain the principles of gravimetric inorganic precipitating agent like $\text{NH}_3$ , $\text{H}_2\text{S}$ , $(\text{NH}_4)_2\text{MoO}_4$ and $\text{NH}_4\text{SCN}$
	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, DSC and their instrumentation
	Describe amperometry, coulometry, chronopotentiometry, anodic stripping voltammetry
<b>CHE4E05-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>CHE4E06-</b> 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
	Summarise specialty polymers

### B.Sc CHEMISTRY

#### PROGRAMME SPECIFIC OUTCOMES

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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>CHE1B01</b> Theoretical and Inorganic Chemistry-I	To apply the methods of a research project.
	To understand the principles behind volumetry.
	To analyse the characteristics of different elements.
	To distinguish between different acid base concepts.
	To analyse the stability of different nuclei.
<b>CHE2B02</b> Theoretical and Inorganic Chemistry-II	To understand the importance and the impact of quantum revolution in science
	To understand and apply the concept that the wave functions of hydrogen atom are nothing but a to microbials.
	To understand that chemical bonding is the mixing of wave functions of the two combining atoms
	To understand the concept of hybridization as linear combination of orbital soft hematoma.
	To inculcate anatomic/molecular level philosophy in the mind.
<b>CHE3B03</b> Physical Chemistry	To understand the properties of gaseous state and how it links to thermodynamic systems.
	To understand the concepts of thermodynamics and its relation to statistical thermodynamics.
	To apply symmetry operations to categorized different molecules.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>CHE4B04</b> Organic Chemistry	To apply the concept of stereo chemistry to different compounds.
	To understand the basic concepts of reaction mechanism.
	To analyse the mechanism of a chemical reaction.
	To analyse the stability of different aromatic systems.
<b>CHE5B06</b> Inorganic Chemistry III	To understand the principles behind qualitative and quantitative analysis.
	To understand basic processes of metalurgy and to analyse the merits of different alloys.
	To understand the applications of different inorganic polymers.
	To analyse different polluting agents.
	To apply the principles of solid waste management.
<b>CHE5B07</b> Inorganic Chemistry II	To understand the difference between alcohols and phenols.
	To understand the importance of ethers and epoxides.
	To apply organometallic compounds in functional groups. Preparation of different
	To apply different reagents for the inter conversion of aldehydes, carboxylic acids and acid derivatives.
	To apply active methylene compounds inorganic preparations.
<b>CHE5B08</b> Physical Chemistry II	To apply the concept of kinetics, catalysis and photochemistry to various chemical and physical processes.
	To characterize different molecules using spectral methods.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	To understand various phase transitions and its applications.
<b>CHE5D02</b>	Explain the functions of biomolecules, vitamins, enzymes, hormones and nucleic acid.
	Describe food additives and food habits.
	Explain the uses of pesticides and fertilizers and their impacts on the environment
	Understand advantages and disadvantages of cleansing agents and cosmetics.
	Recognize the common classes of drugs in pharmaceutical industry and their application.
	Understand the basic concepts and processes in petroleum industry
<b>CHE6B09</b> Inorganic Chemistry IV	To understand the principles behind different instrumental methods.
	To distinguish between lanthanides and actinides.
	To appreciate the importance of CFT.
	To understand the importance of metals in living systems.
	To distinguish geometries of coordination compounds.
<b>CHE6B10</b> Organic Chemistry III	To elucidate the structure of simple organic compounds using spectral techniques.
	To understand the basic structure and tests for carbohydrates.
	To understand the basic components and importance of DNA.
	To understand the basic structure and applications of alkaloids and terpenes.
	To distinguish different pericyclic reactions.
<b>CHE6B11</b> Physical Chemistry III	To understand the basic concepts of electrochemistry.
	To understand the importance of colligative properties.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	To relate the properties of materials/solids to the geometrical properties and chemical compositions.
<b>CHE6B12</b> Advanced and Applied Chemistry	To understand the importance of nanomaterials.
	To appreciate the importance of green approach in chemistry.
	To understand the uses and importance of computational calculations in molecular design.
	To understand the role of chemistry in human happiness index and life expectancy.
<b>CHE6B13(E1)</b> Industrial Chemistry	To understand the importance of petrochemicals.
	To appreciate the importance and to familiarize the opportunities of pharmaceutical, leather and sugar industries.
	To analyse the role of catalysts in industrial processes.
<b>CHE6B13(E2)</b> Polymer Chemistry	To understand various classification of polymers and types of polymerization methods.
	To understand the important characteristics of polymers such as average molecular weight, glass transition temperature, viscoelasticity and degradation.
	To appreciate the importance of processing techniques.
	To characterize different commercial polymers and to understand the significance of recycling.
<b>CHE1C01</b> General Chemistry	To understand and to apply the theories of quantitative and qualitative analysis.
	To understand the theories of chemical bonding.
	To appreciate the uses of radioactive isotopes.
	To understand the importance of metals in biological systems.
<b>CHE2C02</b> Physical Chemistry	To understand the importance of free energy in defining spontaneity.
	To realise the theories of different states of matter and their implication.
	To understand the basic principles of electrochemistry.
<b>CHE3C03</b> Organic Chemistry	To understand the basic concepts involved in reaction intermediates.
	To realise the importance of optical activity and chirality.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	To appreciate the importance of functional groups and aromatic stability.
	To understand the basic structure and importance of carbohydrates, nucleic acids, alka
	loids and terpenes.
<b>CHE4C04</b> Physical and Applied Chemistry	To understand the basic concepts behind colloidal state and nano chemistry.
	To understand the importance of green chemistry and pollution prevention.
	To appreciate the importance of different separation methods and spectral techniques.
	To understand the extent of chemistry in daily life.

### M.SC BOTANY

#### PROGRAMME SPECIFIC OUTCOMES

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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>BOT01CT01</b> Phycology, Bryology, Pteridology and Gymnosperms	The identification of native species of Algae, Bryophytes, Pteridophytes and Gymnosperms
<b>BOT01CT02</b> Mycology, Lichenology, Microbiology and Plant pathology	Identification of pathogens causing plant diseases
<b>BOT01CT03</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>BOT02CT06</b> 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.
<b>BOT02CT07</b> 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
<b>BOT02CT08</b> 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
<b>VPBO3C07</b> 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
<b>VPBO3C08-</b> Angiosperm morphology, and Plant resources Taxonomy	Identify and classify plants based on taxonomic disciplines.
	Develop the skill imaging of plants.
	Realize importance of field study
	To understand the basic principles of tissue culture



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VPBO3C09</b> Biotechnology and Bioinformatics	To know more about biological databases and tools used for protein structure prediction.
<b>VPBO4E01</b> 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
<b>VPBO4E02</b> 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
<b>VPBO4E03</b> 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

<b>PSO1</b>	Understand scope and importance of Botany in every field especially in dealing with societal and environmental issues, agriculture, ethics and healthcare.
<b>PSO2</b>	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 conservation strategies.
<b>PSO3</b>	Develop scientific temper and undertake scientific projects.

*Academic Year 2019-2020*





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>PSO4</b>	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 daily life.
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### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>BOT1B01T</b> Angiosperm Anatomy, Reprod. Botany & Palynology	Demonstrate the ability to differentiate plant organs by observing anatomical features.
	Understand the non-living inclusions of plants and their significance.
	Differentiate tissues and Their functions.
	Illustrate primary and secondary (normal and anomalous) structures of plant organs
	Explain various developmental details of angiosperms. 6. Realize the significance and applications of palynology.
<b>BOT1B02T</b> 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.
<b>VBO3B03</b>	Understand basics of microbial life and their economic importance.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Microbiology, Mycology, Lichenology and Plant Pathology	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
<b>VBO4B04</b> Phycology, Mycology and Pteridology	Appreciate the diversity and evolutionary significance of lower plant groups.
	Classify algae, bryophytes and pteridophytes.
	Understand the economic and ecological importance of lower plant groups.
<b>VBO5B05</b> Gymnosperms, Palaeobotany, Phytogeography and Evolution	Understand the role of gymnosperms as a connecting link between pteridophytes and angiosperms
	Appreciate the process of organic evolution.
	Realize the importance of fossil study.
	Understand the climatic conditions of the past and realize the changes happened
<b>VBO5B06</b> Angiosperm Morphology & Systematics	Appreciate the diverse morphology of angiosperms.
	Identify and classify plants based on taxonomic principles.
	Make scientific illustrations of vegetative and reproductive structures of plants.
	Develop the skill of scientific imaging of plants.
	Realize the importance of Field study.
	Change their attitude towards over exploitation of rare/endemic plants.



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<b>VBO5B07</b> Embryology, Palynology, Horticulture, Economic Botany and Ethnobotany	Critically evaluate the advantages of tissue culture and horticulture over conventional methods Of propagation.
	Apply various horticultural practices in the field.
	Experiment on the subject and try to become entrepreneurs.
	Identify the economically Important plants
<b>VBO5B08</b> General & Bioinformatics, Introductory Biotechnology and Molecular Biology	Analyze the role of biotechnology in daily life.
	Understand the basic aspects of bioinformatics.
	Explain the concepts in molecular biology.
<b>VBO5D01</b> Basic Tissue Culture	Understand plant tissue culture as a rapid propagation method.
	Explain the steps involved in Tissue culture.
	Realize the applications of plant tissue culture
<b>VBO6B09</b> Genetics and Plant Breeding	Appreciate the facts behind heredity and variations.
	Understand the basic principles of inheritance.
	Solve problems related to classical genetics.
	Predict the pattern of inheritance.
	Understand various plant Breeding techniques.
	Realize the role of plant breeding in increasing crop productivity
	Identify the physiological responses of plants.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>VBO6 B10</b> Plant Physiology and Metabolism	Analyze the role of external factors in controlling the physiology of plants.
	Explain the metabolic processes taking place in each cell.
	Appreciate the energy fixing and energy releasing processes taking place in cells
<b>VBO6 B11</b> Cell Biology and Biochemistry	Appreciate the ultra-structure of a Plant cell.
	Enumerate the functions of each Cell organelle.
	Draw and explain the structure of biomolecules
<b>VBO6 B12</b> Environmental Science	Realize the importance of ecological studies.
	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 plastic wastes.
	Spread awareness of the need of conservation of biodiversity and Natural resources.
	Analyze the reasons for climate change and find out ways to combat it
<b>VBO6E02</b> Genetics and Crop Improvement	Understand various techniques employed for increasing crop productivity.
	Identify diseases affecting crop plants.
	Attain general awareness on various crop research stations of the country
<b>VBO1C01</b> Angiosperm Anatomy	Explain the types, structure and functions of plant tissues.
	Explain primary and secondary (Normal and anomalous) structures of plant organs.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

and Micro technique	Identify plant organs by observing anatomical features.
	Illustrate primary and secondary (Normal and anomalous) structures of plant organs.
<b>VBO2C02</b> Cryptogams, Gymnosperms and Plant Pathology	Analyze the role of the lower plants in the process of evolution.
	Explain the ecological significance of lower plants.
	Identify plant diseases and take remedial measures to control them
<b>VBO3C03</b> Morphology, Systematic Botany, Economic Botany, Plant Breeding and Horticulture	Appreciate the diverse morphology of angiosperms.
	Identify and classify plants based on taxonomic principles
	Make scientific illustrations of vegetative and reproductive structures of plants
	Identify the economically important plants
	Understand the basic principles of Plant breeding
	Apply various horticultural practices in the field.
<b>VBO4C04</b> Plant Physiology, Ecology and Genetics	Explain the physiological processes in plants.
	Understand the basic principles of heredity and variation.
	Realize the importance of ecology.
	Spread awareness of the necessity of conservation of biodiversity and natural resources



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## M.SC ZOOLOGY

### PROGRAMME SPECIFIC OUTCOMES

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

### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>ZOL1C01-</b> Biochemistry 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
<b>ZOL1C02-</b> Biophysics and Biostatistics	Observe and understand the matter and 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ZOL1C03-</b> 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
<b>ZOL2C04-</b> 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
<b>ZOL2C05-</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the pathophysiology of hypoand hyper secretions of endocrine glands
<b>ZOL2C06-</b> 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
<b>ZOL3C07 -</b> 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
<b>ZOL3C08-</b> 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
<b>ZOL3E09-</b> Fishery Science 1: Taxonomy, Biology, Physiology & Ecology	understand fish taxonomy
	Understand the fish biology





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ZOL4C10-</b> Biotechnology and Microbiology	Explain the physiology of fish
	Understand the ecology of sea
	Study on brackish and inland water
	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
<b>ZOL4E11-</b> Fishery Science II: Capture & Culture Fisheries	Understand DNA sequencing, Genetic Engineering, gene silencing and cloning techniques
	Interpret biotechnology in animal healthcare and environment
	Understand the capture and culture of fishes, Designing of aqua farms
	Understand the nutrition of fishes and water quality management
	Understand the reproduction and genetic selection
<b>ZOL4E12-</b> Fishery Science III: Harvesting, Post-harvesting Technology & Marketing	Explain different aquacultural practices
	Study on aquarium and major fish diseases
	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



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Study on fishery management and international marketing.

## B.Sc ZOOLOGY

### PROGRAMME SPECIFIC OUTCOMES

<b>PSO1</b>	Understand the biological diversity and grades of complexity of various animal forms through their systematic classification and process
<b>PSO2</b>	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
<b>PSO3</b>	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
<b>PSO4</b>	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**

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>ZOL1B01T</b> 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 animals



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Explain the classification with examples and characteristic features of kingdom Protista and describe the morphology and structural organization of <i>Paramecium</i>
	Explain the classification of phylum Porifera and elucidate the salient features of each class
	Describe the characteristic features of phylum Cnidaria and Ctenophora, Illustrate 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 Aschelminths and phylum Nematoda
	Elucidate the characters of Pseudocoelomate minor phyla Rotifera and Gastrotricha
<b>ZOL2B02T</b> Animal Diversity- Non-Chordata Part II	Explain the classification with examples and characteristic features of phylum Annelida and describe the morphology and structural organization of <i>Nereis</i>
	Describe the distribution, peculiarities and affinities of phylum Onychophoran
	Explain the classification of phylum Arthropoda; elucidate the salient features of each class and describe the morphology and structural organization of <i>Panurginus</i>
	Describe the characteristic features of phylum Mollusca, illustrate its classification down to classes and explain the structural organization of <i>Pila globosa</i>
	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
<b>ZOL3B03T</b>	Explain the characteristics of chordates and outline classification of the phylum Chordata



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Animal diversity: chordata Part-I	
	Describe the salient features and affinities of subphylum Urochordata and its classification down to classes; elucidate the morphology and structural organization of <i>Ascidia</i>
	Explain the salient features and affinities of subphylum Cephalochordata with reference to <i>Branchiostoma</i>
	Describe the salient features of subphylum Vertebrata, illustrate its classification down to classes and elucidate the characteristics of division Agnatha
	Enumerate the salient features of superclass Pisces and illustrate its classification down to orders and the morphology and structural organization of <i>Mugil cephalus</i>



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Describe the salient features and affinities of class Amphibia and its classification up to orders; explain the morphology and organ systems of <i>Hoplobatrachus tigerinus</i>
	Elucidate the characteristic features of the Reptilia and its classification down to orders; describe the morphology and organ systems of <i>Calotes versicolor</i>
<b>ZOL4B04T</b> 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 <i>Columba livia</i>
	Enumerate the salient features and classification of class Mammalia down to orders with suitable examples
	Elucidate the external characters and functional systems of <i>Oryctolagus cuniculus</i>
	Compare the circulatory, excretory and nervous systems of vertebrates
<b>ZOL4B05P</b> Zoology core course practical  I: Animal diversity (Practical I*A + I*B+ I*C+ I*D)	Identify and describe specified protists and coelomate & 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ZOL5B06T</b> 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 and the structure and functions of plasma membrane, mitochondria, lysosome, cytoskeletal elements and interphase nucleus
	Illustrate the nucleosome organization of chromatic and Illustrate the nucleosome organization of chromatin
	Enumerate eukaryotic cell cycle and cell division by mitosis, meiosis and meiosis
	Explain the causes of transformation, characteristics of transformed cells role of protooncogenes and tumor suppressor genes in malignant transformation mechanism and significance of apoptosis
	Enumerate allelic and nonallelic gene interactions; supplementary, complementary, polymeric, duplicate and modifying genes and polygenic inheritance
	Illustrate multiple allelism and solve problems related to blood group inheritance
	Explain characteristics of linkage groups and linkage map; crossing over sex-linked, sex-influenced and sex-limited, sex differentiation and disorders of sexual development
	Describe the mechanisms of sex determination including chromosomal genic, haploid/diploid mechanisms; the hormonal and environmental influence genic, haploid/diploid 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
<b>ZOL5B07T</b>	Illustrate the steps in genetic engineering and animal cell culture



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Biotechnology, Microbiology , Immunology	Explain transfection methods, transgenic animals and ethical issues of transgenic animals
	Enumerate the applications of biotechnology
	Understand the biological diversity of microbial forms 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 immune deficiency diseases and immunology of tumor and organ transplantation
<b>ZOL5B08T</b> Biochemistry and Molecular Biology	Understand the elements of biological importance and the non-covalent 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 amino acids and their standard abbreviations; hierarchical levels of protein structure, classification, separation, 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, Krebs' 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the concept of gene and gene expression
	Genetic code and wobble hypothesis
	Explain the mechanism of transcription and post-transcriptional modification of hnRNA, translational modification and targeting of peptides
	Describe the regulation of <i>trp</i> operon, C-value, repetitive DNA, satellite DNA, selfish DNA, overlapping genes, pseudogenes, cryptic genes, transposons and retrotransposons
	Explain the structure and life cycle of bacteriophage and the gene transfer mechanisms in bacteria
<b>ZOL5B09T</b> 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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ZOL5D01T</b> 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



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	Explain fertilization, implantation, pregnancy, gestation, placenta, parturition and lactation
	Explain the scope of reproductive technologies infertility 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 myths
	Understand the ethical aspects of sex
<b>ZOL6B15P</b> 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 <i>D. Melanogaster</i> 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 <i>Drosophila</i> and solve problems on Monohybrid, dihybrid crosses, blood groups and sex-linked inheritance
	Understand electrophoresis, PCR, Northern blotting Southern 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 motility by standard laboratory protocols
	Understand the detection of human blood groups and organs of immune system
	Perform standard biochemical tests for the detection of reducing and nonreducing sugars, polysaccharides, proteins and lipids



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>ZOL6B10T</b> 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 common renal 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 impulse transmission
	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 neuro secretion and the mode of action of peptide and steroid hormones
<b>ZOL6B11T</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 <i>Amphioxus</i> , frog, chick and man
	Explain the basics of cell differentiation and its 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
<b>ZOL6B12T</b> 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 and habitat as a self-regulating system
	Understand various types of population interactions and appraise the co-evolution
	Comprehend the diverse environmental and sustainability 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
<b>ZOL6B13T</b>	Describe the patterns and mechanisms of animal behavior



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Ethology, Evolution and Zoogeography	Illustrate biological rhythms and the chemical basis 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
<b>ZOL6B14BE 02T</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ZOL6B16P</b> 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 <i>Peripatus</i> , lung fishes, <i>Sphenodon</i> , 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>Complementary course</b>	
<b>ZOL1C01T</b> 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, Aschelminthes, Annelida, Arthropoda, Onychophora, Mollusca and Echinodermata, and the structural organization of <i>Peneaus</i> sp
	Describe the characteristic features and classification of phylum Chordata with examples and, structural organization of <i>Oryctolagus cuniculus</i>
	Describe the characteristic features and classification of phylum Chordata with examples and structural organization of <i>Oryctolagus cuniculus</i>



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ZOL2C02T</b> 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
<b>ZOL3C03T</b> Physiology and Ethology	Describe the structure of plasma membrane and the various trans-membrane transport mechanisms
	Enumerate the constituents of normal diet and the mechanism of digestion and absorption of carbohydrates, proteins and lipids and 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 transfusion and cardiovascular problems
	Illustrate the structure of human kidney, the mechanism of urine formation, hormonal control of kidney function and kidney disorders; osmoregulation and urea cycle
	Enumerate the structure of myofibrils and myofilaments; muscle contractile and regulatory proteins and 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 behavior
	Enumerate biological rhythms, communication in animals and social organization in mammals
<b>ZOL4C04T</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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

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

#### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>HTC1C01</b> Historic Costumes	Compare the different costumes of India
	Build up an idea about couture from middle age period





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand and discuss the garments and, accessories including headgear and foot wear of various regions
	Analyze the fashion trends in 18 <sup>th</sup> century
	Explain the evolution of costumes
	Understand the information regarding the costumes origin, fabrics, colours and accessories
<b>HTC1C02</b> 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
<b>HTC1C03</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Identify the human figure, construction, anatomy of men, women & child
	Influence the students to inspire to develop fashion collection (portfolio)
<b>HTC1C04</b> Introduction To Fashion Design Concept	Analyze and use color units effectively in their design process.
	Identify and discuss concepts related to the historical background 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
<b>HTC1C05</b> Research Methodology And Statistics	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
<b>HTC2C06</b> Quality Assurance and Textile Testing	Interpret statistical literature, research articles, the claims made on the basis of statistics
	Understand the method of testing textile fibers, yarns and fabrics
	Analyze and interpret the results of fabric testing from testing equipment's



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>HTC2L01</b> 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
<b>HTC2C07</b> 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.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>HTC2L02</b> 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
<b>HTC2C08</b> 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.
<b>HTC3C09</b> Fabric Construction and	Demonstrate the weaving, weaving loom, weaving mechanism & different weaving machineries.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Analysis	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
<b>HTC3C11</b> 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 indyeing/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
<b>ELECTIVE COURSES</b> <b>HTC3E01</b> Fashion Choreography	Understand various steps in planning a show
	Understand the technical framework and sound check of fashion show
	Organize fashion show



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand different techniques for advertising and promotional activities
	Develop the fashion presentation skill
	Develop the managerial skills
<b>ELECTIVE COURSES</b> <b>HTC3 E01</b> Fashion Communication	Understand various media incommunication
	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
<b>ELECTIVE COURSES HTC3E01</b> 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
<b>ELECTIVE COURSES</b> <b>HTC3E02(1)</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Compare the difference between organic and conventional textile fibres
<b>ELECTIVE COURSES</b> <b>HTC3E02(2)</b> 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
<b>ELECTIVE COURSES</b> <b>HTC3E02(3)</b> 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
<b>ELECTIVE COURSES</b> <b>HTC4E03(1)</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ELECTIVE COURSES</b> <b>HTC4E03(2)</b> 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
<b>ELECTIVE COURSES</b> <b>HTC4E03(3)</b> 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**

<b>PSO1</b>	Understand the basics of textile science, apparel production, fashion marketing, costumes, home science and visual merchandising
<b>PSO2</b>	Create an aesthetic sense towards fashion
<b>PSO3</b>	Equip with entrepreneurial skill in various fields in the fashion industry
<b>PSO4</b>	Train young minds create sustainable fashion ideas
<b>PSO5</b>	Develop productive design thinking for the betterment of the society
<b>PSO6</b>	Build attitudes and values promoting good citizenship
<b>PSO7</b>	Create knowledge and skill for community development





# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>HTF1B01</b> 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
<b>HTF2B02</b> 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 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
<b>HTF3B03</b> Computer aided fashion design	Illustrate accurate representations of garment specification 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 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>HTF4B04</b> 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
<b>HTF5B05</b> 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
<b>HTF5B06</b> Fashion presentation	Analyze the accounting for factory overhead
	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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>HTF5B07</b> Traditional textiles and ornamentation  Indian surface	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
<b>HTF5B08</b> Concepts design of fashion	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
<b>HTF5D02</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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

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

#### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>HND1 C01</b> Human Physiology	Understand structure, component and functions of all systems of the human body



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 controlling 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
<b>HND1</b> Nutrition Through Cycle <b>C02</b>  Life	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.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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.
<b>HND1</b> Advanced Science <b>C03</b> Food	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
<b>HND1 C04</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 calorimetry, work capacity and its efficiency
	Explain control of food intake and metabolic consequences of starvation
<b>HND1</b> Research Methods Statistics <b>C05</b> And	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
<b>HND2 C07</b> 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 foodservice 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Use effective and professional oral and written communication and documentation.
	Study hygiene and sanitation in the foodservice industry
	Build a kitchen layout using the available physical facilities
	Ensure the patients receive their best possible nutritional intake whilst in hospital
<b>HND2 C08</b> 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.
<b>HND2 C09</b> Nutritional Management in Life Style Diseases	Understand the risk factors associated with life style diseases
	Understand the symptoms associated with life style diseases





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 lifestyle 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 infuture
<b>HND3 C10</b> Vitamins And Minerals	Understand the chemistry of minerals &vitamins
	Understand the food sources and factorsaffecting 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
<b>HND3 C11</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

		Understand the role of various organizations in combating malnutrition
<b>HND3</b> Pediatric Nutrition	<b>E01</b>	Demonstrate a thorough knowledge of the theory of human nutrition and dietetics as it applies to pediatrics.
		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.
<b>ELECTIVE COURSES HND3E03</b> Functional Foods And Nutraceuticals		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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>ELECTIVE COURSES</b> <b>HND3E06</b> Nutritional Counselling and Education	Define counseling and nutritional counselling
	Classify types of counselling
	Interpret different theories of counselling
	Identify the person who needs counselling
	Take part in nutrition education
	Interview persons who need counselling
<b>HND4L03</b> 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 information 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.
<b>ELECTIVE COURSES</b> <b>VPND 4 E07</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the micro and macro vascular complications of Diabetes Mellitus
	Understand the co –morbidity 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**

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

#### **COURSE OUTCOMES**

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>FCS1B01</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>FCS2B02</b> 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
<b>FCS3B03</b> 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
<b>FCS4B04</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>FCS5B05</b> Human Physiology and Microbiology	Understand about the anatomy of human body
	Understand the various organ systems and its functioning
	Understand the morphology of micro organisms 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
<b>FCS5B06</b> 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.
<b>FCS5B07</b> Family Resource Management	Understand the process of management in family living



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Develop wise decisions in personal life and make use of given resources
	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
<b>Fcs5b08</b> Textile Science	Develop strong knowledge base in the 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
<b>FCS6B09</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>FCS6B10</b> 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
<b>FCS6B11</b> 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 instages of life cycle
	Solving critical family situations
	Develop sound knowledge on methods of family planning
	Improve the knowledge regarding legal issues concerning women
<b>VI FCS6B12</b> <b>(E2)-</b> Quantity Food Preparation Techniques	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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Ensure the patients receive their best possible nutritional intake whilst in hospital
<b>FCS5D02</b> 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

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



# VIMALA COLLEGE (AUTONOMOUS), THRISSUR

## COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>MCM1C01</b> Business Environment & Policy	To understand the concept of business environment and its factors affecting business decisions. To understand government policies and regulations affecting business operations.
<b>MCM1C02</b> Corporate Governance & Business Ethics	Provide a range of definitions of corporate governance Identify issues usually addressed by corporate governance structures Summarise recent scandals and abuses and the regulatory reaction Explain and evaluate the roles and responsibilities of executive directors, non-executive directors, auditors and company secretaries in ensuring effective corporate governance.
<b>MCM1C03</b> Quantitative Techniques for Business Decisions	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.
<b>MCM1C04</b> Management Theory and Organizational Behaviour	Demonstrate the applicability of the concept of organizational behaviour to understand the behaviour of people in the organisation. Better understanding of the complexities associated with management of group behaviour in the organisation
<b>MCM1C05</b> 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 in decision-making. Understand the nature of standard costing and demonstrate the necessary skills to calculate advanced variances. Understand and critique both the theoretical issues and influences on practical decisions associated with cost volume analysis.
<b>MCM2C06</b> Advanced Corporate Accounting	Understand the techniques of restructuring and liquidating the corporate entities. Understand the basic accounting standards relating to revenue and leases Familiarize with modern concepts in accounting.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>MCM2C07</b> 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.
<b>MCM2C08</b> Strategic Cost Accounting	To understand the applications of cost accounting tools, techniques and concepts in managerial decision making. To understand emerging cost concepts and its applications in strategic cost management.
<b>MCM2C09</b> International Business	Explain the key legal issues related to businesses operating in other countries. Students are expected to enhance their cognitive knowledge of global issues; interpersonal skills with individuals from various cultures, and social responsibility awareness on global issues.
<b>MCM2C10</b> Management Science	Translate a problem into a simple mathematical model to allow easier understanding and to aid problem solving. Employ appropriate mathematical tools to solve problems.
<b>MCM3C11</b> Financial Management	Students will be able to evaluate, synthesise and apply the contemporary theories and empirical evidence concerning Financial Management. Demonstrate and apply knowledge for taking investment decisions, financing decisions and dividend decisions.
<b>MCM3C12</b> Income Tax, Law, Practice and Tax Planning I	To describe how the provisions in the corporate tax laws can be used for tax planning. To explain different types of incomes and their taxability and expenses and their deductibility. To learn various direct and indirect taxes and their implication in practical situations. To state the use of various deductions to reduce the taxable income.
<b>MCM3C13</b> Research Methodology	Search for, select and critically analyse research articles and papers. Gain experience with instrument development and data collection methods.
<b>MCM3E01</b> 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 financial markets.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	<p>Students will understand the benefit of diversification of holding a portfolio of assets, and the importance played by the market portfolio.</p> <p>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 investment risks.</p>
<b>MCM3</b> <b>E02</b> Markets & Financial Institutions	<p>Sound knowledge of the broad framework of financial markets and institutions.</p> <p>Better understanding of the characteristics of various financial market instruments and the regulatory environment in India.</p>
<b>MCM4C14</b> Financial Derivatives & Risk Management	<p>Analyse and price diverse derivatives products to generate an optimal risk management strategy.</p> <p>Demonstrate critical thinking, analytical and problem solving skills in the context of derivatives pricing and hedging practice.</p>
	<p>Explain the binomial model and its extension in continuous time to the Black- Scholes model.</p> <p>Demonstrate an understanding of pricing forwards, futures and options contracts</p>
<b>MCM4C15</b> Income Tax Law, Practice and Tax Planning II	<p>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 tax planning.</p>
<b>MCM4E03</b> International Finance	<p>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 relevant stakeholders</p> <p>Explain exchange rate determination, and how firms can manage their exchange rate risk and capitalize on anticipated exchange rate movements</p>
<b>MCM4E04</b> Advanced Strategic Financial Management	<p>Students will be able to understand concepts, tools and techniques used for financial decision</p>



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Learners will be equipped with the skills to apply financial principles relevant to strategic financial management in Organisational contexts

### B.COM (FINANCE)

#### PROGRAMME SPECIFIC OUTCOMES

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

#### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>BCM1B01</b> 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
<b>BCM2B02</b> 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
<b>BCM3B03</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the LLP act 2008, LLP agreement and its formation, registration and dissolution
<b>BCM3B04</b> 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
<b>BCM4B05</b> 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
<b>BCM4B06</b> 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
<b>BCM5B07</b> 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.
<b>BCM5B08</b> Business Research	To understand basic knowledge required for carrying out business researches.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Methods	To understand various styles of report writing to be used in business researches
<b>BCM5B09</b> Income Tax Law and Accounts	Students will be able to solve their own taxpayment calculations easily
	Students will be capable of advising tax saving methods by applying the different loopholes within the law, which will be the main demand by the companies
<b>BCM6B12</b> 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.
<b>BCM6B13</b> 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
<b>BCM5B10</b> Financial Markets and	Understand the role and function of the financial system in reference to the macro economy.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Services	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
<b>BCM5B11</b> Financial Management	Understand the concept, tools and practices of financial management
	Demonstrate and apply knowledge for taking investment decisions, Financing decisions and dividend decisions
<b>BCM6B14</b> Fundamentals of Investments	Students will understand the characteristics of different financial assets.
	Demonstrate and apply knowledge for taking investment decisions
<b>BCM6B15</b> Financial Derivatives	To give an account of the derivative market in general
	To give a detailed idea about derivative instruments prevailing in the market
<b>BCM1C01</b> 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.
<b>BCM2C02</b> 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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Understand the concepts of marketing communication and sales promotion
	Understand the concept of E-Commerce ,Electronic payment system and security issues in E commerce
<b>BCM3C03</b> 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.
<b>BCM4C04</b> 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
<b>BCM3A11</b> Basic Numerical Methods	Employ appropriate mathematical tools to solve problems
	Calculate and interpret numerous statistical values and appreciate their value to the business manager
<b>BCM3A12</b> 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
<b>BCM4A13</b> Entrepreneurship Development	Understand the function of the entrepreneur in the successful commercial application of innovations.
	Understand entrepreneurship assisting agencies.
<b>BCM4A14</b> 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;



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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.
<b>BCM5D03</b> 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
<b>BCM5D02</b> Basics of Entrepreneurship and Management	Understand the concept of business and social responsibilities of business
	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

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

### COURSE OUTCOMES

<b>COURSES</b>	<b>COURSES OUTCOMES</b>
<b>SOW 1 C 01:</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>SOW I C 02 : Sociology and Economics for Social Work Practice (Core Paper)</b>	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
<b>SOW1 C 03:</b>	Understand the definition, nature and scope of Psychology



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Human Growth and Development (Core Paper)	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
<b>SOWIC04:</b> 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
<b>SOW I C 05:</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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.
<b>SOW I C 06:</b> 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.
<b>SOW2 C07:</b> 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 inter personal problems
	Acquire ability in Laisoning, 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 Laisoning, networking and mobilizing resources for the rehabilitation of individuals with problems



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Acquire skills for recording and documentation of individual and group interventions
<b>SOW2 C 08:</b> 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
<b>SOW2 C 09:</b> 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
<b>SOW2 C 10:</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>SOW2 C 11:</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

<b>SOW2 C 12:</b> 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.
<b>SOW3 C 13:</b> Quantitative and Qualitative Methods for Social Work Research (Core Paper)	Understand the significance and characteristics of social work research
	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
<b>SOW3 C 14:</b> 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





## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	Develop skills in designing and implementing participatory training programmes
	Use participatory training methodologies for social work interventions
<b>SOW3 C 15:</b> 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
<b>SOW3 E1 01</b> :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
<b>W3 E 2 01</b> : Rural Community Development and Governance active II – Rural and	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.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Urban Community Development	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
<b>SOW3 E102:</b> 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
<b>SOW E202:</b> Urban Community Development and Governance 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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
<b>SOW3 C 16:</b> Concurrent Field Work (Core Paper)	Learn practice of social work in 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
<b>SOW4 C 17 :</b> 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
<b>SOW4 C 18 :</b> 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	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 Tribes communities, policies and welfare programmes and the approaches and strategies of social work with them
<b>SOW E 1 03 :</b> 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 behavior therapies and techniques
	Understand the Humanistic and existential therapies and techniques of practice
	Understand Family 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,
<b>SOW4 E 2 03:</b>	Understand the basic concepts in environment studies.



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Environmental Studies and Disaster Management Elective 2 - Rural and Urban Community Development	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.
<b>SOW 4 E1 04</b> : 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
<b>SOW4 E2 04</b> : 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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

	analysis frame woks
	Understand the theoretical frame workfor feminist social work
	Practice social work with women indifferent contexts using Gender Aware therapy, Feminist counselling, building collectives,education, advocacy and assertiveness training
<b>SOW4 C 19 :</b> Concurrent Field work (Core Paper)	Apply social work methods inspecialized settings.
	Skill in documentation, dissemination and recording of social work intervention
	Develop innovative models for social work interventions
<b>SOW4 C 20:</b> Concurrent Field work (Core Paper)	Apply social work methods inspecialized 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**

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



## VIMALA COLLEGE (AUTONOMOUS), THRISSUR

### COURSE OUTCOMES

COURSES	COURSES OUTCOMES
<b>VPE5D03</b> Physical Activity Health and Wellness	To introduce the Fundamental concepts of Physical Education, Health, and Fitness.
	To provide a general understanding of exercise principles, 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.