

ADIRAMPATTINAM - 614 701

### **DEPARTMENT OF ARABIC**

### B.A. Arabic (Un aided)

### **Programs offered**

### PROGRAMME OUTCOMES:

- Get exposed to grammatical patterns and usages in Arabic.
- Improve skills to speak and write Arabic accurately.
- Enhance skills to analyze functions of language in different contexts Develop the advancement to higher education.
- Beware on distinct features of Classical and Modern Arabic Literature.

### SPECIFIC PROGRAM OUTCOMES:

- Demonstrate an effective understanding of linguistic principles required to analyze Arabic.
- Apply effectively and appropriately Arabic language skills in a professional context.
- The ability to research cultural phenomena.
- Translate basic language structures from Arabic to English and vice versa.
- Appreciate linguistic, literary and cultural concept.

S.No	Name of the Course	Subject Code	Course outcomes
1/1	LANGUAGE COURSE	22LCA1	Learning Arabic. (Ism, fifl, harf, word formation). Through this, Quran, Hadith and other Arabic books can be accessed and understood.
1/2	ENGLISH LANGUAGE COURSE	16ELCE1	Regarding English language learning.
1/3	GRAMMAR I	222ACCAR1	Learning Arabic. (Ism, fifl, harf, word formation). Also by doing text structure exercises called "Tamreen" you can access the meaning of Quran, Hadith and other Arabic books.
1/4	ARABIC MORPHOLOGY	22ACCAR2	Learning Arabic. It will explain many types of VERB, which are very important in sentence



# KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

			,
			structure. Through this, Quran, Hadith and other Arabic books
			can be
			accessed and understood.
			The biographies of the
1/5	HISTORY OF PROPHET I	224546401	Messengers known as Prophets
1/5		22AFACAR1	will be explained briefly and in
			simple Arabic style. Through this
			one can learn Arabic language
			and history of
			Prophets.
			It teaches many good things like
1/6	VALUE EDUATION	22UGVED	morality, culture, civility, giving
			up, caring, humanity to be
			followed in personal life and
			social
			life.
2/1	ENGLISH LANGUAGE COURSE	22ELGE2	
			Identify the various types of verbs.
			Explain the ending changes in verbs
2/2		224.004.00	in a simple manner.
_,_	GRAMMAR II	22ACCAR3	Construct the other forms of verbs. Analyze the plural words and its
			roots. Derive the verbs with moods
			of imperfect tense
			Explain the creation of Adam (Pbuh)
			and its purpose.
			Discuss the story of Nooh (Pbuh).
2/2			Examine the causes for the flood
2/3	APPLIED GRAMMAR II	22ACCAR4	during Nooh (Pbuh).
			Interpret the transgression of nation of Aad.
			Summarize the history of Saalih
			(Pbuh) and his nation.
			Learning Arabic. It will explain
2/4		224542125	many types of VERB, which are
<i>2/4</i>	HISTORY OF PROPHETS II	22AFACAR2	very important in sentence
			structure. Through this, Quran,
			Hadith and other Arabic books
			can be



2/5	NON-MAJOR ELECTIVE I (Sirappu Tamil) PROFESSIONAL ENGLISH	22ASACAR1 22LCRST1	accessed and understood. The biographies of the Messengers known as Prophets will be explained briefly and in simple Arabic style. Through this one can learn Arabic language and history of Prophets. It teaches many good things like morality, culture, civility, giving up, caring, humanity to be full and the state of th
			followed in personal life and social life.
2/7	Language Course II	22LCA2	
4/1	ENGLISH LANGUAGE COURSE	23ELCE4	
4/2	GRAMMAR IV	22ACAR7	Analyze the Nominal Sentences in Various aspects Evaluate the different types of verbs with pronouns Appraise the rules of Exceptional



			1 1 <b>T</b>
			particles and Tameez Identify the kinds of words which are prohibited to apply vowels
			Illustrate the conjunctions particles and interrogative particles
			Appraise the Manners discussed in the Surah Luqman.
4/3	CLASSICAL PROSE I	22ACCAR8	Develop the Heritage of Islam Discuss the Miracles of Quran
			Analyze How the Quran influences the society Discuss about the Islamic Traditions
4/4	CLASSICAL ARABIC LITERATURE	22ASACAR2	<ul> <li>Review the tribes and divisions of the Arabs.</li> <li>Estimate the literature of the Pre-Islamic periods of Arabs.</li> <li>Discuss about the Knowledge of</li> <li>Pre-Islamic Poets to develop their</li> <li>Language&amp; Literature □</li> <li>Demonstrate the Knowledge of</li> <li>Ummayad Period.</li> <li>Appraise the concept of Literature developed in</li> </ul>
			Abbassid Period.
5/1	GRAMMAR V	22ACCAR9	Assess the various rules related to Arabic Grammar. Distinguish between the different types of wav. Demonstrate the rules of Isthifhaam in Arabic. Discuss about the Badhl and its rules. Appraise the sentences as studied in Advanced level.
5/2	CLASSICAL PROSE II	22ACCAR10	Demonstrate an ability to read and understand a variety of classical literary texts in the target language. Express the Knowledge of inflections, grammatical constructions and vocabulary items found on the average page of a classical literary text. Differentiate between the styles of authors in the major genres of prose and poetry. Organize to conduct research on classical subjects by using different reference works and sources in book form and on the Internet. Practice the skill of writing in the Arabic language.



			Examine the logic poetry.
			Explain the contributions of Imam Busuri to the Arabic Literature.
5/3	CLASSICAL POETRY	22ACCAR11	Investigate the structure, usages of words in praising of prophet Mohamed (sal).
			Compare the style of writings of different poets with Imam Busiri.
			Evaluate the achievements of Arabic poets.
			Define Balaga (Rhetoric) in Arabic language. Assess the classifications of Arabic Rhetoric and its
			impact in Arabic literature.
5/4	RHETORIC I	22ACCAR12	Describe the special features of Ilm Al Bayan.
-	KILTOKICT		Illustrate the various topics in Balaga with suitable examples.
			Explain similies, metaphors and other topics in Arabic Rhetoric.
			Compose various types of letters for official
			purpose.
5/5		2241405402	Construct letters to banks and insurance
- 4 -	COMMERCIAL ARABIC	22AMBEAR2	companies. Formulate job applications and leave letters.
			Evaluate the various kinds of advertisements.
			Apply the rules of Idgamm during the
			recitation of Holy Quran.
	TAJVEEDHUL QURAN		Demonstrate the Rules of Meem Sakin and
			Rules of Madd.
		22ASBEAR2	Practice the rules of Waqf and Rules of Noon Al Qutni.
5/6			Interpret the meanings of Surah Ad Dhuha to
			Al Asr.
			Illustrate the meanings of last few chapters of
			Holy Quran. Prepare tenders for auction and authorization
			letters.
			Recognize the techniques and skills of
			communication.
			Apply the conversational skills in important places.
<b>_</b> /_	SOFTSKILL DEVELEPMENT		Demonstrate the Arabic terminologies
5/7		22UGSDC	according to the situations.
			Practice the important terms required during
			travel. Dramatize the booking of an
			accommodation in a hotel



6/2	RHETORIC II MODERN POETRY	18ACCAR15 18ACCAR14	<ul> <li>classical prose.</li> <li>Evaluate the writing style of Modern Writers.</li> <li>Demonstrate the objectives of Khabar and its various types.</li> <li>Appraise the articles of Istifhaam and its different meanings.</li> <li>Analyze the places of Fasl and Wasl in detail.</li> <li>Assess the various aspects of Ilm Al Badee'.</li> <li>Recognize the importance of Ilm Al Badee'.</li> <li>Describe the early changes that occurred in modern poetry ranging from subject to style of □ Presentation.</li> <li>Explain the influence of Modern Arabic Poetry.</li> <li>Differentiate between the themes, language usage, and style of writing from the beginning of modern Arabic poetry to the current era.</li> <li>Assess the socio-cultural dimensions, thoughts, and concepts in modern Arabic poetry □ Appraise the performance of modern Arabic</li> <li>Construct essays in Arabic on various topics.</li> <li>Illustrate the different yocabularies in Arabic</li> </ul>
6/4	ESSAYS IN ARABIC	18AMBEAR2	Illustrate the different vocabularies in Arabic. Apply the new terminologies in the Arabic essays. Demonstrate the language skills and communication skills in Arabic. Evaluate the essays written in Arabic on various aspects.
6/5	TRANSLATIONS SKILLS IN ARABIC	18AMBEAR3	Express their opinions in Arabic Sentences Translate the Arabic Sentences into English



ADIRAMPATTINAM - 614 701

List out and Conjugate Arabic Verbs Apply the Translation Theories and Practices Apply the translation theories in written and verbal communicationAnalyze the current translation methods with the previous methods

### **DEPARTMENT OF BOTANY**

### **Programmes offered:**

### > B.Sc. Botany (Unaided)

#### **Programme Outcomes:**

- Critical Thinking: Apply the knowledge of biology to make scientific queries and enhance the comprehension potential.
- Effective Communication: Successful transfer of scientific knowledge both orally and in writing.
- Social Interaction: Function as an individual, as a member or a leader to perform a task in class room situation or during field study.
- Ethics: Convey and practice social, environmental and biological ethics.
- Environment and Sustainability: Insist the significance of conserving a clean environment for perpetuation and sustainable development.
- Self-directed and Life-long Learning: study incessantly by self to cope with growing competition for higher studies and employment.

### **Programme Specific Outcomes:**

- Educate students in and around Tiruchirappalli, a prime area of Cauvery Delta, about plant science.
- ✤ Inculcate strong fundamentals on modern and classical aspects of Botany.
- Build life skills in Edible mushroom cultivation, Biofertilizer production, Greenhouse maintenance and Seed technology through value-added courses.
- ✤ Create platform for higher studies in Botany.



ADIRAMPATTINAM – 614 701

**Course Outcomes:** 

SL. No	Sub Code	Name of The Course	Course outcome
1.	22SCCBO1	Algae, Fungi, Lichens and Bryophytes	<ul> <li>Relate the morphology structure of Algae, Fungi, bryophytes and Lichens.</li> <li>Apply the practical knowledge to understanding the diversity of plant forms.</li> <li>Examine the importance of structural diversity in the evolution of plant forms.</li> <li>State the ecological and economic importance of Algae, Fungi, lichen and bryophytes.</li> <li>Compare the structural organization of gametophytes and sporophytes in different classes of bryophytes.</li> </ul>
2.	22SCACBO1	Allied Botany 1	<ul> <li>Illustrating the features of plant group.</li> <li>Get knowledge in plant groups and their features</li> <li>Categorize organizational characters and reproductive features of plant groups</li> <li>Examine life cycles of different plant groups</li> <li>Record understanding on the anatomy of plants</li> <li>Apply the fundamental knowledge on the embryology and its applications.</li> </ul>
2.	22SCCBO1P	Algae, Fungi, Lichens and Bryophytes (P)	<ul> <li>Learn about the structure, methods and reproduction of Algae</li> <li>Know about the economic importance of algae, fungi and lichens.</li> <li>Microscopic observation and identification of algae, fungi, lichens and bryophytes.</li> <li>Know about the structure, life history and Economic importance of Gymnosperms.</li> <li>Make use of practical knowledge to comprehend the variety of plant types</li> </ul>
3.	22SCCBO2	Microbiology, Plant Pathology and Plant Protection	<ul> <li>Understand the structure, reproduction, culture and economic importance of bacteria</li> <li>Understand and the structure, reproduction, culture and economic importance of virus</li> <li>Explain the causes of different plant diseases</li> <li>Recognize different plant pathogens</li> <li>Explain different plant protection methods.</li> </ul>
4.	22SCCBO2P	Core-II (P) Microbiology, Plant Pathology and Plant Protection (P)	Study about the symptoms caused by viruses, transmission, assay of viruses, physical properties and purification. □ Detailed study of symptoms of important diseases of above mentioned crops.



			<ul> <li>Collection and dry preservation of diseased specimens of important crops.</li> <li>Microscopic study of important pathogens.</li> <li>Acquaintance with formulation of different fungicides and plant protection appliances.</li> </ul>
	22SCACBO1P	Allied-1I (P) Botany(P)	<ul> <li>Illustrating the features of plant group.</li> <li>Get knowledge in plant groups and their features</li> <li>Categorize organizational characters and reproductive features of plant groups</li> <li>Examine life cycles of different plant groups</li> <li>Record understanding on the anatomy of plants</li> <li>Apply the fundamental knowledge on the embryology and its applications</li> <li>Interpret plants based on the features on and off the field.</li> <li>Contrast the characters of some dicot and monocot families.</li> <li>Measure the concepts of plant functions.</li> <li>Recognize an insight on Ecology of plants</li> <li>Appraise the fundamental knowledge on plant biotechnology and its applications</li> </ul>
	22SCACBO2	Zoology –II	<ul> <li>Interpret plants based on the features on and off the field.</li> <li>Contrast the characters of some dicot and monocot families.</li> <li>Measure the concepts of plant functions.</li> <li>Recognize an insight on Ecology of plants</li> <li>Appraise the fundamental knowledge on plant biotechnology and its applications</li> </ul>
5.	22SCCBO3	Bryophytes, Pteridophytes, Gymnosperms and Paleobotany.	<ul> <li>Compare the classification of pteridophytes.</li> <li>Measure the evolution of sporophytes, heterospory and seed habit and stelar evolution of pteridophytes.</li> <li>Understand about gymnosperms their classification.</li> <li>Illustrate the geological time scale and carbon dating.</li> <li>Rate the distribution and reconstructed structure of fossils</li> </ul>
6.	22SCCBO3P	Bryophytes, Pteridophytes, Gymnosperms and Paleobotany.(p)	Learn about the general characters and classification, stelar evolution in Pteridophytes, heterospory and origin of seed habit.



			<ul> <li>Know about the structure, life history and Economic importance of Gymnosperms.</li> <li>Training students to prepare micropreparation and showing permanent slides/photographs of Rhynia, Lepidodendron etc.</li> <li>It provides a thorough knowledge about the diversity, structural organization and reproduction of Pteridophytes and Gymnosperms.</li> <li>Gain the knowledge on fossils.</li> <li>Inspect process of compatibility involved in plant</li> </ul>
7.	22SCCBO4	Plant Anatomy and Embryology	<ul> <li>reproduction.</li> <li>Comply importance and tissues involved in plant reproduction.</li> <li>Comply importance and tissues involved in secondary growth of Dicot and Monocot.</li> <li>State the types of plant growth and compare their structure, function and its process of luxuriant pant growth.</li> <li>Demonstrate anomalous Secondary growth in dicot and Monocot.</li> <li>Examine fertilization, types of Endosperm, dicot embryo, Polyembryony, Parthenocarpy and Apomixis.</li> </ul>
8.	22SCCBO4P	Plant Anatomy and Embryology (P)	<ul> <li>Understand the scope and importance of Anatomy and Embryology.</li> <li>Understand the normal and anomalous secondary growth in plants and their causes.</li> <li>Perform the techniques in anatomy.</li> <li>Know fertilization, endosperm and embryogeny.</li> <li>Understand the structure and development in microsporangium and megasporangium.</li> </ul>
9.	22SNMEZO2	<mark>Non Major Elective</mark> – Public Health and Hygiene	<ul> <li>Understand the concept of nutrition, balanced diet and related deficiencies.</li> <li>Comprehend environmental health related risks and their impacts.</li> <li>Identify the source of origin of any disease and its related symptoms.</li> <li>Perceive the precautionary strategies to avoid any type of disease.</li> <li>Create awareness on various health education policies, Amendments and Acts and social health programmes.</li> </ul>
10.	22SNMEBO1	Non Major Elective I Semester Iii Biofertilizers And Biopesticides	<ul> <li>Understand the importance of biofertilizers.</li> <li>□ To organize the bio fertilizers for mass cultivation parameters.</li> <li>□ To categorize the type of bio fertilizers to be used.</li> </ul>



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			<ul> <li>To employ the biofertilizers for commercialization.</li> <li>Aware the mechanism and action of biopesticides.</li> </ul>	
11.	22SNMEBO2	Non–Major Elective Horticulture	<ul> <li>Acquire knowledge on horticulture.</li> <li>Demonstration of horticulture technique is well achieved.</li> <li>Understand the landscape gardening</li> <li>Knowledge on culture practice and management</li> <li>To get opportunity on various ornamental plants cultivation.</li> </ul>	
12.	16SCCBO5	Cell And Molecular Biology	To study microscopy, cell organelles of Prokaryotic and Eukaryotic cells, chromosomes, cell divisions, DNA and RNA. ➤ Gene regulation and chloroplast and mitochondria genome organization.	
13.	16SCCBO6	Genetics, Biostatistics And Evolution	<ul> <li>Mendelian Genetics, Recombination of Chromosomes, Structure and Function of Genes.</li> <li>Mutation Impart Knowledge On Biostatistics</li> <li>ApplicationsBiological Experiments</li> <li>Of Evolution and Population Genetics.</li> </ul>	
14.	16SCCBO7	Morphology,Taxonomy Andeconomic Botany	<ul> <li>To study morphological features of vegetative, inflorescence, fruits and seed characters.</li> <li>To impart knowledge on botanical nomenclature, classifications, merits and demerits of various systems of classifications.</li> <li>To understand the systematic of the selected families of the flowering plants with their economicimportance.</li> <li>To have knowledge on the economically important plants with their systematic treatment</li> </ul>	
15.	16SMBEBO1	Major- BasedElectiveMedical And Applied Botany	<ul> <li>To understand the importance of the medicinal plant wealth in Indiaand the role of Medicinal plants in human health care.</li> <li>To know the medicinally usefulplants, Herbal medicine preparation for common diseases and adulterants.</li> <li>To understand the importance of biofertilizers and biopesticides</li> </ul>	



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			Tounderstandthetechniquesinvolved inthecultivation of ediblemus hrooms	
16.	16SCCBO8	PlantPhysiology,Biochem istry And Biophysics	<ul> <li>To understand themetabolic activities of plants</li> <li>To understand the role of enzymes in various metabolic activities of plants</li> <li>Toknowtheapplicationofthelawsof physics in biological phenomena</li> </ul>	
17.	16SCCBO9	PlantEcologyAnd Conservation	<ul> <li>To realize the values of plants and animals of the ecosystem</li> <li>To know about the hazards of pollution and the importance of keeping his/her environment clean</li> <li>To know in detail on various types of vegetation</li> <li>To know about his/her environment andmouldthestudentstobecome managers of various ecological systems</li> </ul>	
18.	16SMBEBO2	Major- BasedElectiveIiPlant Breeding, Horticulture And landscaping	<ul> <li>the various methods of plant breeding and plant propagation</li> <li>teaches students the art of growing plants for a</li> </ul>	
19.	16SMBEBO3	Major– BasedElectivePlant Biotechnology And Bioinformatics	<ul> <li>To comprehend the advances made in the field of plant biotechnology; and bioinformatics</li> <li>To understand how mere jumbling of genes results in the creation of new organisms</li> </ul>	



#### PG & RESEARCH DEPARTMENT OF BUSINESS ADMINISTRATION

#### **Programmes offered:**

### > BBA (Aided)

#### **Programme Objectives:**

- To provide adequate basic understanding about Management Education among the students.
- To prepare students to exploit opportunities being newly created in the Management Profession.
- To train the students in communication skills effectively.
- To develop appropriate skills in the students so as to make them competent and provide themselves self-employment.
- To inculcate Entrepreneurial skills.

#### **Programme outcomes: (For BBA)**

- The Bachelor of Business Administration programme is a judicious mix of all functional elements of Business studies which provide participants with foundational knowledge on different aspects of the administration of a business concern. It includes at one end the need to realize why an organization exists while the other shows the new frontiers to which it can be developed.
- The programme intends to train the students to become competent enough for entry level management professionals. Its basic aim to impart basic and operational knowledge on all functional areas of management makes the programme convergently unique.
- The core objective of the programme is to make young BBA's a change agent in the society by fostering values which self-proclaim that "Turn to enterprising serves the society and the nation".



### ADIRAMPATTINAM - 614 701

#### **Programme Specific outcomes:**

- This programme is designed to develop knowledge on the functional parlour of business administration. The disciplines it covers include management, commerce, banking, economics, law, mathematics, statistics, accounting, communication, computer application and accounting software.
- At the under graduate level no other programme provides the student a feel and basic understanding on such a variety of disciplines. These disciplines are not merely touched upon but are dealt taking the serious contributions it can provide to running business enterprises.
- The programme is designed in such a fashion to provide ample scope for practical exposure to the problems and opportunities of real business.

SEMESTER	SUBJECT	NAME OF THE COURSE	OUTCOMES
	CODE		
Ι	22BCCBB1	CORE COURSE-I INTRODUCTION TO MANAGEMENT	<ul> <li>Enhance their managerial abilities and professional skills.</li> <li>Develop and make the students to know the organization hierarchy; authority and</li> <li>Responsibility relationships associated with the different levels of</li> <li>Management.</li> <li>Understand the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities.</li> </ul>
	22BCCBB2	CORE COURSE-II FUNDAMENTALS OF ACCOUNTING	<ul> <li>Identify events that need to be recorded in the accounting records</li> <li>Describe the need for adjustments while preparing the financial statements;</li> <li>To facilitate them to prepare final Accounts of business and non-trading concerns.</li> <li>Recognize circumstances providing for increased exposure to errors and frauds</li> <li>Along with the methods of depreciation, the accounts to be prepared by non-trading Concern</li> </ul>

#### **Course Outcomes**:



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	22BFACBB1	FIRST ALLIED COURSE- I	□ Apply the objectives of business
		MANAGERIAL ECONOMICS	firms, demand analysis and elasticity
			of demand.
			□ Identify the effective applications
			of factors of production. $\Box$
			□ Analyze the break-even point in
			their business.
			$\Box$ Understand the determination of
			the Price, Market structure and
			competition.
			$\Box$ Evaluate the performance of
			public sector in India.
	22UGVED	VALUE EDUCATION	• Apply the values in thirukural to be
			peaceful, dutiful and responsible in
			family and society • Develop
			character formation and sense of
			citizenship • Be secular, self-control,
			sincere, respectful and moral.
			Master yoga, asana and meditation to
			promote mental health • Be
			attitudinal to follow the
			constitutional rights Students to
			understand the value education is to
			include the essential values
			depending upon the objectives, they
			may be individual, social and national values for example in India.
			$\Gamma$ hanonal values for example in mina
тт <u>— — — — — — — — — — — — — — — — — — </u>	22BCCBB3	CODE COUDSE III	
II	22BCCBB3	CORE COURSE- III	$\Box$ Students gain knowledge about the
п	22BCCBB3	MARKETING	☐ Students gain knowledge about the basic concepts of marketing □
Ш	22BCCBB3		<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle</li> </ul>
п	22BCCBB3	MARKETING	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest</li> </ul>
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Π	22BCCBB3	MARKETING	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior</li> </ul>
Π	22BCCBB3	MARKETING	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> </ul>
Π	22BCCBB3	MARKETING	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical</li> </ul>
Π		MARKETING MANAGEMENT	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> </ul>
Π	22BCCBB3 22BCCBB4	MARKETING MANAGEMENT CORE COURSE- IV	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations</li> </ul>
Π		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in</li> </ul>
Π		MARKETING MANAGEMENT CORE COURSE- IV	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> </ul>
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Π		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as</li> </ul>
		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as mathematical tools in Business.</li> </ul>
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		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as mathematical students</li> <li>Able to use the appropriate statistical techniques in Business</li> <li>Able to develop a strategic</li> </ul>
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		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as mathematical students and the statistical techniques in Business.</li> <li>Able to use the appropriate statistical techniques in Business</li> <li>Able to develop a strategic approach to organize and analyze the data</li> </ul>
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		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as mathematices and determinants are used as mathematical tools in Business.</li> <li>Able to use the appropriate statistical techniques in Business</li> <li>Able to develop a strategic approach to organize and analyze the data</li> <li>Analyze the management problems in research and decision</li> </ul>
		MARKETING MANAGEMENT CORE COURSE- IV BUSINESS MATHEMATICS	<ul> <li>Students gain knowledge about the basic concepts of marketing</li> <li>Students develop skills to tackle the challenges and latest development in Marketing</li> <li>Management</li> <li>Awareness of buyer's behavior becomes better among students</li> <li>Students gain the Practical Knowledge to sell the goods.</li> <li>Understand how differentiations are used as mathematical tools in Business.</li> <li>Understand how matrices and determinants are used as mathematices and determinants are used as</li> <li>Able to use the appropriate statistical techniques in Business.</li> <li>Able to develop a strategic approach to organize and analyze the data</li> <li>Analyze the management</li> </ul>



LIGHT FOR US	[		
	22BFACBB2	FIRST ALLIED COURSE- II	Develop an understanding on the
		BUSINESS ENVIRONMENT	gamut of the business activities.
			$\Box$ To analyze various categories that
			constitute the business environment
			and apply various
			approaches that is helpful to manage
			both the internal and external
			environment of the
			business.
			$\Box$ To apply the various types of
			policies in the economic
			environment, applying these
			policies change the structure of the
			economy and the transition there of
			from the past to the
			present scenario.
			□ Comprehend the environmental
			factors that are conducive
			/detrimental to the respective
			businesses
			□ Facilitating the learners
			understand, analyze and take
			decisions for a given international
			business environment.
	22UGCES	ENVIRONMENTAL	• Understand the environmental
		STUDIES	importance including interactions
			across local to global scales. • The
			learners to update and analyze
			environmental relationships and
			interactions of environmental
			components • The student to gain
			knowledge on importance of natural
			resources in a systematic way. • The
			course content is introduce the
			concept of renewable and non-
			renewable energy resources and its
			scenario in India and at global level •
			The students will know the
			relationship between biodiversity and
			ecosystem functions, direct and
			indirect values of biodiversity
			resources and their bioprospecting
			opportunities. • The learners can gain
			awareness related on environmental
			pollution, causes and pollution
			control with case studies. • Student
			to obtain the environmental ethics
			and gain knowledge about the
			sustainable development. • Learners
			should realize the environmental
			legislation and policies of national
			and international regime and know
			the regulations applicable to



			induction and effective in the
			industries and other organizations
			with significant Environmental
	22PELCM1	PROFESSIONAL ENGLISH	aspects
	22PELCIVI1	FOR COMMERCE AND	• Recognise their own ability to
		MANAGEMENT –I	improve their own competence in
		MANAGEMENT -I	using the language • Use language
			for speaking with confidence in an
			intelligible and acceptable manner •
			Understand the importance of
			reading for life • Read independently
			unfamiliar texts with comprehension
			• Understand the importance of
			writing in academic life • Write
			simple sentences without committing
			error of spelling or grammar
			(Outcomes based on guidelines in
			UGC LOCF – Generic Elective)
III	22BCCBB5	CORE COURSE - V	The students will be aware of their
		MANAGERIAL	communication skills and know their
		COMMUNICATION	potential to become successful
			managers.
			• The students will get enabled with
			the mechanics of writing and can
			compose the business letters in
			English precisely and effectively.
			• Students will get exposure in drafting business proposals to most
			drafting business proposals to meet the challenges of competitive
			environment. • The students will be
			introduced to the managerial
			communication practices in business
			those are in vogue.
			• Students will get trained in the art
			of Interpersonal communication and
			technological advancement and
			social media usage in
			communications, with emphasis on
			analysing business situations.
	22BCCBB6	CORE COURSE - VI	• Students gain the knowledge of
		COMPUTER APPLICATIONS	computers
		IN BUSINESS(Theory)	• Students developed skills in MS
			Office
			• They get acquaint skills in Tally
			for business functions.
			• Student known about the GST
			• Students gain the Practical
			Knowledge in MS Office, Tally and
			GST applications
	22BSACBB1	SECOND ALLIED COURSE	Learn the basics of laws governing
		- I	commercial contracts and nuances of
		BUSINESS LAW	competency to contract, rules of
			consideration, free concern and



	22SNMECS1 / 22 LCST1 22PELCM2	NON-MAJOR ELECTIVE – I FUNDAMENTALS OF INFORMATION TECHNOLOGY / SPECIAL TAMIL PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT-II	<ul> <li>object of contract with case laws and illustrations.</li> <li>Have an insight on the provisions related to Sale of Goods Act 1930</li> <li>Understand the consequences of applicability of various laws on business situations.</li> <li>Know the rights and duties under various legal acts.</li> <li>Develop critical thinking through the use of law cases.</li> <li>Students to understand the basic concepts and working principles of internet and help them to acquire the skills needed to become successful IT professional and to expose learners to various processes of the management</li> <li>Recognise their own ability to improve their own competence in using the language • Use language for speaking with confidence in an interval with the orderectable memory of the state of the second state of the</li></ul>
			intelligible and acceptable manner • Understand the importance of reading for life • Read independently
			<ul> <li>unfamiliar texts with comprehension</li> <li>Understand the importance of writing in academic life • Write</li> </ul>
			simple sentences without committing error of spelling or grammar (Outcomes based on guidelines in UGC LOCF – Generic Elective)
187	220000007	CODE COURSE VII	
IV	22BCCBB7	CORE COURSE - VII ORGANIZATIONAL BEHAVIOUR	<ul> <li>Have an insight on how employees behave and perform in the workplace</li> <li>Analyze the individual and group behavior and understand the implications of organizationalbehavior on the process of management.</li> <li>Understand their own behavior, attitude, ethical views and performance as well as those of the people with whom they behave.</li> <li>Demonstrate how to make better decisions both as an individual and in a group</li> <li>Apply different motivational theories and methods to increase the productivity and job satisfaction of employees</li> </ul>
	22BCCBB1P	CORE PRACTICAL-I COMPUTER APPLICATION IN BUSINESS	□ To gain practical knowledge in computer applications



		(Practical)	<ul> <li>To give in-depth knowledge of documentation through MS Office packages</li> <li>To help them apply various accounting procedures through</li> </ul>
			TALLY software
	22BSACBB2	SECOND ALLIED COURSE - II OPERATIONS RESEARCH	<ul> <li>Formulate and obtain the optimal solution for Linear Programming problems.</li> <li>Determine the optimal solution for Transportation problems.</li> <li>Determine the optimal solution for for the optimal solution for the opti</li></ul>
			Assignment problems. <ul> <li>Understand the need of inventory control and Management</li> <li>Decide an optimal replacement decision for given equipment.</li> </ul>
	22SNMECS2 / 22 LCST2	NON-MAJOR ELECTIVE – II WORKING PRINCIPLES OF INTERNET / SPECIAL TAMIL	Perform end user support including identifying and implementing solutions to user requests and Analyze technical requirements to determine resource requirements and the impact the solution will have on an organization.
V	16CCBB9	CORE COURSE IX COST ACCOUNTING	To enable students to conceptualize Various methods and techniques of cost accounting and its application.
	16CCBB10	CORE COURSE X FINANCIAL MANAGEMENT	Students should be able to show Analytical skills in short term and longterm decision making. Core Course XI Company Law and Secretarial Practice
	16CCBB11	CORE COURSE XI COMPANY LAW AND SECRETARIAL PRACTICE	Understand the concept of company law and secretarial practice and comprehend important elements of company documents and to get enlightened on the role of company secretary and the procedures of meetings.
	16CCBB12	CORE COURSE XII RESEARCH METHODS IN MANAGEMENT	Students will be able to convert business problems into research problem and design research accordingly. Students will be able to identify correct statistical tools to solve problem in hand. Students will write short research report.
	16MBEBB1	MAJOR BASED ELECTIVE – I SERVICES MARKETING	Students to know the various concepts of services marketing and they understand the strategies for managing and marketing of services and to devise strategies for marketing



			services in the liberalized business environment.
	16RSBE7:2	SKILL BASED ELECTIVE – II OFFICE MANAGEMENT TOOLS	This course will help you develop an assertive and organized approach to managing people and processes in your office, to facilitate harmonious and productive working. It includes key management skills and planning techniques to improve information flow and achieve objectives.
	16RSBE7:3	SKILL BASED ELECTIVE – III COMMUNICATION & INTERPERSONAL SKILLS	Students will develop knowledge, skills, and judgment around human communication that facilitate their ability to work collaboratively with others.
	RUGSDC	SOFT SKILLS DEVELOPMENT	student will be able to effectively communicate through verbal/oral communication and improve the listening skills and write precise briefs or reports and technical documents and actively participate in group discussion / meetings / interviews and prepare & deliver presentations
VI	16CCBB13	CORE COURSE XIII HUMAN RESOURCE MANAGEMENT	Understand of the basic elements of HRM and gain knowledge on various facets, the policies and practices of HRM and to acquire knowledge on the recent trends in HRM.
	16CCBB14	CORE COURSE XIV MANAGEMENT ACCOUNTING	Students should acquire the basic knowledge required for application of tools for decision making.
	16CCBB15	CORE COURSE XV ENTREPRENEURIAL DEVELOPMENT	The students will be able to design successful Business Plan in order to setup a venture in future. The students will become more capable in selfemployment.
	16MBEBB2	MAJOR BASED ELECTIVE – II MANAGEMENT CONCEPTS IN THIRUKKURAL	To expose the students of management studies, thirukkural the book of wisdom that has stood the test of time for over 2000 years and still remains relevant as a guiding force for the mankind.
	16MBEBB3	MAJOR BASED ELECTIVE – III GLOBAL BUSINESS MANAGEMENT	understand the fundamental concepts of international trade and to comprehend basic principles of t of MNCs and to acquire broad knowledge on Global Liberalization and WTO Agreements
	UGGS	EXTENSION ACTIVITIES** GENDER STUDIES	Students will be adept at considering gender in diverse national and international contexts as a result of studying the multiple and contested



meanings and roles of gender from a historical, a multidisciplinary, and a transnational perspective, and will have developed an understanding of how gender is related to other social
categories such as race, ethnicity, social class, sexuality, religion, and nationality.



### PG and RESEARCH DEPARTMENT OF CHEMISTRY

#### **Programmes Offered:**

- **B.Sc.** (Aided)
- > M.Sc. (Aided)
- > M.Sc. (Unaided)
- > Ph.D.

#### **B.Sc. Chemistry**

PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry.

PO-2. Solve the problem and also think methodically, independently anddraw a logical conclusion.

**PO-3**. Employ critical thinking and the scientific knowledge to design, carryout, record and analyze the results of chemical reactions.

**PO-4**. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.

**PO-5**. Find out the green route for chemical reaction for sustainabledevelopment.

PO-6. To inculcate the scientific temperament in the students and outside the scientific community.

PO-7. Use modern techniques, decent equipments and Chemistry software's

#### **Course Outcomes:**

S.No	Subject Code	Name of the Course	Course Outcomes
01	22SCCCH1	General Chemistry-I	<ul> <li>To predict periodic properties and position of elements in the periodic table.</li> <li>To apply theoretical aspects in qualitative and quantitative analysis and work safe and hygienically in laboratories.</li> <li>To prepare and predict the stability and reactivities of reaction intermediates.</li> <li>To prepare &amp; explain the properties of colloids and emulsions.</li> <li>To determine the Molecular Weight of macromolecules.</li> </ul>
02	22SCCCH1P	Volumetric Analysis	•To understand the use of volumetric pipette, burette and analytical balance. • To Explain the principles of volumetric analysis, • Toprepare standard solution to find out the concentrations of unknown analyte, • To understand the selection of indicators and can apply the knowledge in chemical experiments.

#### **B.Sc. Chemistry**



03	22SCCCH2	General Chemistry-II	•To explain the principles and theories of chemical bonding. • To explain the chemistry of S-block elements and Zero group elements. • To apply the concept of common ion effect, solubility product in inorganic Semi micro qualitative analysis • To explain the reaction mechanism of haloalkanes and halobenzene. • To explain atomic models. Atomic spectrum and dual nature of light black body radiation and significances of wavefunctions.
04	22SCCCH2P	Applied experiments in Volumetric Analysis	• To Apply the principles of complexometric titrations, • To understand the conditions of complex formation. • To prepare the buffer solutions at a required pH • To select the correct titrimetric procedure along with standard and nonstandard solutions. • To perform all sorts of volumetric calculations.
05	22SCCCH3	General Chemistry-III	To explain the chemistry of p block elements. • To prepare and to predict the structure and properties of compounds of oxygen, sulphur, halogens & interhalogen compounds. • To predict the absolute and relative configuration of organic molecules. • To isolate, resolve the mixture of conformational isomers • To explain the gas laws, properties of real gases and types of molecular velocities. • To explain the types, structure and properties of solids and liquid crystals.
06	225СССНЗР	Semi micro Analysis(P)	• To understand the systematic steps to perform a qualitative analysis and the logical sequence of each step. • To understand chemical equilibria involving acid/base, redox, precipitation and complexation. • To understand the purpose of elimination of interfering acid radical, separation of groups and identifying cations and anions in aqueous solutions. • To plan, execute and record all the experimental results.
07	22SCCCH4	General Chemistry-IV	To explain the general characteristics of d and f block elements. • To apply the principles of metallurgy for extraction of metals from ores • To explain the reactions of organometallic compounds, alcohols, phenols and ethers. • To relate heat, work and energy and to calculate



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			work from pressure – volume relationships. • To determine order of the reaction and to explain theories of reaction rates.
08	22SCCCH4P	Organic Analysis and Preparation (P)	<ul> <li>Understand the fundamental methods and procedures adopted in organic analysis.</li> <li>Perform systematic qualitative organic analysis of common organic compounds</li> <li>Detect of special elements</li> <li>N, S and halogens</li> <li>Apply chemical tests to identify unknown chemical species</li> <li>Synthesise simple organic compounds on a laboratory scale.</li> <li>Perform Isolation and purification of organic compounds.</li> </ul>
09	16SCCCH5	Inorganic Chemistry -I	• To understand the basics and theories of coordination compounds. • To study a few biologically important coordination compounds. • To understand the preparation and properties of nitrosyl compounds • To learn the basic principles and applications of magnetic properties.
10	16SCCCH6	Organic Chemistry -I	•To learn the reactions of carbonyl compounds, carboxylic acids, amines, heterocycles. • To know the requirement of the oxidation and reducing agents for synthesis.
11	16SCCCH7	Physical Chemistry-I	• To know the various concepts of photochemistry and group theory. • To learn the second law of thermodynamics, carnot cycle, carnot theorem, entropy, free energy and Maxwell's relations. • To learn the third law of thermodynamics, Van't Hoff isotherm, Clausius – Clapeyron equation and Nernst heat theorem. • To understand the laws and properties of solutions. • To learn the fundamental concepts of phase rule and its applications to one, two and three component systems.
12	16SMBECH1:1	Analytical Chemistry	<ul> <li>To know the storage and handling of various chemicals and first aid procedures.</li> <li>To learn data analysis, various separation techniques.</li> <li>To learn gravimetric analysis and various thermo analytical methods.</li> <li>To learn visible spectrophotometry and colorimetry.</li> <li>To know the various electroanalytical techniques.</li> </ul>
13	16SCCCH3P	Practical-III(Physical Chemistry)	• To learn the fundamentals of conductometric and potentiometric titrations. • To understand the method of



### ADIRAMPATTINAM - 614 701

			determination of molecular weight, CST, TT and rate constant.
14	16SCCCH8	Organic Chemistry -II	• To learn the chemistry of carbohydrates, proteins, vitamins, alkaloids and terpenoids. • To understand the rearrangements and spectroscopy techniques for the elucidation of structures.
15	16SCCCH9	Physical Chemistry-II	• To learn the various concepts of electrochemistry. • To know the types and theories of catalysis. • To learn the adsorption isotherms. • To know the spectroscopic techniques such as IR, UV- visible, Raman and NMR.
16	16SMBECH2	Nuclear and Industrial Chemistry	• To know the fundamentals of nuclear chemistry. • To understand the applications of nuclear chemistry. • To study the metallic bond, theories and applications. • To understand the applications of inorganic polymers.
17	16SMBECH 3:1	PolymerChemistry	• To know the chemistry of polymers. • To study the importance of polymers. • To study the concepts ofpolymerization and techniques.
18	16SCCCH4P	Gravimetric and organic Analysis Practical-IV	• To learn the techniques of gravimetric analysis. •To learn the methods of different organic compounds preparation and analysis.

### M.Sc. Chemistry

S.No	Subject Code	Name of the Course	Course Outcomes
01	P22CHCC11	Inorganic Chemistry -I	• To understand the basic concepts of main group elements. • To learn the theories and mechanism of reactions of metal complexes. • To study the concepts of photochemistry and its applications.
02	P22CHCC12	Organic Chemistry -I	• To learn the Nomenclature of Organic Compounds • To learn stereochemistry of organic compounds. • To understand the basic concepts of aromaticity. • To know about oxidation and reducing reagents for organic synthesis.
03	P22CHCC1A	Physical Chemistry-I	<ul> <li>To study the theories of kinetics, photochemistry and radiation chemistry.</li> <li>To understand the concepts of quantum</li> </ul>



			· · · · · · · · · · · · · · · · · · ·
			mechanics and group theory. • To learn the statistical thermodynamics.
04	P22CHE1A	Analytical Chemistry	<ul> <li>To learn the instrumental methods •To learn the nature of errors and their types.</li> <li>To understand the various techniques in chromatography. •To understand the principles and instrumentation of thermoanalytical and fluorescence techniques. • To studying detail, the electroanalytical techniques.</li> </ul>
05	P22CHCC1P	Inorganic Chemistry Practical	• To perform the semi-micro qualitative analysis. • To estimate the metal ions using colorimeter. • To Prepare the coordination complexes
06	P22CHVAC1	Environmental Chemistry	• To know the fundamentals of various environment. • To study the Energy Resources, Ecosystem, Biodiversity and its Conservation. • To learn environment related social issues
07	P22CHCC21	Physical Chemistry -II	• To study the applications of quantum chemistry and group theory. • To acquire knowledge about various spectroscopic techniques.
08	P22CHCC22	Inorganic Chemistry -II	• To understand the role of metal ions in biological process. • To learn the basic concepts of chemotherapy. • To learn the fundamentals of organometallic compounds and catalysis.
09	P22CHCC2B	Bioorganic Chemistry	• To learn the preparation, properties of amino acids and proteins. • To study the activity of enzymes and cofactors. • To know basics of lipids and nucleic acids. • To learn the concept of bioenergetics. • To learn the principles of lead and analogue synthesis.
10	P22CHE2B	Pharmaceutical Chemistry	• To understand the basics of pharmaceutical chemistry. • To study the antibiotics and their activity. • To learn the analgesic and antipyretic activities. • To know the activities of anaesthetics and local anaesthetics. • To understand concept of clinical chemistry.
11	P22PYNME1	Physics for Everyone	• To understand the fundamental principles and basics of physics. • To know the light sources in our environment with concepts of physics. • To impart knowledge on energy sources in diverse fields.
12	P22CHCC2P	OrganicChemistry Practical-I	• To perform the qualitative analysis of a given organic mixture. • To estimate the organic compounds



13	P22CHCC31	Organic Chemistry -III	• To learn the Photochemistry and Pericyclic reactions • To apply the various spectroscopic techniques of organic compounds • To understand the Retro synthetic analysis and strategy.
14	P22CHCC32	Physical Chemistry-III	• To learn about the Electrochemistry • To acquire knowledge about kinetics, surface Phenomena and catalysis • To understand Classical Thermodynamics.
15	P22CHCC3A	Inorganic Chemistry - III	• To educate students on electronic and Raman spectroscopy. • To acquire knowledge in NMR,EPR and NQR spectroscopy
16	P22CHE3B	Catalysis	• To understand the basic concepts of catalysis • To know the different methods of catalysis • To learn the various techniques and mechanisms involved in catalysis.
17	P22PYNME2	Renewable Energy Sources	• To understand the necessity of using solar energy. • To learn the fundamentals of solar energy conversion systems. • To comprehend the challenges in sustainable energy processes.
18	P22CHCC3P	Physical Chemistry Practical-I	To perform the various techniques of physical chemistry experiments.
19	P22CHCC41	Chemistry of Nano Science and Nano Technology	<ul> <li>To know the basic ideas of an industry and industrial wastes.</li> <li>To understand the petroleum and petrochemicals.</li> <li>To understand the functions of portland cement.</li> <li>To study the principles of pulp and paper.</li> <li>To know the preparation of soaps, detergents and perfumes.</li> </ul>
20	P22CHCC42	Selected topics in chemistry	• To know the synthetic methods of nanomaterials. • To understand the characterization of nanomaterials. • To understand carbon clusters and nanostructures. • To learn nanotechnology and nanodevices.
21	P22CHIBC	Industrial Chemistry	• To know the basic ideas of an industry and industrial wastes. • To understand the petroleum and petrochemicals. • To understand the functions of portland cement. • To study the principles of pulp and paper. • To know the preparation of soaps, detergents and perfumes.
22	P22CHVAC2	Polymer Chemistry	• To know the basic concepts of polymers. • To study the Structure and Properties of Polymers. • To learn the applications of polymers.



#### PG & RESEARCH DEPARTMENT OF COMMERCE

#### **Programmes offered:**

- > B.Com (Aided)
- > B.Com. (Unaided)
- M.Com. (Aided)
- > Ph.D.

#### B.Com.

#### **Programme Outcomes (PO):**

The Under graduation programme in commerce is aimed at equipping students with necessary skill sets to make them fully conversant with all basic aspects in the world of business in tune with the changing times.

#### Programme Specific Outcomes (PSO)

Mentoring students to take up assignments in the domain of commerce and business with the conceptual and theoretical frameworks replicating real time job environs.

#### **Course Outcomes (CO'S)**

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	22CCCCM1	Principles of accountancy	<ul> <li>LEARNING OUTCOMES: On successful completion of the subject, the students acquired knowledge about: The Concepts and Conventions of Financial Accounting.</li> <li>Accounting for sole traders with adjustment entries and Rectification of Errors</li> <li>Calculation of Accounts of Non-profit organization and Bills of exchange.</li> <li>Accounts of the Agency Business and temporary partnership.</li> <li>Preparation of Accounts under Single Entry System. Calculation of Depreciation and</li> <li>Provisions and Reserves by using the various methods</li> </ul>
2	22CCCC M2	Marketing	LEARNING OUTCOMES : Familiar with the basic concepts and functions of marketing



			2
			<ul> <li>Effective understanding of buyer behaviour and new product development</li> <li>Communicate the pricing methods and services rendered by the middlemen</li> <li>Demonstrate analytical skills in selling the product in the market</li> <li>Develop knowledge in marketing research and recent trends in marketing</li> </ul>
3	22CFACCM1	Management Concepts	LEARNING OUTCOMES : To Understand the Evolution and theory of Management,• To develop the students to take decisions in various fields.• To get a knowledge about various organization structure and its responsibility,• To develop the flow of communication among the people,• To examine and practice the suitable leadership pattern in organization
4	22UGVED	Value Education	<ul> <li>COURSE OUTCOMES: After completion of the course, the student will be able to:</li> <li>Apply the values in thirukural to be peaceful, dutiful and responsible in family and society Develop character formation and sense of citizenship</li> <li>Be secular, self- control, sincere, respectful and moral.</li> <li>Master yoga, asana and meditation to promote mental health</li> <li>Be attitudinal to follow the constitutional rights</li> </ul>
II Semeste			
S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	22CCCCM3	Business Accounting	LEARNING OUT COMES: On successful completion of the subject, the students acquired knowledge about;



			Students are familiarized with
			branch accounts and
			departmental accounts
			• Students can deal with hire
			purchase system and
			Installment purchase system
			• Become knowledgeable on
			self balancing and sectional
			balancing ledgers and royalty
			• account. Trained to handle
			the Insolvency accounts and
			statement of affairs
			• Trained to calculate Fire
			insurance claims and
			accounting for sale or return.
2	22CCCCM4	Business Tools for Decision	LEARNING OUTCOMES:
		making	On successful completion of
		C C	the course, the students will
			Index numbers
			• Time series and
			interpolation
			• Simple correlation and
			regression
			• Measures of Dispersion and
			Skewness.
			• Basics in statistics,
			Classification, Tabulation and
			Measure of central tendency
			•acquire knowledge on
3	22CFACCM2	Business Economics	LEARNING OUTCOMES :
			The Micro and Macro
			Economics relating to
			business1 Demand and
			concepts in relation to Law of
			Demand, Demand Curves and
			Elasticity of Demand2
			Production function, scale of
			production and economics of
			large scale production and
			limitations3 Law of Supply,
			Optimum firm, pricing under
			Perfect and Monopolistic
			competition4 Income and
			Expenditure pattern of
			National Income.5
			Trational Income.5



## KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

LIGHT	FOR US		
4	22UGCES	Environmental Studies	COURSE OUTCOMES: Understand the environmental importance including interactions across local to global• scales. The learners to update and analyze environmental relationships and interactions of• environmental components The student to gain knowledge on importance of natural resources in a systematic way.• The course content is introduce the concept of renewable and non-renewable energy• resources and its scenario in India and at global level The students will know the relationship between biodiversity and ecosystem functions,• direct and indirect values of biodiversity resources and their bioprospecting opportunities. The learners can gain awareness related on environmental pollution, causes and pollution• control with case studies. Student to obtain the environmental ethics and gain knowledge about the sustainable• development. Learners should realize the environmental legislation and policies of national and• international regime and know the regulations applicable to industries and other organizations with significant Environmental aspects
S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	22CCCCM5	Partnership Accounts	COURSE OUTCOMES : On
		r	successful completion of the subject, the students acquired knowledge about: Students are aware about partnership



2	22CCCM6	Business Law	<ul> <li>accounts and various</li> <li>Accounting Treatments.</li> <li>Students can familiar with accounts for Admission of Partner, Partner's Capital Accounts and</li> <li>Balance Sheet. Students become knowledgeable on calculation of Gaining ratio, Adjustments regarding</li> <li>partner's Capital Account at the time of Retirement of a Partner Students get trained to prepare the accounts for Dissolution of partnership firm, Realisation of</li> <li>asset and Insolvency of a partner. Trained to calculate the accounts for Amalgamation of firms and Conversion of sale of a</li> <li>partnership firm to a company</li> <li>COURSE OUTCOMES : After the successful completion of the course students will able to get Knowledge about the basics of Law and to know about the meaning of contract.</li> <li>Knowledge about the law relating to Bailment, pledgement and Contract of Agency</li> <li>Knowledge about the different aspects and the rules and regulations connected with Sale of</li> <li>Goods Act Knowledge about the law relating to Negotiable Instruments, cyber-crime and the law</li> <li>relating to Information Technology.</li> </ul>
3	22CSACCM1	Business Communication	LEARNING OUTCOMES FOR THE COMMUNICATION :



			<ul> <li>Understands the basics of communication</li> <li>Knowledge about different types of communication</li> <li>Through knowledge on report writing</li> <li>Knowledge on preparation of different official letters</li> <li>Knowledge on corporate communication.</li> </ul>
4 IV Semesto	22ANMEEC1	Economics for Investors	<ul> <li>COURSE OUTCOMES: After the completion of the course students should be able to:</li> <li>Describe the types and importance of savings and investments.</li> <li>Explain the available for investment avenues</li> <li>Understand the operations of different types of investment markets.</li> <li>Evaluate the economic fundamentals and information.</li> <li>Construct objective enabling investment plans, strategy, evaluate and restructure if required.</li> </ul>

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	22CCCCM7	Cost Accounting	COURSE OUTCOMES : Learners are explained how accounts are maintained in cost a/c. and how to record • various costing transactions. Learner got insight as to where contract costing is applied, steps in contract costing, and • profit is ascertained of complete & incomplete contract. Learner understood of Process costing is



-			
			applicable and to ascertain
			cost at each stage of
			<ul> <li>process; valuation of</li> </ul>
			abnormal gain & abnormal
			loss Learner understood of
			meaning, application of
			Marginal costing towards
			Break even
			• analysis, P/V ratio used in
			Managerial decision. Learner
			got understanding of standard
			cost and its types, process,
			and types of variances
			• through application used for
			Managerial decisions
2	22CCCCM8	Banking Theory, Law and	COURSE OUTCOMES :
		practice	Elucidate the services
			rendered by banks• Have an
			understanding about various
			types of accounts and savings
			schemes• Generate
			information types of
			customers• Analyse
			information about the rights,
			responsibilities and duties of
			paying and collecting• banker
			Express opinions recent
			trends in Modern Banking•
3	22CSACCM2	Company law and secretarial	COURSE OUTCOMES:
		practices	After the successful
			completion of the course
			students will able to get
			Knowledge regarding the
			procedures to form a
			company.• Knowledge
			regarding how to prepare the
			documents of a company.
			Knowledge how to raise their
			owned capital and
			borrowings.• Knowledge
			about the types of company
			meetings.• Knowledge about
			the procedure for wind up a
			company.•
4	22ANMEEC2	Economic For Competitive	COURSE OUTCOMES:
		Examinations	After the completion of the
		Examinations	After the completion of the course students should be able
		Examinations	-
		Examinations	course students should be able to:
		Examinations	course students should be able to: Explain the basic Economic
		Examinations	course students should be able to:



### ADIRAMPATTINAM - 614 701

Examine the various
development aspects of the
Indian Economy over the
years.
•
Analyze the income structure
and poverty issues in India.
•
Explain the Tax Structure and
Fiscal Federalism in India.
Examine the Banking and
Trade aspects of India.

#### V Semester

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	16CCCCM9	Corporate Accounting	Imparting knowledge on advanced accounting methods followed in companies.
2	16CCCCM10	Auditing	Enlightening the students on processes ensuring probity in record keeping
3	16CCCCM11P/T	Computer Applications in Business	Computer Applications in Business
4	16CCCCM12	Management Accounting	Offering knowledge on accounting aimed at Management people
5	16MBECM1	Entrepreneurial Development	Providing a platform to hone their business acumen / Sharing of information on global impacting marketing programmes
6	RUGSDC	Soft Skills Development	Aimed at improving inter personal skills of Students

VI Semester

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	16CCCCM13	Financial Management	Offering vital financial jargons and techniques of financial control and management



### ADIRAMPATTINAM - 614 701

2	16CCCCM14	Income Tax Theory Law & Practice	Imparting contemporary knowledge on income tax management processes
3	16CCCCM15	Financial Services	Making students well grounded on various financial products
4	16MBECM4	Services Marketing	Introducing core knowledge on people management/ Familiarizing the ways of popularizing and monetizing services
5	16MBECM5	Insurance Management	Enabling to have elementary knowledge on insurance
6	UGGS	Gender Studies	Sensitizing the students the need to be gender neutral

#### M.Com.

#### **Programme Objective(PO):**

The Post graduation programme in Commerce is designed to empower students on advanced levels of learning through consolidation of fundamental aspects of commerce imparted in under graduation.

#### **Programme Specific Outcome (PSO)**

Equipping students with all necessary skills sets with the offering of knowledge through various tiles of courses with core informational coupled with adequate practical exposure.

Course	Outcomes	(CO's)
Lagmastar		

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	P22MCCC11	Managerial Economics	Understand the methods of
		_	Managerial Economics
			•COURSE OUTCOMES: &
			Theory of the firm. Understand
			the concept
			• & Analysis of Demand
			Forecasting. Understand the
			concept
			• & Analysis of Production
			function. Describe various
			market forms and pricing
			Methods with their objectives.



-	FOR US		
			• Analyse the resource allocation in various economic levels for
			effective capacity utilization.
			• Evaluate various market
			Structure, Strategy and Economic
			Forecasting
2	P22MCCC12	Services Marketing	COURSE OUTCOMES :
			Students will strong conceptual
			knowledge in the area of services marketing
			• Student will acquaint
			knowledge in concept of services
			marketing in buyer behaviour and
			• awareness. Students will have
			analytical skills in marketing mix,
			product strategy and PLC.
			• Students will strong knowledge
			in banking marketing insurance marketing and transport
			• marketing management. The
			commerce graduate can
			understand the tourism and hotel
			management.
3	P22MCCC13	Advanced Financial	COURSE OUTCOMES :
		Management	Formulate finance Decisions
			Considering Risk and Return.
			• Identify and discuss long term
			and short-term sources of finance.
			• Compute the cost of debt, Equity, Preference, retain
			earnings and overall cost of
			Capital.
			• Apply the concept of leverage
			in financial decision making.
			• Design an Optimal capital
			Structure of the firm,
			understanding theories of capital structure and
			• dividend. Evaluate the concept
			of Working Capital Management
4	P22MCCC1A .	Corporate law	COURSE OUTCOMES : The
			students will be able to
			understand how law is important
			in day-to-day life.
			• The students will be able
			develop the knowledge and skills
			in the understanding of the
			general
			• legal framework, and of specific
			legal areas relating to business.
			The students will get elementary
			knowledge about process of
			various legal transactions that



			• occurs in the corporate world.
			The students will be able to
			identify the process of SEBI
			Regulations and its transparency
			and
			• disclosures. The students will
			have wide knowledge about the
			Environment Protection Act and
			Consumer
			Protection Act.
5	P22MCE1B	Insurance Management	COURSE OUTCOMES :
			Understand the concepts and
			significance of insurance,
			principles and kinds of insurance,
			• impact of LPG on insurance
			industry in India and IRDA
			regulations for insurance
			business. Acquaint with life
			insurance and procedure followed
			for issuing life insurance policies
			• nominations, assignments, and
			revival and surrender value and
			claim settlement procedure for
			life insurance policies. Gain an
			insight on the nature of fire
			insurance and to know the
			procedure for making claims
			• against different kinds of
			insurance policies. Gain an
			insight on the nature of Marine
			Insurance and to know the
			procedure for making
			• claims against different kinds of
			insurance policies. Understand
			the features of personal accident
			insurance and general insurance.
6	P22MCVAC1	Mutual Funds - Concepts	COURSE OUTCOMES : The
		and Planning	students, after the completion of
		Ŭ Ŭ	the course would be able to
			Know the basics of mutual funds,
			their role and structure.
			• To know the different kinds of
			mutual fund schemes and their
			features.
			<ul> <li>Understand the channels for</li> </ul>
			mutual funds distribution
			• Understand the legalities,
			accounting, valuation and taxation
			aspects underlying mutual
			• funds and their distribution. Get
			acquainted with financial
			planning as an approach to
			investing in mutual funds, as an



II semester

## KHADIR MOHIDEEN COLLEGE,

ADIRAMPATTINAM - 614 701

	• aid for mutual fund distributors. To develop long term relationships with their clients.

NAME OF THE SUB.CODE **COURSE OUTCOME** S.No: COURSE Developing research 1 P22MCCC21 **Research Methodology** design and acquiring skills to formulate research • Learning the meaning of research, its types. •COURSE OUTCOMES : Upskilling Data construction, collecting techniques and testing their validity • Acquiring knowledge of sampling technique and formulating Hypotheses. •problems. Developing skills in Processing and analysis of data, applying various •and reliability. Developing skills to draft a report. •statistical tools using software packages. COURSE OUTCOMES 2 P22MCCC22 Quantitative Techniques of business : To make the students evaluate different decision quantitative techniques • The students will be able to take opt decisions in business. • The students will have knowledge in statistic and quantitative techniques. • The students will be familiar with decision making skills.



			• The students will be
			able to design new skills
			in decision making.
3	P22MCCC23	Income Tax Law and	COURSE OUTCOMES
		Practice	Enabling students to file
			tax returns
			• Providing avenues for
			employment
			opportunities in tax
			filing
			• Grasping the basics
			and advanced concepts
			in tax planning in
			knowledge perspective
4	P22MCCC2A		COURSE OUTCOMES
4	PZZIVICCCZA	Human resource	: Understand the
		management	
			concept of HRM.
			• Identify the need for
			man power planning.
			Gain Knowledge
			about various training
			programmes.
			• Know the procedures
			for recruitment and
			selection.
			• Enhance performance
			appraisal techniques.
			• Gain Knowledge
			about settlement about
			grievances.
5	P22MCE2A	Organisational	COURSE OUTCOMES
		Behaviour	: To understand the
			conceptual framework
			of the discipline of OB
			and its practical
			• applications in the
			organizational set up.
			To deeply understand
			the role of individual-
			groups and structure in
			achieving
			<ul> <li>organizational goals</li> </ul>
			effectively and
			efficiently. To critically
			evaluate and analyse
			various theories and
			models that contributes
			in the overall
			• understanding of the
			discipline. To develop
			creative and innovative
			ideas that could



## ADIRAMPATTINAM - 614 701

			<ul> <li>positively shape the organizations.</li> <li>To accept and embrace in working with different people from different cultural and diverse</li> <li>background in the workplace.</li> </ul>
6	P22CHNME1	Chemistry of Pollution, Food and Cosmetics	

## II<u>I</u> semester

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
	P22MCCC31	Advanced Corporate Accounting	COURSE OUTCOMES : The students will be able Construct the financial statements of company within the frame • work of Ind AS 2 The students will be able to devise a plan for reconstruct the capital structure in the financial • statement of Joint stock company ltd. The students will be able to determine how the companies are analysed at the time of • Merger and Acquisition and its accounting procedures The students will familiarize about the concepts and the legal requirements related to • presentation of accounts by a holding company The students will be able to justify the outstanding claims against the Company and satisfy • those claims in the manner and order prescribed by law. The students will be to elaborate the various principles, provisions that govern the banking



2P22MCC32Information Technology Concepts (Theory)COURSE OUTCOMES : Conscessful completion of the course for the course of the				
2P22MCC32Information Technology Concepts (Theory)COURSE OUTCOMES Course the students will be able to Know Evolution, Classification and Applications of Computers3P22MCC33PInformation Technology Concepts (Practical)Course the students will be able to Know Evolution, Classification and Applications of Computers3P22MCC33PInformation Technology Concepts (Practical)COURSE OUTCOMES computers3P22MCC33PInformation Technology Concepts (Practical)COURSE OUTCOMES computers3P22MCC33PInformation Technology Concepts (Practical)COURSE OUTCOMES completion of the course, the students will acquire still on: creating and Editing Word Documents; and Mail Merge. Creating and Editing Word Documents; and Mail Merges, Relationship, Query, Forms, Reports and Macros • Page maker and methods to use. • Photoshop, Images and Animation4P22MCCC3ABrand ManagementCOURSE OUTCOMES				companies and how the Human resources are maintained in an organization in order to achieve cost effective
2P22MCCC32Information Technology Concepts (Theory)COURSE OUTCOMES : On Successful completion of the course, the students will be able to Know Evolution, Classification and Applications of Computers3P22MCC33PInformation Technology Concepts (Practical)COURSE OUTCOMES : On Successful computers 				0
3P22MCC33PInformation Technology Concepts (Practical)COURSE OUTCOMES : On successful completion of the course, the students will acquire skill on: Creating and Editing Word Documents and Saving, opening, closing and protecting • documents; and Mail Merge. Creating work sheet and Charts, formula applications, and PPT.OUTSE OUTCOMES : On successful course, the students will acquire skill on: Creating and Editing Word Documents and Saving, opening, closing and protecting • documents; and Mail Merge. Creating work sheet and Charts, formula applications, and PPT.• MS Access, Database, Relationship, Query, Forms, Reports and Macros • Page maker and methods to use. • Photoshop, Images and Animation4P22MCCC3ABrand Management	2	P22MCCC32		COURSE OUTCOMES : On successful completion of the course, the students will be able to Know Evolution, Classification and Applications of Computers • Understand Computer peripherals • Have knowledge on Software, Programming Language, Word Processing and Spread Sheets • Presentation Do Data Communication and BDP • Aware Computerized
4 P22MCCC3A Brand Management COURSE OUTCOMES	3	P22MCC33P		<ul> <li>: On successful completion of the course, the students will acquire skill on: Creating and Editing Word Documents and Saving, opening, closing and protecting</li> <li>documents; and Mail Merge. Creating work sheet and Charts, formula applications, and PPT.</li> <li>MS Access, Database, Relationship, Query, Forms, Reports and Macros</li> <li>Page maker and methods to use.</li> <li>Photoshop, Images</li> </ul>
	4	P22MCCC3A	Brand Management	



## ADIRAMPATTINAM - 614 701

6P22CHNME2Chemistry in Day-To- Day LifeCompletion of the subject, the students acquired knowledge about: Branding challenges & opportunities. Strategies for positioning the brand for competitive advantage • Managing Brand image • Implications for buying& selling brands. Co-branding & Licensing Brands.5P22MCE3BProject ManagementCURRSE OUTCOMES columnation and reasonable. Co-branding & Licensing Brands.6P22CHNME2Chemistry in Day-To- Day LifeStatebolders.				
5P22MCE3BProject ManagementCOURSE OUTCOMES : Understand project characteristics and various stages of a project.•Understand the conceptual clarity about project organization and feasibility analyses: • Market- Technical- Financial and Economic. Analyse the learning and understand techniques for Project planning- scheduling and • Execution Control. Apply the risk management plan and analyse the role of stakeholders.6P22CHNME2Chemistry in Day-To-				subject, the students acquired knowledge about: Branding challenges & opportunities. Strategies for positioning the brand for competitive advantage • Managing Brand image • Implications for buying& selling brands. Co-branding &
	5	P22MCE3B	Project Management	COURSE OUTCOMES : Understand project characteristics and various stages of a project. • Understand the conceptual clarity about project organization and feasibility analyses: • Market- Technical- Financial and Economic. Analyse the learning and understand techniques for Project planning- scheduling and • Execution Control. Apply the risk management plan and analyse the role of
	6	P22CHNME2		

IV semester

S.No:	SUB.CODE	NAME OF THE COURSE	COURSE OUTCOME
1	P22MCCC41	Strategic Management	COURSE OUTCOMES : Upon Successful completion of this course the students would be able Acquire knowledge on basic concepts of strategy and levels of strategy .• Understand the strategic options and



2	P22MCCC42	Advanced Cost and Management Accounting	formulate realistic strategies to formulate vision • mission and analyse a firm's internal strengths and weaknesses based on available resources and capabilities using various techniques. Develop Knowledge on firm's external environment including competitive forces in the • industry environment, forces in the macro environment, and competitors Demonstrate the knowledge on the strategic approaches to manage a business successfully• on the nature of business and industry COURSE OUTCOMES : Understand the basis of conventional and contemporary costing systems
			<ul> <li>Determine the costs of products and services</li> <li>Critically analyse relevant costs and provide recommendations for decision making</li> <li>Prepare plans and budgets and analyse variances from standard cost to pinpoint areas that</li> <li>need control</li> </ul>
3	P22MCIBC	Entrepreneurship Development	<ul> <li>Reed control</li> <li>COURSE OUTCOMES</li> <li>To offer the students to understand the basic knowledge of entrepreneurship.</li> <li>To understand the EDP practices and preparation of project report.</li> </ul>



			<ul> <li>To familiarise in project market information, sources and financial problems.</li> <li>To explain the finance to trade.</li> <li>To describe the importance various organisations involved in entrepreneurial growth.</li> </ul>
4	P22MCPW	Project work	
5	P22MCVAC2	Basics of GST (Goods and Service Tax)	<ul> <li>COURSE OUTCOMES</li> <li>The students will get a general understanding of the GST law in the country</li> <li>The students will provide an Insight into practical aspects of GST</li> <li>The students will equip themselves to become tax practitioners.</li> <li>The students will be able to calculate GST at different level.</li> </ul>



ADIRAMPATTINAM – 614 701

#### PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

#### Programme Outcomes (B.Sc. Computer Science)

- Graduates will be able to comprehend the basic concepts learnt and apply in real life situations with analytical skills.
- Graduates with acquired skills and enhanced knowledge will be employable / become entrepreneurs or will pursue higher Education.
- Graduates with acquired knowledge of modern software tools will be able to contribute effectively as software engineers.
- Graduates will be able to comprehend the related concepts to Computer Science with Allied papers
- Graduates will be imbibed with ethical values and social concerns to ensure peaceful society.

S. No.	Name of the Course	<b>Course Code</b>	Course Outcome
1.	PROGRAMMING IN C AND DATA STRUCTURES	22SCCCS1	To know about the basics of C Programming, Control and Looping Structures and programming with it and know about the basic concepts in Data Structures.
2.	PROGRAMMING IN C LAB	22SCCCS1P	To impart hands-on training for writing a C program using computers.
3.	PROGRAMMING IN JAVA	22SCCCS2	To implement the object- oriented concepts with Java language
4.	PROGRAMMING IN JAVA LAB	22SCCCS2P	To implement the object- oriented concepts with java language
5	PROGRAMMING IN PYTHON	22SCCCS3	To develop programs using functions and pass arguments in python.
6.	PROGRAMMING IN PYTHON LAB	22SCCCS3P	To write, test, and debug simple Python programs
7.	FUNDAMENTALSOF INFORMATION TECHNOLOGY	22SNMECS1	To familiarize the students with the world of IT and IT- enabled services.
8.	DATABASE MANAGEMENT SYSTEMS	22SCCCS4	To impart the basic database concepts, applications, data models, schemas and instances



-	12.04		
9.	DATABASE MANAGEMENT SYSTEMS LAB	22SCCCS4P	To understand the basic concepts and the applications of database systems using MYSQL
10.	WORKING PRINCIPLES OF INTERNET	22SNMECS2	To teach the basics of the World Wide Web
11.	FUNDAMENTALS OF ALGORITHMS	22SCCCS5	To study the fundamentals of algorithms
12.	COMPUTER NETWORKS	22SCCCS6	To describe the general principles of Computer Networks
13.	DIGITAL ELECTRONICS AND MICROPROCESSOR	22SCCCS7	To impart knowledge about the basics of Digital Systems
14.	DIGITAL ELECTRONICS AND MICROPROCESSOR LAB	22SCCCS5P	To have hands-on experience with digital electronics concepts
15.	ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEMS	22SMBECS1A	To study about the basic concepts in Artificial intelligence and reasoning
16.	COMPUTR GRAPHICS	22SMBECS1B	To understand the basic objectives and scope of computer graphics.
17.	WEB TECHNOLOGY	22SSBECS1	To understand the basic concepts related to HTML, JavaScript and VB script.
18.	OPERATING SYSTEMS	22SCCCS8	To understand the basics of Operating systems and their working
19.	PROGRAMMING IN PHP	22SCCCS9	To know about various constructs available in PHP
20.	PROGRAMMING IN PHP LAB	22SCCCS6P	To acquire the programming experience in PHP
21.	SOFTWARE ENGINEERING	22SMBECS2A	To impart knowledge in the life cycle of software engineering
22.	BIG DATA ANALYTICS	22SMBECS2B	To explore the fundamental concepts of big data analytics
23.	PROJECT	22SCSPW	The candidate shall be required to take up a Project Work by group or individual and submit it at the end of the final year.
24	MOBILE APPLICATION DEVELOPMENT	22SSBECS2	To understand about user Interfaces for the Android platform and to familiarize of the Android Studio development tool.



ADIRAMPATTINAM - 614 701

#### Programme Outcomes (B.C.A.)

- Graduates will be able to comprehend the basic concepts learnt and apply in real life situations with analytical skills.
- Graduates with acquired skills and enhanced knowledge will be employable / become entrepreneurs or will pursue higher Education.
- Graduates with acquired knowledge of modern software tools will be able to contribute effectively as software engineers.
- Graduates will be able to comprehend the related concepts to Computer Science with Allied papers
- Graduates will be imbibed with ethical values and social concerns to ensure peaceful society.

S. No.	Name of the Course	<b>Course Code</b>	Course Outcome
1.	PROGRAMMING IN C AND DATA STRUCTURES	22SCCCA1	To know about the basics of C Programming, Control and Looping Structures and programming with it and know about the basic concepts in Data Structures.
2.	PROGRAMMING IN C LAB	22SCCCA1P	To impart hands-on training for writing a C program using computers.
3.	PROGRAMMING IN JAVA	22SCCCA2	To implement the object- oriented concepts with Java language
4.	PROGRAMMING IN JAVA LAB	22SCCCA2P	To implement the object- oriented concepts with java language
5	PROGRAMMING IN PYTHON	22SCCCA3	To develop programs using functions and pass arguments in python.
6.	PROGRAMMING IN PYTHON LAB	22SCCCA3P	To write, test, and debug simple Python programs
7.	FUNDAMENTALSOF INFORMATION TECHNOLOGY	22SNMECA1	To familiarize the students with the world of IT and IT- enabled services.
8.	DATABASE MANAGEMENT SYSTEMS	22SCCCA4	To impart the basic database concepts, applications, data models, schemas and instances
9.	DATABASE MANAGEMENT SYSTEMS LAB	22SCCCA4P	To understand the basic concepts and the applications of database systems using MYSQL
10.	WORKING PRINCIPLES OF INTERNET	22SNMECA2	To teach the basics of the World Wide Web



### ADIRAMPATTINAM - 614 701

11.	FUNDAMENTALS OF ALGORITHMS	22SCCCA5	To study the fundamentals of algorithms
12.	COMPUTER NETWORKS	22SCCCA6	To describe the general principles of Computer Networks
13.	DIGITAL ELECTRONICS AND MICROPROCESSOR	22SCCCA7	To impart knowledge about the basics of Digital Systems
14.	DIGITAL ELECTRONICS AND MICROPROCESSOR LAB	22SCCCA5P	To have hands-on experience with digital electronics concepts
15.	ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEMS	22SMBECA1A	To study about the basic concepts in Artificial intelligence and reasoning
16.	COMPUTR GRAPHICS	22SMBECA1B	To understand the basic objectives and scope of computer graphics.
17.	WEB TECHNOLOGY	22SSBECA1	To understand the basic concepts related to HTML, JavaScript and VB script.
18.	OPERATING SYSTEMS	22SCCCA8	To understand the basics of Operating systems and their working
19.	PROGRAMMING IN PHP	22SCCCA9	To know about various constructs available in PHP
20.	PROGRAMMING IN PHP LAB	22SCCCA6P	To acquire the programming experience in PHP
21.	SOFTWARE PROJECT MANAGEMENT	22SMBECA2A	To be familiar with the different methods and techniques used for project management.
22.	E-COMMERCE TECHNOLOGIES	22SMBECA2B	To study ecommerce concepts with case studies
23.	PROJECT	22SCAPW	The candidate shall be required to take up a Project Work by group or individual and submit it at the end of the final year.
24	INTERNET OF THINGS	22SSBECA2	To learn the concepts of IoT and its protocols.

#### **Programme Outcomes (M.Sc., Computer Science)**

- An ability to apply mathematical model, algorithmic principles, and computer science theory in the design of real-time applications
- Get expertise in developing smart applications
- Apply computer science theory and software development concepts to construct computing-based solutions.
- Discover the opportunity for entrepreneurship and create and add value for



## KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

the betterment of an individual and society at large.

• Use research-based knowledge and research methods to design, analyze, and interpret data and synthesize information to provide valid findings to serve the

community

S. No.	Name of the Course	Course Code	Course Outcome
1.	MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	P22CSCC11	Ability to apply mathematical logic to solve problems.
2.	PROBLEM SOLVING USING PYTHON AND R	P22CSCC12	To understand Computational thinking using Python.
3.	ADVANCED JAVA PROGRAMMING	P22CSCC1A	To deepen student's programming skills by analyzing the real world problem in a programmer's point of view.
4.	WEB TECHNOLOGIES	P22CSCC1B	To provide fundamental concept of Internet, JavaScript, XML, JSP, ASP with a view to developing professional software development skills.
5	PROBLEM SOLVING USING PYTHON AND R	P22CSCC1P	To develop Python and R Programming Skills
6.	ADVANCED JAVA PROGRAMMING	P22CSCC1AP	To develop java Programming Skills
7.	WEB TECHNOLOGIES	P22CSCC1BP	To develop Web Application Programming Skills
8.	WEB SERVICES	P22CSE1A	To enable the student to be familiar with distributed services, XML and web services.
9.	MICROPROCESSOR AND MICROCONTROLLERS	P22CSE1B	To realize the 8086 Microprocessor Architecture, Operations, Programming,
10.	COMPUTER GRAPHICS AND MULTIMEDIA	P22CSE1C	To understand the graphics hardware And get knowledge about Raster Graphics for drawing 2_D primitives
11.	SECURITY IN COMPUTING	P22CSVAC1	Understand various threats Understand Security in operating systems, database and networks
12.	ADVANCED DATABASE MANAGEMENT SYSTEM	P22CSCC21	Understand Relational Model Get knowledge about SQL as well as NoSql and understand transaction management
13.	COMPILER DESIGN	P22CSCC22	Define the design and intrinsic functioning of compilers Identify the purpose and functions of phases of the compiler



14.	DISTRIBUTED TECHNOLOGIES	P22CSCC2A	To provide ideas to be able to compare the architectures of distributed systems
15.	MOBILE APPLICATION DEVELOPMENT	P22CSCC2B	A good understanding on the Mobile Environment. To Understand the Features of Android
16.	ADVANCED DATA BASE MANAGEMENT SYSTEM	P22CSCC2P	To implement Advanced Database System concepts
17.	DISTRIBUTED TECHNOLOGIES	P22CSCC2AP	To develop JEE, ASP based distributed programs for understanding.
18.	MOBILE APPLICATION DEVELOPMENT	P22CSCC2BP	To develop Android based Mobile applications.
19.	E-COMMERCE TECHNOLOGIES	P22CSE2A	Get knowledge about e-commerce framework. Explain electronic system for payment.
20.	OPEN SOURCE SYSTEMS	P22CSE2B	To understand open-source licenses and learn the implications for users, developers and the software community.
21.	GREEN COMPUTING	P22CSE2C	Understand Green IT fundamentals Get knowledge about green assets and models Understand Grid framework
22.	FUNDAMENTALS OF INFORMATION TECHNOLOGY	P22CSNME1	To understand the revolution in computers and communications To know about various application software
23.	BIG DATA ANALYTICS	P22CSCC31	To impart knowledge in Fundamentals of Big Data Analytics.
24.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	P22CSCC32	To understand the problem-solving methods using state space search
25.	USER INTERFACE DESIGN AND DEVELOPMENT	P22CSCC3 A	To learn new emerging web technologies.
26.	CRYPTOGRAPHY AND NETWORK SECURITY	P22CSCC3B	To describe various terminologies in network security.
27.	MACHINE LEARNING	P22CSCC3P	To develop machine learning programs to illustrate real life examples



#### ADIRAMPATTINAM – 614 701

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	USER INTERFACE DESIGN	P22CSC	To develop programs for front-end
28.	AND	СЗАР	web development.
	DEVELOPMENT	0.57 M	
	CRYPTOGRAPHY AND	P22CSCC3BP	To develop programs to demonstrate
29.	NETWORK		Cryptography and network security
	SECURITY		algorithms.
		P22CSE3A	Understand basic concepts of self-
20	SWADM INTELLICENCE		organization, meta heuristic, and
30.	SWARM INTELLIGENCE		explain
			popular swarm intelligent algorithms.
0.1		P22CSE3B	To understand the history, types and
31	BLOCK CHAIN TECHNOLOGY		applications of Blockchain
		P22CSE3C	To study the various concepts,
22	DIGITAL IMAGE PROCESSING	12200230	methods and algorithms of digital
32.			image
			processing
22	FUNDAMENTALS OF	P22CSNME2	To study the basic concepts of
33.	INTERNET		Internet
		P22CSCC41	To provide students with a theoretical
			as well as practical understanding of
24	AGILE TECHNOLOGIES		agile software development practices
34.			and how small teams can apply them
			to
			create high-quality software.
35.	CLOUD COMPUTING	P22CSCC42	To be Familiar with the Cloud
55.		F22CSCC42	Architecture
	TECHNOLOGY INNOVATION		Provide information, frameworks,
36.	AND	P22CSIBC	and tools for identifying and pursuing
	SUSTAINABLE ENTERPRISE		sustainable business opportunities
			Each candidate shall be required to
37.	PROJECT	P22CSPW	take up a Project Work and
			submit it at the end of the final year.
	FOUNDATIONS OF IOT	P22CSVAC2	To understand the concepts of
38.			Internet of Things
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#### **Programme Outcomes (M.Sc., Information Technology)**

- Understand how technical developments can be achieved.
- Enhance the development of critical thinking, code writing skills and configuring the technical tools.
- Prepares students for a wide variety of careers in IT related all industries with research bent of mind.
- Able to develop strong analytical skills, critical thinking and experimental skills.
- Understand how technological advances impact society and the social, legal, ethical and cultural ramifications of computer technology and their usage.

S. No.	Name of the Course	Course Code	Course Outcome
1.	Object Oriented System Development	P22ITCC11	To introduce the concept of Object-oriented design and understand the



			Fundamentals of OOSD life cycle.
2.	Advanced Database Management Systems	P22ITCC12	Acquire Knowledge of Database Models, Applications of Database
3.	Web Programming	P22ITCC1A	To introduces the concepts of PHP, MySQL, HTML 5, CSS.
4.	Advanced Data Structures	P22ITCC1B	To provide the knowledge of advanced data structures and their implementations
5.	Advanced Database Management Systems Lab	P22ITCC1P	To understand about SQLand develop the programsforprocessingtheDatabase.
6.	Web Programming Lab	P22ITCC1AP	To develop Web programming skills.
7.	Advanced Data Structures Lab	P22ITCC1BP	ToimplementDataStructuresusingC/C++/Java
8.	E-Commerce	P22ITE1A	To acquire the basic concept of E-Commerce
9.	Open Source Technologies	P22ITE1B	Understand the difference between open-source software and commercial software.
10.	Green Computing	P22ITE1C	Study the concepts related to Green IT
11.	Multimedia And Animation	P22ITVAC1	It introduces how multimedia can be used in various application areas.
12.	Advanced Operating Systems	P22ITCC21	To study the characteristics of Multiprocessor and Multi computer
13.	Foundations of Information Security	P22ITCC22	Understand the conceptual foundation of information security awareness
14.	J2EE Technologies	P22ITCC2A	To design and develop web based and enterprise applications using J2EE.
15.	Data Mining Technologies and Tools	P22ITCC2B	Introduce the basic concepts of data mining and various data mining techniques like classification, clustering, and association rule mining



16.	Advanced Operating Systems Lab	P22ITCC2P	To understand Advanced Operating System using C/C++ programs.
17.	J2EE Technologies	P22ITCC2AP	To understand Distributed Technology skills using J2EE.
18.	Data Mining Technologies and Tools Lab	P22ITCC2BP	To implement data mining techniques using C/C++
19.	Wireless Networks	P22ITE2A	Understand the basic WSN technology and supporting protocol
20.	Big Data Framework	P22ITE2B	To understand the basic concepts of Big data.
21.	Internet of Things	P22ITE2C	Understand the basic concepts of IoT, IoT Protocols and design methodology.
22.	Fundamentals of Information Technology	P22ITNME1	To understand the revolution in computers and communications
23.	Principles of Compiler Design	P22ITCC31	To get familiar with the structure of the compilation process
24.	Problem Solving using R	P22ITCC32	Introduce the basic features of R Programming.
25.	Distributed Technologies	P22ITCC3A	To introduce the technologies behind the distributed computing environment
26.	Machine Learning Techniques	P22ITCC3B	To Learn about Machine Intelligence and Machine Learning applications
27.	Problem Solving using R	P22ITCC3P	To develop programs for solving real world problems using R
28.	Distributed Technologies	P22ITCC3AP	To develop JEE, ASP based distributed programs for understanding
29.	Machine Learning Techniques	P22ITCC3BP	To develop machine learning programs to illustrate real life examples
30.	Web Services	P22ITE3A	To Understand the Basic Virtual Machines Concepts
31.	Software Metrics	P22ITE3B	To gain basic knowledge about metrics,



### ADIRAMPATTINAM - 614 701

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			measurement theory and related
			terminologies
		P22ITE3C	To understand the
32.	Parallel Computing		technologies enabling
			parallel computing
		P22ITNME2	To understand the
33.	Fundamentals of Internet		revolution in Internet
			Technology
		P22ITCC41	To understand the
34.	Software Project Management		Software Project Planning
			and Evaluation techniques
	Cloud Computing		To understand the broad
35.		P22ITCC42	perceptive of cloud
			architecture and model
			Provide information,
	Technology Innovation and Sustainable	P22ITIBC	frameworks, and tools for
36.	Enterprise		identifying and pursuing
			sustainable business
			opportunities
			Each candidate shall be
			required to take up a
37.	Project	P22ITPW	Project Work and submit
			it at the end of the final
			year
20	Cyber Security Fundamentals	P22ITVAC2	To understand the Basic
38.			Concepts in Cyber
			Security

#### **Programme Outcomes (PGDCA – Post Graduate Diploma in Computer Applications)**

- Aspiring for higher degrees and research work in computers.
- Attaining specialization in specific domains of Computer Applications.
- Applying Knowledge in Software Development/ IT Sectors
- Applying skilled knowledge in Banking, Insurance, Teaching and other services in Corporate and Government sectors.

S. No.	Name of the Course	Course Code	Course Outcome
1.	Programming with C++	P16DCA11	To impart Object-Oriented Programming Skills using C++
2.	Operating Systems	P16DCA12	To present the fundamental aspects of various managements in an operating systems
3.	Computer Organization & Architecture	P16DCA13	To understand the principles of digital computer logic circuits and their design.
4.	C++Programming Lab	P16DCA14P	To get hand-s on experience in developing Programs using C++.



5.	Shell Programming Lab	P16DCA15P	To get hand-s on experience in developing UNIX Shell programs.
6.	Programming in Java	P16DCA21	To impart sound knowledge in Object-Oriented Programming skills in Java.
7.	Database System	P16DCA22	To impart knowledge about relational database and distributed database.
8.	Computer Graphics	P16DCA23	To present concepts on basic graphical techniques, raster graphics, two-dimensional and three-dimensional graphics.
9.	Java Programming Lab	P16DCA24P	To get hand-s on experience in developing Programs using Java.
10.	Database System Lab	P16DCA25P	To get hand-s on experience in developing queries and designing forms using RDBMS software.



#### PG AND RESEARCH DEPARTMENT OF ECONOMICS

#### **Programmes offered:**

- ➢ B.A. Economics (Aided)
- M.A. Economics (Unaided)
- ➢ Ph.D.

#### Programme outcome - Bachelor of Arts (Economics)

Demonstrate a detailed knowledge and understanding of selected fields of study in core disciplines in the humanities, social sciences and languages ; Apply critical and analytical skills and methods to the identification and resolution of problems within complex changing social contexts.

#### Programme Specific outcome

Students will be able to describe how economic trade-offs and social values impact public / private policy. Students will be able to explain the function of markets and prices as allocative mechanisms. Students will be able to explain how fiscal and monetary policies can be used to..

Sl.No.	Subject Code	Name of the Course	Course Outcomes
1.	22ACCEC1	Micro Economics –I	Understand and analyse the traditional and
			modern definitions of Micro Economics
			Analyse the impact of economic events on markets
			markets.
			Inspect the behavior of consumers in terms
			of the demand for products.
			Examine the performance of firms under
			different market situations.
			Evaluate the elements affecting production
			and costs.
			Apply the various concepts of economic
			theory on the recent economic events.
2.	22ACCEC2	Tamil Nadu Economy	Recall the demographic features of Tamil
			Nadu.
			Outline the agricultural and rural
			development situation and policies of
			Tamil Nadu.
			Elucidate the industrial development
			situation of Tamil Nadu.
			Analyse the role of State Finance and
			Development Programmes in the Growth of
			TamilNadu.
			Evaluate the General Performance of Tamil
			Nadu economy.



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			Understand the various current events
			related to Tamil Nadu economy and view
2			them in a policy perspective.
3.	22AFACEC1	Principles of	State the fundamentals of Commerce. Discuss the fundamentals of hearbing and
		Commerce (First AC –	Discuss the fundamentals of banking and insurance
		I)	<ul><li>insurance.</li><li>➢ Examine the role of advertisement and</li></ul>
			media.
			Analyse the role of finance in balanced
			regional development.
			<ul> <li>Assess the principles of management.</li> </ul>
			Become cognizant of the various recent
			developments in the principles of
			commerce and management.
4.	22ACCEC3	Micro Economics- II	Understand the factors involved in price
			determination under perfect competition.
			Asses the price determination factors in monopoly.
			<ul> <li>Evaluate the methods of fixing prices under</li> </ul>
			imperfect competition.
			<ul> <li>Analyse the impact of rent and wages with</li> </ul>
			theories.
			Understand the interpretations of the
			various postulates of profit and interests.
			Become cognizant of the various recent
			developments in Microeconomic theory
			and practice.
5.	22ACCEC4	Indian Economic	Analyse the basic issues in growth and
		Development	development with a historical and general
			<ul><li>perspective.</li><li>Gain a comparative Perspective on key</li></ul>
			Issues related to Poverty, Inequality,
			Education, Health and Gender.
			<ul> <li>Evaluate the Policies and Performance of</li> </ul>
			Agriculture and Industry.
			<ul> <li>Identify various Economic Reforms related</li> </ul>
			to the primary and secondary Sectors.
			Determine and analyse the Female Labour
			Force Participation in India.
			Become cognizant of the recent
			developments in Indian Economic
			development and policy.
6.	22AFACEC2	Economic Statistics	Examine the nature and scope of statistics.
		(First AC – II)	Summarize the Difference Between
			classification and Tabulation.
			Solve problems related to Arithmetic mean,
			Median and Mode.
			Solve problems related to various measures of dispersion
			of dispersion.



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			<ul> <li>Learn to evaluate the Karl Pearson, Bowley and Kelly's Measures of Skewness.</li> <li>Become cognizant of the recent</li> </ul>
			developments in Economic Statistics
7.	22ACCEC5	Macro Economics –I	<ul> <li>Analyse the characteristics of Macro Economics</li> </ul>
			<ul> <li>Evaluate the measures of National Income</li> </ul>
			<ul> <li>Appreciate the implications of Classical</li> </ul>
			theory of employment.
			<ul> <li>Understand the importance of effective</li> </ul>
			demand.
			Learn the applicability of consumption theories in real life situations.
			<ul> <li>Become updated about the various</li> </ul>
			contemporary developments in
			Macroeconomic theory.
8.	22ACCEC6	Money and Banking	<ul> <li>Understand the prime factors and concepts</li> </ul>
0.	22ACCLC0	woney and Danking	of monetary economics and banking theory.
			<ul> <li>Appreciate simple articles related to</li> </ul>
			monetary economics and banking theory.
			<ul> <li>Understand current events and concepts</li> </ul>
			related to monetary economics and banking
			theory.
			<ul> <li>Acknowledge the importance of monetary</li> </ul>
			phenomenon in the economy.
			<ul> <li>Understand the role and function of RBI.</li> </ul>
			Become aware of the various contemporary
			theoretical and empirical developments in
			Money and Banking.
9.	22ASACEC1	Statistical Methods	Obtain knowledge on the statistical
		(Second $AC - I$ )	concepts, methods & techniques related to
			Economics.
			Understand the significance and
			applicability of statistical analysis in
			Economics.
			Gain knowledge on statistical analysis and
			hypothesis testing.
			Identify the type of statistical situation to
			which different distributions and statistical
			tools can be applied.
			Develop skills to carry out statistical
			analysis works.
			Become cognizant of the recent
10		Enceders M.	developments in Statistical Methods.
10.	22ANMEHI1	Freedom Movement in	Illustrate the Emergence of Indian Nationalism
		India (NME– I)	Nationalism.
			Understand the growth of Nationalism in India
			India.



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			Recognizes the Struggle for Independence and the managers having her the Driving to the
			and the proposals given by the British to
			Indians.
			Explores the efficiency of India on the
			threshold of Independence.
			Illustrate the various incidents and
			prominent leaders who worked towards the
			freedom.
11.	22ACCEC7	Macro Economics –II	Evaluate the relationship between GNP and
			the standard of living of a nation.
			Learn about the rationale for the study of
			national income accounts.
			Understand the various theories of
			Classical and Keynesian school of thought.
			Become familiar with the psychology of
			consumers with respect to consumption
			pattern.
			<ul> <li>Become aware of fiscal and monetary</li> </ul>
			policies and their relevance to Indian
			economy.
			<ul> <li>Become cognizant of the various recent</li> </ul>
			developments in Macroeconomic theory
			and practice.
12.	22ACCEC8	Monetary Economics	<ul> <li>Understand how value of money is</li> </ul>
12.	22ACCEC0	Wonetary Leononnes	determined.
			<ul> <li>Gain knowledge about the derivation of</li> </ul>
			•
			<ul><li>Philips curve from aggregate supply curve.</li><li>Understand the theories of demand for</li></ul>
			money.
			Understand the importance of exchange rate
			rate.
			<ul> <li>Gain knowledge about Financial Market.</li> <li>Bassens acception of the various resent</li> </ul>
			Become cognizant of the various recent
10			developments in Monetary Economics.
13.	22ASACEC2	Mathematics for	Understand basic concepts of mathematics
		Economics (Second	and its application in economics.
		AC – II)	Analyze the relevance of the types of
			matrices and its use in solving simultaneous
			equations.
			Gain knowledge of the rules of
			differentiation and its economic
			applications.
			Optimize the single variable functions in
			Economics.
			Gain knowledge of the production
			functions, linear programming and input
			output analysis.
			Become cognizant of the various recent
			developments in Mathematical Economics.
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14.	22ANMEHI1	Working of Indian	Understand the historical background of Indian constitution
		Constitution (NME –	Indian constitution
		II)	Understand the powers and function of the Union Executive.
			<ul> <li>Illustrate the powers and function of the</li> </ul>
			state Government.
			<ul> <li>Know the Indian Judiciary system in India</li> </ul>
			<ul> <li>Study the federal system of states.</li> </ul>
15.	16ACCEC9	Public Finance	<ul> <li>Examine the role of public finance in the</li> </ul>
15.	TORRECLEY	I done I manee	economy.
			<ul> <li>Distinguish between tax revenue and non-</li> </ul>
			tax revenue.
			Sketch out the shifting and incidence of
			taxation.
			Explain the causes and effects of public
			debt.
			Evaluate the Recent Finance Commission
			and its report.
			Become cognizant of the recent
			developments in Public Finance.
16.	16ACCEC10	Economics of Growth	Examine the Neo-classical growth models.
		and Development	Explain the various growth and
			development models.
			Interpret the social and institutional aspects
			of development.
			Explain the various theories of development
			development.
			Become cognizant of the contemporary approaches to growth and development
17.	16ACCEC11	International	<ul> <li>approaches to growth and development.</li> <li>Examine Classical and Neo-classical</li> </ul>
17.	IUACCECII	Economics	Theories of International trade.
		Leonomies	<ul> <li>Explain the various aspects of free trade</li> </ul>
			and protection.
			<ul> <li>Distinguish between balance of trade and</li> </ul>
			Balance of Payments.
			Understand the system of foreign exchange
			and theories associated with it.
			Evaluate the functions of various
			international economic institutions.
			Become cognizant of the recent
			developments in International trade and
			economics.
18.	16ACCEC12	History of Economic	Understand pre – classical, neo- classical
		Thought	schools of economic thought.
			Understand Austrian and Institutional
			schools of economic thought.
			Gain knowledge about socialistic school of
			thought.



			<ul> <li>Understand historical, Keynesian and welfare schools of economic thought.</li> <li>Gain the knowledge about Indian economic thought.</li> <li>Gain knowledge about contemporary economic thought.</li> </ul>
19.	16AMBEEC1	Capital Market	<ul> <li>Understand capital market and its origin.</li> <li>Understand the various sources of finance.</li> <li>Gain the knowledge importance corporate securities.</li> <li>Understand the importance of stock exchange market.</li> <li>Gain the knowledge about public issues of shares.</li> <li>Gain the knowledge about contemporary Developments in theory and practice of capital market.</li> </ul>
20.	16RSBE 6:2	Reporting and Editing (SBE - I)	<ul> <li>Equip students with the skills to gather information, conduct interviews.</li> <li>Write accurate news stories, and edit them for clarity, style, and factual correctness, enabling them to produce publishable content across various media platforms.</li> <li>Understand news values, proficiently conducting interviews.</li> <li>Write different types of news stories.</li> <li>Apply ethical reporting standards, identifying and correcting factual errors, editing for grammar and style, and adapting content for different media formats.</li> </ul>
21.	16RSBE 6:3	Public Relations (SBE – II)	<ul> <li>Equip students with the ability to effectively communicate messages tailored to specific audiences.</li> <li>Analyze public perception, develop strategic communication campaigns.</li> <li>Manage organizational reputation through various media channels.</li> <li>Critically evaluate information, and apply ethical principles in public relations practices, all while demonstrating strong writing, presentation, and critical thinking skills.</li> </ul>
22.	16ACCEC13	Agricultural Economics	<ul> <li>Find the role of agriculture in Indian Economy, causes for low productivity and measures to improve productivity.</li> <li>Demonstrate the structural and institutional changes in agriculture.</li> </ul>



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			<ul> <li>Identify the sources of agricultural finance.</li> </ul>
			Analyze the recent state of agricultural marketing and price policy.
			<ul> <li>Explain the Government measures for</li> </ul>
			unemployment and agricultural labourers.
			<ul> <li>Receive an understanding of the recent</li> </ul>
			developments in Agricultural Economics.
23.	16ACCEC14	Human Resource	<ul> <li>Find evolution, nature and significance of</li> </ul>
23.	IUACCEC14	Management	human capital.
		Wanagement	<ul> <li>Demonstrate the methods of human capital</li> </ul>
			for economic growth and elimination of
			social discrimination.
			<ul> <li>Identify the OBJECTIVES, need and</li> </ul>
			problems in planning.
			<ul> <li>Examine the role of women in economic</li> </ul>
			development.
			<ul> <li>Assess the work participation rate of male</li> </ul>
			and female.
			<ul> <li>Understand the recent developments in</li> </ul>
			Human Resource Management.
24.	16ACCEC12	Environmental	<ul> <li>Recall the concepts, theories, relationship</li> </ul>
		Economics	with other sciences and conservation of
		2	natural resources.
			Illustrate the Pareto Theory and
			environmental quality as a public good.
			> Apply laws for environmental protection.
			$\blacktriangleright$ Analyze the pollution Cost and benefit of
			pollution control.
			Explain the role of government and
			voluntary organizations in pollution
			control.
			Understand the recent developments in
			Environmental Economics.
25.	16AMBEEC2	Entrepreneurship	<ul><li>Asses the opportunities of</li></ul>
		Development	entrepreneurship in India.
			<ul><li>Outline the significance of MSME'S,</li></ul>
			women entrepreneurship.
			Get a basic idea about the various
			promotional agencies.
			Synthesize the policy regulations and
			estimations of cost and price.
			<ul> <li>Calculate and frame project proposals.</li> </ul>
			<ul> <li>Understand the recent developments in</li> </ul>
			Entrepreneurship Development.
26.	16AMBEEC3	Economics of	Recall the meaning, nature and
		Insurance	importance of insurance.
			Understand the meaning of risk and its
			management.



ADIRAMPATTINAM - 614 701

Discuss the features of life and health
insurance.
$\succ$ Trace the growth of insurance business in
India.
Analyze the strategies of insurance
marketing.
Evaluate the insurance acts in India.
Become cognizant of the contemporary
developments in Economics of Insurance.

#### Programme outcomes - Master of Arts (Economics)

To develop the ability to explain core economic terms, concepts and theories. To Identify key macroeconomic indicators and measures of economics change, growth, and development. To Identify and discuss the key concepts underlying comparative advantage. To Identify and explain major types of market failures.

Sl.No.	Subject Code	Name of the Course	Course Outcomes
1.	P22ECCC11	Micro Economics- I	<ul> <li>Learn Demand Analysis and theory of price formation.</li> <li>Get introduced to the concepts of Production function, Theory of Production and Costs.</li> <li>Understand Price and Output Determination under the perfect competition and monopoly.</li> <li>Understand Monopolistic Competition and Oligopoly Models of price and output determination.</li> <li>Become familiarized to the different theories of the Firm.</li> <li>Become cognizant of the contemporary developments in Microeconomic Theory.</li> </ul>
2.	P22ECCC12	Macro Economics –I	<ul> <li>Understand the basic concepts of Macroeconomics.</li> <li>Illustrate the components of National Income Accounting.</li> <li>Explain the theories of Consumption function.</li> <li>Examine the determinants of Investment.</li> <li>Analyze the simultaneous equilibrium in goods market and money market with the help of IS and LM curves.</li> <li>Become cognizant of the contemporary developments in Macroeconomic Theory.</li> </ul>
3.	P22ECCC13	Monetary Economics	□ Understand the operation of Demand of Money



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			<ul> <li>Understand the operation of Supply of Money</li> <li>Explain the theory of inflation</li> <li>Analyze the Post-Keynesian theory for Demand for Money</li> <li>Understand the nature and way of operation of Financial Market</li> <li>Become cognizant of the contemporary developments in Monetary Economics</li> </ul>
4.	P22ECCC1B	Energy Economics	<ul> <li>Have an understanding of origin, scope and nature of natural resources and energy resources.</li> <li>Learn the role of energy in economic development of a nation.</li> <li>Understand the impact of energy consumption and production on environment.</li> <li>Become familiarised to Energy Planning and its Management</li> <li>Have an understanding of structure of energy markets and patterns of energy production and consumption of India</li> </ul>
5.	P22ECE1A	Environmental Economics	<ul> <li>Get a detailed understanding of environmental economics including key principles and methods.</li> <li>Use economic techniques to analyse environmental problems and assess environmental policies</li> <li>Develop research skills in the field of environmental economics.</li> <li>Discuss various approaches and methods developed for valuing environmental goods and services.</li> <li>Analyse the contemporary environmental discourse from an economist's point of view.</li> <li>Explore the contemporary developments in Environmental Economics</li> </ul>
6.	P22ECVAC1	Calculation of Income Tax	<ul> <li>Get cognizant of the scope and importance of Income tax.</li> <li>Get introduced to the illustration of income tax in Budgets.</li> <li>Become familiarised to the calculation of personal income tax and tax for HUF.</li> <li>Learn the calculation of corporate tax.</li> <li>Develop the skills for filing e-mode of income tax with latest slab limit in the budget.</li> </ul>



	HI POR US		
7.	P22ECCC21	Micro Economics- II	<ul> <li>Do welfare economics without use of marginal condition.</li> <li>Understand the intuition underlying the main welfare theorems both in general and partial equilibrium analysis.</li> <li>Define risky outcomes and describe how they are assessed.</li> <li>Understand explain expected utility and risk preference.</li> <li>Apply knowledge of risk and insurance to explain how systematic risk makes risk pools difficult and destroys private markets for insurance.</li> <li>Understand the recent developments in Microeconomic theory and practice.</li> </ul>
8.	P22ECCC22	Macro Economics –II	<ul> <li>Understand how economic indicators like GDP are used to assess the state of the economy.</li> <li>Understand that economic growth is a recent relatively phenomenon, and identify key institutional factors that contribute to economic growth.</li> <li>Explain and graphically illustrate market equilibrium, surplus and shortage.</li> <li>Understand about the macro equilibrium in the income-expenditure model.</li> <li>Become aware of policy implications of Keynesian economics.</li> <li>Be cognizant to recent developments in Macroeconomic theory and practice.</li> </ul>
9.	P22ECCC23	Mathematical Methods for Economic Analysis	<ul> <li>Find the applications of mathematics in Demand and supply functions, Cost and Revenue functions, and Consumption and Multivariable functions.</li> <li>Explain the use of Derivatives in Economics.</li> <li>Identify the use of integration in calculating Producer surplus, Consumer surplus, Cost and Revenue.</li> <li>Examine the matrix operation and the use of Crammer rules to solve system of equations.</li> <li>Explain the applications of Linear Programming techniques.</li> <li>Introduce the contemporary developments in the Mathematical Methods for Economic Analysis.</li> </ul>



	HI POR 03		
10.	P22ECCC2B	Labour Economics	<ul> <li>Demonstrate an understanding of basic labour economics theory, including labour market structures and wage determination.</li> <li>Form a well theoretical knowledge of wage determination.</li> <li>Comprehend and assess the different approaches to Labour Migration trends &amp; effects.</li> <li>Understand the labour unions in India and able to comprehend the structure, pattern and growth of labour unions.</li> <li>Construct, defend and analyse important labour policy issues.</li> </ul>
11.	P22ECE2B	Computer Applications in	□ Analyse the components of modern
		Economics	computer
			☐ Have an understanding of the application
			of operating systems in Economics
			$\Box$ Understand the use of MS office in
			Economic analysis
			□ Examine the various software packages
			related to Economics
			$\Box$ Understand the Application of internet in
			Economics
			□ Recent developments related to
12.	P22HINME1	The Constitution of India	Computer Applications in Economics
12.	P22HINME1	The Constitution of India	<ul> <li>Evaluate the importance of Fundamental Rights and Duties.</li> </ul>
			□ Illustrate the students working of union
			executive.
			Understand the judicial system in India
			Evaluate the powers of state
			Government.
			$\Box$ Understand the federal system of
			administration in India.
13.	P22ECCC31	Research Methodology	□ Identify the appropriate methods to
			choose in research.
			□ Summarize the different methods and
			various tools used in data collection. $\Box$
			□ Apply writing of report for an
			educational project. $\Box$ Analyze the concent of variables and
			□ Analyse the concept of variables and
			hypothesis, their nature importance and
			types. □ Explain the term population sample and
			describe the steps involved in the process of
			sampling.
			□ Summarize the various contemporary
			developments in Research Methodology.
L		1	at a stophicity in Rebearen Methodology.



14.	P22ECCC32	Statistics	$\Box$ Calculate and interpret the Univariate analysis. $\Box$
			$\Box$ Compare the relation between regression
			and correlation coefficients.
			$\Box$ Apply the theory of probability in economics. $\Box$
			$\Box$ Examine the sampling distribution. $\Box$
			$\Box$ Construct the index numbers. $\Box$
			$\Box$ Understand the recent developments in Statistica $\Box$
15	DOECCCO	Indian Deensman	Statistics.
15.	P22ECCC33	Indian Economy	$\Box$ Identify the causes and impact of population growth. $\Box$
			$\Box$ Summarize the problems of poverty and
			unemployment $\Box$
			$\Box$ Sketch out the Indian and Global
			Economy
			$\Box$ Analyze the agriculture and industrial sectors as the foundation of economic
			growth
			□ Evaluate the importance of planning
			undertaken by the government of India, have
			knowledge on various objectives, achievements as the foundation of the
			ongoing planning and economic reforms taken by the
			government
			$\Box$ Cultivate an idea about the contemporary
			developments in Indian Economy $\Box$
16.	P22ECCC3B	Agricultural Economics	$\Box$ Know the role of agriculture in economic
10.	I 22ECCC3D	Agricultural Economics	development.
			$\Box$ Know the physical and economic
			optimum point of output.
			□ Analyse agricultural production function
			using programming techniques.
			$\Box$ Estimate the marketing efficiency.
			$\Box$ Identifying the role of different
			organizations in international trade and the
			share of agriculture in total export.
17.	P22ECE3B	Mathematical Economics	□ Understand the basic knowledge of sets'
			theory.
			☐ Identify the techniques of mathematical
			methods in the theory of consumer.
			□ Acquire knowledge on the application of
			mathematical methods in the theory of firm.
			□ Understand market equilibrium and
			application of mathematical methods in it.
			$\square$ Apply mathematical methods and
			techniques in theory of games.
		I	cominques in meety of games.



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18.	P22MCNME2	Management concepts	□ Understand the historical backdrop and fundamentals of Management thoughts vital for understanding the conceptual frame work
			of Management as a discipline. □ Know various concepts of planning, Decision making and controlling to help
			solving
			managerial problems.
			$\Box$ Get Knowledge on motivation theories.
			□ Comprehend the theories of management
			& evolution of management thought.
			□ Run the business effectively by applying the menagement theories
			the management theories. □ Act as an effective manager by applying
			the controlling techniques.
19.	P22ECCC41	International Business	□ Understand special features of
			international business.
			□ Understand the importance of
			international organizations in the field of
			foreign trade. $\Box$ Coin the knowledge about foreign trade.
			☐ Gain the knowledge about foreign trade documents.
			□ Understand foreign trade procedures.
			☐ Gain the knowledge about export
			arbitration.
			□ Get an understanding about the recent
			theoretical and empirical developments in
20	Daapagada		International Business.
20.	P22ECCC42	Industrial Economics	□ Understand pattern and structures of industrial location.
			□ Understand market structure of industrial
			products.
			$\Box$ Gain the knowledge of industrial finance,
			balance sheet.
			Understand industrial labour
			employment dimensions.
			☐ Gain the knowledge of net present value and internal rate return.
			□ Get an exposure to the recent theoretical
			and empirical developments in
			International Business
21.	P22ECIBC	Entrepreneurship	□ Understand the role of entrepreneurship
			in Economic Development.
			□ Become familiarised various theories of
			motivation.
			□ Identify and evaluate business opportunities.
			opportunities.



			<ul> <li>Understand how to prepare a business plan.</li> <li>Become familiarised to the various practical aspects of entrepreneurship.</li> </ul>
22.	P22ECVAC2	Personality and Soft Skills Development	<ul> <li>Develop listening, speaking, reading and writing skills in English.</li> <li>Develop interpersonal skills to maintain human relationship</li> <li>Promote communicative ability in both spoken and written form of the language</li> <li>Enhance soft skills and engage in a range of communicative tasks and activities</li> <li>Develop corporate skills to promote leadership qualities and team spirit.</li> </ul>



#### PG AND RESEARCH DEPARTMENT OF ENGLISH

#### **Programmed offered:**

- **B.A. English (Unaided)**
- > M.A. English (Unaided)
- > Ph.D.

#### Programme Outcomes: (For Bachelor of English)

Students will be able

- To imbibe Human values and emotions which makes them more responsible in the society
- > To nurture creative writings
- > To permeate in various fields through communicative skills

#### **Programme Specific Outcomes:**

- > To get acquaints to the history of literature and language
- To evaluate the concepts of literary critics and their contribution to literature

Sl.No	Sub Code	Name of the course	Course outcome
01.	22ACCEN1	PROSE	<ul> <li>Language development: Focuses on the process through which students improve their English language skills over time, often measured by assessments or language proficiency exams.</li> <li>These outcomes are typically tied to standards set for both teachers and students, ensuring that educational practices are aligned with desired language competencies.</li> </ul>
02.	22ACCEN2	SHORT STORIES	<ol> <li>Resolution (Happy Ending): The conflict is resolved positively for the characters. This is often seen in feel-good stories or fairy tales.</li> <li>Twist Ending: The story ends with a surprising or ironic turn of events that alters the reader's perception of the narrative or characters.</li> <li>Ambiguous Ending: The conclusion leaves some questions unanswered or open to interpretation, which can provoke thought and discussion.</li> </ol>



## KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

4. <b>Tragic Ending:</b> The characters face
failure, loss, or death, which often
emphasizes the story's theme of
inevitability or the harshness of life.
5. <b>Open-ended:</b> The story ends without
clear resolution, leaving the outcome to
the imagination of the reader,
encouraging further speculation or
reflection.

03.	22AFACEN1	SOCIAL HISTORY OF ENGLAND	To help learners understand the social history of England from the Middle Ages to the 20th century To make learners aware of the relation between socio-political and socio-religious events and literary works
04.	22ACCEN3	POETRY I	To introduce learners to the changing trends in English poetry from the Age of Renaissance to Johnson To help learners analyse and appreciate poetry critically
05.	22ACCEN4	FICTION	To make learners understand different forms of novel from the Age of Tennyson to the 20th century To enable learners to identify diverse fictional themes and techniques To help learners improve their creative and imaginative faculties through the novels of major British writers
06.	22AFACEN2	LITERARY FORMS	To initiate learners into the study of various literary forms To enable learners to understand the literary terms while analyzing and interpreting the works of literature
07.	22ACCEN5	POETRY II	To enable learners to comprehend the salient features of various types of poetry from the Romantics up to T.S. Eliot To make learners sharpen their poetic sensibility and stylistic skills



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08.	22ACCEN6	ONE -ACT PLAYS	To help learners understand the salient features of one-act plays To make learners comprehend and appreciate various cultures and varieties of presentation in the representative texts To expose learners to the sociological and psychological dimensions of characterization
09.	22ASACEN1 HISTORY OF ENGLISH LITERATURE I the texts from the Age of Ch To make learners understand literary movements and their		To help learners aware of the literary history of the texts from the Age of Chaucer to Dryden To make learners understand the rise and fall of literary movements and their relationships to socio-political and socio-religious events
10.	22ACCEN7	DRAMA	To introduce learners to the emergence of English Drama from the Elizabethans to the 20th century To make learners understand the features of tragedy, comedy of humors, anti- sentimental comedy, drama of ideas and absurd plays
11.	22ACCEN8	INTRODUCTION TO LANGUAGE AND	To introduce learners to the history of English language and concepts in phonetics and linguistics To make learners aware of the form and content of language To enable learners to know the scientific systems of the language
12.	22ASACEN2	HISTORY OF ENGLISH LITERATURE II	To expose learners to the historical background of the literary texts from the Age of Pope to the
13.	22ACCEN9	SHAKESPEARE	To introduce learners to the dramatic and theatrical conventions of Shakespeare To make learners understand the characterization, dramatic and poetic techniques in Shakespearean plays To enhance learners' appreciation and enjoyment of select plays of Shakespeare



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14.	22ACCEN10	PRINCIPLES OF LITERARY CRITICISM	To acquaint learners with the knowledge of history of literary criticism, its various trends and schools To help them apply literary theory to texts in order to enrich their understanding and appreciation of literature
15.	22ACCEN11	AMERICAN LITERATURE	To introduce learners to important aspects in various genres of American literature To help them get acquainted with the richness of American literature through representative works of poets, essayists and novelists.
16.	22ACCEN12	INDIAN CULTURE AND LITERATURE	To make learners understand the rich literary heritage of India To appreciate the underlying unity among the diverse languages and literatures of India To recognize the important contribution of India to world literature
17.	AMBEEN1	TRANSLATION THEORY AND PRACTICE	To familiarize learners with the history and theory of translation To introduce them to the techniques involved in translation To make them translate prose passages from English to Tamil and vice versa
18.	16ACCEN13	INDIAN WRITING IN ENGLISH	To make learners aware of the history and the growth of Indian Writing in English To introduce them to the rich literary tradition in Indian Writing in English To enable them to appreciate the changing trends in Indian literature in English from pre- to post-Independence era
19.	16ACCEN14	COMMONWEALT H LITERATURE	To introduce learners to the literatures of a few commonwealth Writers To enable them to understand and appreciate various cultures, traditions and more.
20.	16ACCEN15	ENGLISHLANGUAG E TEACHING	To expose learners to various approaches and methods, aspects and strategies of teaching English to help them understand the essential components and concepts of language teaching
21.	16AMBEEN 2	JOURNALISM	To initiate learners to the history of journalism To expose them to various aspects of journalism



22.	16AMBEEN 3	ENGLISH FOR COMPETITIVE EXAMINATIONS	To instill confidence in learners and improve their language skills to face the challenges of competitive examinations To equip learners with adequate English language skills to achieve success in competitive examinations
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#### Programme Outcome: (For Master of English)

Students will be able

- > To understand and apply the basic concepts of research
- > To acquire in depth knowledge in various genre of literature
- > To make effective use of language for their expressions

#### **Programme Specific Outcome**

- > To express the concepts and movements of world literature
- > To analyze the works of literature through theoretical approach



Sl.No	Sub Code	Name of the course	Course outcome
01.	P22ENCC11	LANGUAGE AND LINGUISTICS	To provide learners an insight into the nature of language To familiarize them with the discourse of linguistics and to expose them to theoretical and practical Manifestations of linguistics To enable them to understand the nexus between literature and society
02.	P22ENCC12	MODERN LITERATURE I	To introduce learners to the evolution of English poetry from Chaucer's period To expose them to the salient features of metaphysical poetry To introduce learners to the origin of English essays To make them understand the features of tragedy, romantic tragedy, revenge play and comedy of humors of Shakespeare's predecessors
03.	P22ENCC13	MODERN LITERATURE II	To expose learners to the changing trends in English poetry from Milton to Pre- Romantics To make learners understand the prose allegory of the Restoration period and varied prose works of the Age of Pope To make learners know the salient features of anti-sentimental comedy and Restoration comedy To introduce learners to the emergence of the English novel during the Age of Transition
04.	P22ENCCC1A	INTRODUCTION TO COMPARITIVE LITERATURE	<ul> <li>Broader Literary Understanding: Students develop an understanding of literature beyond the confines of a single language, culture, or tradition. This involves comparing works from different parts of the world, highlighting both similarities and differences in themes, styles, genres, and historical contexts.</li> <li>Critical Thinking and Analytical Skills: Students learn to critically analyse texts not only from a single cultural perspective but through multiple lenses. This may include comparative analysis of</li> </ul>



			narrative structures, character development, symbolism, and language use.
05.	P22ENE1B	CHILDREN'S LITERATURE	<ul> <li>Understanding of Children's Development: Students gain insight into the developmental stages of children and how literature can cater to different age groups, from picture books for young children to more complex narratives for older readers. This includes recognizing the role of literature in cognitive, emotional, and social development.</li> <li>Exploration of Themes and Motifs: Students learn to identify recurring themes in children's literature, such as coming-of- age, friendship, moral lessons, fantasy, family dynamics, and the exploration of identity. They explore how these themes are presented in ways that are engaging and accessible to young readers.</li> </ul>
06.	P22ENVAC1	SOFT SKILLS THROUGH LITERATURE	To enhance the life skills of the learners To make the learners aware of workplace and career skills To focus on positive behaviour and management techniques
07.	P22ENCC21		To familiarize learners in the characteristics of Romantic poetry To acquaint learners with the unique qualities of the essays of the Romantic Period To make them aware of the political, social and intellectual background of the age through the works of various writers of the Romantic period



08.	P22ENCC22	MODERN LITERATURE IV	To appreciate the issues such as Capitalism, race, evolution of democracy that shaped the 19 <sup>th</sup> century England Analyze and examine the representation of the characteristics of the era in the Literature.
09.	P22ENCC23	SHAKESPEARE	Understand the Socio-Political influences of Britain during the Shakespearean age Analyze the technique of disguise in Shakespeare's plays, the reason behind it and discuss the significance of the women characters in his plays. Demonstrate the portrayal of history in his historical plays
10.	P22ENCC2B	GREEN LITERATURE	Describe the role of nature in the works of Art Comment on the Modernized theories of Green Literature Describe the various streams of Eco- Criticism Note the role of Literature in protecting the Nature
11.	P22ENE2A	RESEARCH METHODOLOGY	To expose learners to philosophy of research To enable learners to use different research sources and document them To make learners know the format of research and mechanics of writing
12.	P22ENCC31	INDIAN ENGLISH LITERATURE	Discuss the different phases of evolution of Indian Writing in English Depict the various customs and traditions through which the writers portray the Indian life Introduce the themes Genres and recent trends of Indian Writing in English

	13.	P22ENCC32	AMERICAN LITERATURE	To introduce learners to significant aspects in various genres of American literature To help learners get acquainted with the richness of American literature through representative works of poets, essayists, playwrights and novelists
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14.	P22ENCC33	LITERARY CRITICISM	To introduce learners to literary theory from the beginning of the twentieth century to the present day To help learners apply theory in the analysis of literary texts To enable learners to understand a wide range of theoretical perspectives to enhance their appreciation of literary texts
15.	P22ENCC3A	WORLD CLASSICS IN TRANSLATION	<ul> <li>Cultural Exchange: Translations help bridge cultural gaps, allowing readers to experience and understand literature from different parts of the world. Works that are considered classics in one culture, such as <i>Don Quixote</i> (Spain), <i>War and Peace</i> (Russia), or <i>One Hundred Years of</i> <i>Solitude</i> (Colombia), become widely available for readers from diverse backgrounds.</li> <li>Literary Preservation: Translation can preserve the legacy of works that might otherwise be limited to a specific language or culture. It ensures that important literary traditions are nolost over time.</li> </ul>
16.	P22ENE3B	SCIENCE FICTION	<ul> <li>Technological Advancement: The outcome might focus on the development of new technologies, such as artificial intelligence, space travel, or advanced robotics. These advancements could lead to a utopian society or, conversely, dystopian outcomes depending on how they're used.</li> <li>Alien Encounters: Many science fiction stories explore the outcome of first contact with alien species. The outcome could range from peaceful coexistence and knowledge-sharing to intergalactic war or existential threats to humanity.</li> </ul>
17.	P22ENCC41	POST COLONIAL LITERATURE	• Understanding of Colonial Legacies: Post-colonial literature offers insights into the lasting effects of colonialism on both colonizers and the colonized. This includes the exploration of issues like cultural erasure, identity struggles, and the psychological impact of colonial domination.



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			• Exploration of Identity and Belonging: Much of post-colonial literature deals with themes of identity, hybridity, and the search for belonging, especially in contexts where colonized people have been subjected to forced assimilation or devaluation of their indigenous cultures.
18.	P22ENCC42	LITERARY THEORY	<b>Deeper Understanding</b> : Literary theory allows readers to explore texts from multiple angles, uncovering layers of meaning that may not be immediately apparent. This can lead to a richer and more nuanced understanding of a text. <b>New Interpretations</b> : Different theoretical lenses—such as Marxism, feminism, postcolonialism, psychoanalysis, structuralism, etc.—can offer new interpretations and insights into the text. A single work of literature can be analysed in various ways, each offering a different perspective.
19.	P22ENIBC	INTRODUCTION TO JOURNALISM AND MASS COMMUNICATION	<ul> <li>Understanding of Mass         Communication Theories: Students gain knowledge about the fundamental theories and models of mass communication, such as the Shannon-Weaver model, the Agenda-Setting theory, and the Uses and Gratifications theory, among others.     </li> <li>Familiarity with Journalism Practices: Students learn about the role of journalists in society, news gathering, writing, editing, and reporting. This includes understanding the ethical standards and legal frameworks that guide journalistic practices.     </li> </ul>
20.	P22ENPW	PROJECT WORK	<ul> <li>Deliverables: The tangible or intangible products, results, or services produced from the project. These could be reports, prototypes, software applications, designs, or data sets, depending on the project's goals.</li> <li>Objectives Achievement: Whether the original objectives or goals of the project were met. This could involve solving a particular problem, creating a solution, meeting deadlines, or fulfilling specific requirements.</li> </ul>



#### POST GRADUATE DEPARTMENRT OF HISTORY

#### **Programmes offered:**

- **B.A. History (Aided)**
- > M.A. History (Unaided From AY 2019-2020)

#### Programme Outcomes (B.A. History)

**PO1.**This programme enable the students to the study of the evolution of human civilizations down the ages from the Pre-Historic to the contemporary period.

**PO2.**It covers the study of major historical events in India as well as the World.

**PO3.**Students will get deep knowledge of long-term historical developments.

**PO4.**History installs the feeling of patriotism in the hearts of the pupils.

**PO5.**History graduates can get a job in the field of Archaeology, Genealogy, Historical Fiction, Historical Research, Teaching, and to meet the challenges in TNPSC and Civil Service Examination.

#### **Programme Specific Outcomes**

PSO1. Compare and contrast the features of the various Pre-Historic cultures

in

#### India PSO2.

Analyse the socio-economic life of early Indian people.

PSO3. Evaluate the contributions of the administrators to the early Indian

society. PSO4. Appraise the contributions of the Muslim rulers to the Indian

Society.

PSO5. Narrate the importance of the cultural heritage of Medieval

India. PSO6. Evaluate the growth of British power in Bengal.

PSO7. Narrate the significance of the Socio-Religious Reform Movements in

the 19<sup>th</sup> Century

PSO8. Estimate the causes and effects of the Geographical Discoveries

#### **Course Outcomes**

Sl.		Name of the Course				
No	Su. Code	Ivalle of the Course	Course Outcome			
IB.	I B. A History I Semester					



1       22ACCHI1       History of India from Pre         1       History to 1206 C. E       to know the pre historic age India         * to study about the invasion of Alexander       to trace the history of Gupta         2       History of Tamil Nadu up to         2       1336 C. E         2       History of Pallava and their contribution to the Tamil society	of <u>s</u> und ent
1       History to 1206 C. E       to study about the invasion of Alexander         2       22ACCHI2       History of Tamil Nadu up to 1336 C. E       to learn the political, social a economic conditions of anci Tamil Nadu         2       1336 C. E       to know the origin of Pallava and their contribution to the Tamil society	s ind ent
2       Alexander         2       Alexander         2       History of Tamil Nadu up to         1336 C. E       to learn the political, social a economic conditions of anci Tamil Nadu         2       to know the origin of Pallava and their contribution to the Tamil society	s ind ent
2       22ACCHI2       History of Tamil Nadu up to 1336 C. E	und ent
2       1336 C. E       economic conditions of anci Tamil Nadu         2       to know the origin of Pallava and their contribution to the Tamil society	ent
2   1336 C. E   Tamil Nadu     2   to know the origin of Pallava and their contribution to the Tamil society	
2 to know the origin of Pallava and their contribution to the Tamil society	as
2 and their contribution to the Tamil society	
Tamil society	
to learn about the advent of	
Muslim and their impact on	
Tamil society	
22AFACHI1Studies on States and* to know the evolution of States	
Governments - I and explore the classification	1 Of
3 governments T governments to learn the concepts of	
Separation of Powers	
<ul> <li>to know the suffrage of India</li> </ul>	ı
22UGVEDValue Education* to understand the philosophy	
the and value through Thirul	
4	
to promote mental and emot health	ional
II Semester	
History of India from 1206  to trace the origin and found	ation
of Delhi Sultanate	ation
C.E to 1707 C. E to study the feature	of
1 Vijayanagara and Bhamani	
to study the establishmer	t of
Mughal Empire in India	omio
22ACCHI3     * to analyse the socio econ condition under Mughals	onne
History of Tamil Nadu from $\diamond$ to learn the administration a	nd
achievements of the Tamil r	1013
2 1336 C.E to 1800 C.E	
2 1336 C.E to 1800 C.E to know the Maratha administration in Tamil Nad	u
2       1336 C.E to 1800 C.E         4       to know the Maratha administration in Tamil Nad         ★       to study about the advent of	u
2       1336 C.E to 1800 C.E         2       to know the Maratha administration in Tamil Nad         22ACCHI4       to study about the advent of Europeans in Tamilagam	u
2       1336 C.E to 1800 C.E <ul> <li>★ to know the Maratha administration in Tamil Nad</li> <li>▲ to study about the advent of Europeans in Tamilagam</li> </ul> 2         22ACCHI4 <ul></ul>	u
2       1336 C.E to 1800 C.E         2       1336 C.E to 1800 C.E         2       ★ to know the Maratha administration in Tamil Nad         2       22ACCHI4         22AFACHI2       Studies on States and Governments - II	u on
2       1336 C.E to 1800 C.E         2       * to know the Maratha administration in Tamil Nad         22ACCHI4       * to study about the advent of Europeans in Tamilagam         22AFACHI2       Studies on States and Governments - II	u on
2       1336 C.E to 1800 C.E         2       236 C.E to 1800 C.E         2       22ACCHI4         3       22AFACHI2         3       Studies on States and Governments - II         3       Studies on States and Governments - II         4       to know the Maratha administration in Tamil Nad to study about the advent of Europeans in Tamilagam         4       to know about the unique features of Indian Constituti         5       to learn about the powers an functions of President         *       to study the Local Government	u on d
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> </ul> 3         22AFACHI2         Studies on States and Governments - II <ul> <li>to know about the unique features of Indian Constituti</li> <li>to learn about the powers an functions of President</li> <li>to study the Local Governmenta and its functions</li> </ul>	u on d
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> </ul> 2       22ACCHI4 <ul> <li>to study about the advent of Europeans in Tamilagam</li> <li>to know about the unique features of Indian Constituti</li> <li>to learn about the powers an functions of President</li> <li>to study the Local Governmental Studies</li> <li>to study about sources and functions</li> </ul>	u on d
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> <li>22AFACHI2</li> <li>Studies on States and Governments - II</li> <li>to know about the unique features of Indian Constituti</li> <li>to learn about the powers an functions of President</li> <li>to study the Local Governmental Studies</li> <li>to study about sources and effects of environmental pollution like air water soil</li> </ul>	u on d ent
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> <li>to know about the unique features of Indian Constituti</li> <li>to learn about the powers an functions of President</li> <li>to study the Local Governmental Studies</li> <li>to study about sources and effects of environmental pollution like air, water, soil</li> </ul>	u on d ent
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> </ul> 2         22ACCHI4 <ul> <li>Studies on States and Governments - II</li> <li>to know about the unique features of Indian Constituti</li> <li>to study the Local Governmental Studies</li> </ul> 4         22UGCES         Environmental Studies <ul> <li>to study about sources and effects of environmental pollution like air, water, soil nuclear and noise</li> </ul>	u on d ent
2       1336 C.E to 1800 C.E <ul> <li>to know the Maratha administration in Tamil Nad</li> <li>to study about the advent of Europeans in Tamilagam</li> <li>to know about the unique features of Indian Constituti</li> <li>to learn about the powers an functions of President</li> <li>to study the Local Governmental Studies</li> <li>to study about sources and effects of environmental pollution like air, water, soil</li> </ul>	u on d ent



II B	. A History III S	Semester		
	22ACCHI5	History of India from 1707	*	to learn the disintegration of the
				Mughals and Maratha
		C.E to 1857 C.E		Confederacy
			*	to know the advent of the
				Europeans in India
			*	to trace the success of the
				expansion of British Rule
			**	to analyze the role of Dalhousie
1				in modernization in India and
				Sepoy Mutiny
	22ACCHI6	History of Tamil Nadu from	*	to learn the administration and
		1800 C.E to 2000 C.E	•	achievements of the Tamil rulers
			*	to analyse the interpret the
				Nayak rulers in Tanjavur
2			***	to know the Maratha
		Public Administration	.*.	administration in Tamil Nadu
	22ASACHI1	rublic Auministration	***	to know the evaluations of Indian administration
			*	to learn the administration
			*	
3			•	administration in India
	22ANMEHI1	Freedom Movement in India	**	to study the emergence of
		Treedom Wovement in mena	•	nationalistic feelings in the
				country
			*	to trace the emergence of Indian
				Nationalism
4			*	to expose the students to the key
4				concepts of political thoughts
	22PELAS2	Professional English - II	*	to motivate the students to
				Learning, Reading and writing
5			*	to develop their communication
				skill
IVS	Semester		•	
	22ACCHI7	History of Europe from 1453	***	to study the reason for the fall of
		C.E to 1789 C.E	.*.	Constantinople
1			***	to study the immediate cause for
			.*.	the discoveries
			•	to trace the emergence of Nation States in Europe
	22ACCHI8	History of India from 1857	*	to evaluate the importance of
			•	Queen Victoria's Proclamation
2		C.E to 1947 C.E	*	to know about socio religious
2			•	movement in India
			*	to study about the growth and
				development of Congress
	22ASACHI2	Panchayat Raj	*	to understand the self-governing
				institutions in India
3			*	to create awareness on the Local
				Self-Institution
			*	to aware of various Rural
				Development Plans



	GHT FOR US		
	22ANMEHI2	Working of Indian	<ul> <li>to study the salient features of Indian Constitution</li> </ul>
4		Constitution	<ul> <li>to trace the powers and function</li> </ul>
-			of the Union Executive
			$\clubsuit$ to study the Federal System of
			State
5	0	Microsoft Digital Skills	*
III	B. A History V S		
	16ACCHI9	Contemporary India	<ul> <li>to know the consequences of partition</li> </ul>
			<ul><li>to provide an overview of the</li></ul>
1			history and politics of
			independent India
			$\diamond$ to learn about development and
			Five Years Plan
	16ACCHI10	History of USA upto 1865	<ul> <li>to give insight on Colonization</li> </ul>
		A.D	and Independence of USA
2			<ul> <li>to know about the American</li> <li>War of Independence</li> </ul>
			<ul><li>War of Independence</li><li>to impart knowledge on slavery</li></ul>
			and its impact
	16ACCHI11	East Asia from 1894 A.D to	<ul> <li>to understand the circumstances</li> </ul>
		1970 A.D	leading to the Chinese
3		197011.0	Revolution
5			<ul> <li>to know the effect of First World</li> </ul>
			War ↔ to know the Peoples Republic in
			China
	16ACCHI12	History of Russia upto 1991	$\bullet$ to understand the rise of Russian
4		A.D	Empire to survey the importance of
			<ul> <li>to survey the importance of Russian Revolution</li> </ul>
			<ul> <li>to trace the formation of USSR</li> </ul>
	16AMBEHIB	Journalism	<ul> <li>to understand the meaning of</li> </ul>
5			Journalism
			<ul><li>to know the history of Press</li></ul>
			<ul> <li>to understand the News Agency</li> </ul>
	16RSBE7:2	Office Management Tools	✤ to know about the meani9ng
_			and elements of Office
6			<ul><li>Management</li><li>to trace characteristics and steps</li></ul>
			<ul> <li>to trace characteristics and steps</li> <li>to study the importance of Office</li> </ul>
			Record Management
	16RSBE7:3	Communication and	✤ to know the basic
		Interpersonal Skills	Communication and barriers to
7			Communication
'			<ul> <li>to know the about the</li> <li>advantages of Lassaning</li> </ul>
			advantages of Lessening ↔ to know about the importance of
			reading
8	RUGSDC	Soft Skills Development	<ul> <li>to develop communicative</li> </ul>
0			competence among the students



<b>VI</b> 5	Semester 16ACCHI13	History of USA from 1865 A.D to 2000	<ul> <li>to enhance to the learners soft skills by giving adequate exposure in LSRW and sub skills</li> <li>to enable learners to put the life skills into practice with confidence</li> <li>to study the importance of the Reconstructions</li> <li>to understand the causes for the</li> </ul>
			<ul><li>Economic Depression</li><li>to know the Cold War scenario</li></ul>
2	16ACCHI14	Introduction to Historiography	<ul> <li>to know the Cold war scenario</li> <li>to understand the need for studying history</li> <li>to analyse the definition, nature and scope of history</li> <li>to evaluate their approaches to</li> </ul>
			history
3	16ACCHI15 16AMBEHIC	History og England from 1603 A. D to 1914 A. D Panchayat Raj with Special	<ul> <li>to understand the history of Great Britain</li> <li>to trace the rise of Parliamentary Democracy in England</li> <li>to understand the rise of Political Party and Cabinet System in England</li> <li>to know the Self-Governing</li> </ul>
4		Reference to Tamil Nadu	<ul> <li>Institutions in India</li> <li>to understand the Political aspect affecting the rural people</li> <li>to create aware of the various Local Self Institutions</li> </ul>
5	16AMBEHID	Human Rights	<ul> <li>to know the meaning and historical development of Human Rights</li> <li>to study promotion and protection of Human Rights</li> <li>to know about the Human Rights issues in India</li> </ul>
6	UGGS	Gender Studies	<ul> <li>to make boys and girls aware of each others strengths and weakness</li> <li>to develop sensitivity towards both genders in-order to lead an ethically enriched life</li> <li>to promote attitudinal change towards a gender balanced ambience and women empowerment</li> </ul>



LIGHT FOR US			
1	P22HICC11	Indian Civilization and Culture from Pre- History to 1206 C.E	<ul> <li>to learn the scope of the study of Ancient History of India</li> <li>to know the political ideas and institutions</li> <li>to know the study of origin of the religion</li> </ul>
2	P22HICC12	Indian Civilization and Culture from 1206 C.E to 1707 C.E	<ul> <li>to know the establishment of Mughal Empire</li> <li>to learn about the religion and state during medieval period</li> <li>to know the growth of population and land system in medieval period</li> </ul>
3	P22HICC13	Socio-Cultural History of Tamil Nadu from Sangam Age to 1800C.E	<ul> <li>to know the socio-cultural activities of the Kalabaras and Pallavas</li> <li>to provide the knowledge on trade and commerce of the Cholas</li> <li>to acquaint the leaners about the development of art and architecture under Nayaks and Vijayanagar Rulers</li> </ul>
4	P22HICC1B	Ideas in History	<ul> <li>to study the basic understanding of the concepts</li> <li>to know the necessity of the concepts of History</li> <li>to assess the relevance of various ideas to the current scenario</li> </ul>
5	P22HIE1A	Archives Keeping	<ul> <li>to know the history of the Archives</li> <li>to study the establishment of Archives</li> <li>to know the preservative methods of Archives</li> </ul>
6	P22HIVAC1	Indian History for Competitive Examinations	<ul> <li>to get thorough knowledge of the main aspects of Indian history and its values</li> <li>toknow about the Mughal Empire and the advent of Europeans</li> <li>to study the growth of nationalism and the making of the Indian Constitution</li> </ul>
II Se	emester	•	
1	P22HICC21	Socio-Cultural History of India from 1707 C.E to 1857 C.E	<ul> <li>to know the disintegration of Mughals and the advent of Europeans in India</li> <li>to know the war with other states by the British</li> <li>to know the British Governor General and their policies in India</li> </ul>
2	P22HICC22	Socio-Cultural History of Tamil Nadu from 1800 C.E to 2000 C.E	<ul> <li>to know the social condition of Tamil Nadu since 1800 A. D</li> </ul>



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			to know the Land Systems in Tamil Nadu
			<ul> <li>to learn the socio-political</li> <li>institution in Tanail Na la</li> </ul>
	Daaluiggaa		institution in Tamil Nadu
	P22HICC23	Freedom Struggle in	$\bullet$ to know the early nationalism and
		India	need of Freedom Movement
			<ul><li>to know the growth and</li></ul>
3			development of Indian National
C			Movement
			<ul> <li>to know the history of Swaraj and</li> </ul>
			Non Co – Operation Movement
			during the period
	P22HICCC2B	India and Her	to study the foreign policy of India
		Neighbours	to trace the relationship of India
4		_	with Pakistan
4			to know the role of Non-
			Alignment to International
			Relations
	P22HIE2B	Indian Art and	<ul> <li>to study the sources of Indian</li> </ul>
		Architecture	architectures
			$\diamond$ to learn about the architectural
5			styles of various dynasties
			<ul> <li>to learn the Indo-Turkish</li> </ul>
			Architectures
	P22HINME1	The Constitution of	<ul><li>to acquaint their rights and</li></ul>
		India	responsibilities as citizens of India
		muta	<ul> <li>to know about the Working of</li> </ul>
6			Union Executive
0			$\diamond$ to acquaint the students about
			-
			power and function of the
II M			Supreme Court
	A History III S		• · 1 · 1 · · · 1
	P22HICC31	Women Studies	<ul><li>to learn the important social</li></ul>
			legislations concerning women
1			<ul> <li>to know the Women's Movement</li> </ul>
_			in India
			<ul><li>to know the rights of Women in</li></ul>
			India
	P22HICC32	Constitutional History of	<ul> <li>to know the historical background</li> </ul>
		India	of Indian Constitution
			$\clubsuit$ to study the Constitutional
2			development under British Crown
			$\clubsuit$ to understand the political scenario
			behind the origin of the
			Constitution
	P22HICC33	Historiography and	<ul><li>to learn the history of</li></ul>
		Research Methodology	Historiography and eminent
			Historians
2			<ul> <li>to develop the skills and gain</li> </ul>
3			knowledge on various aspects of
			research
			<ul> <li>to acquire proficiency in the art of</li> </ul>
			history writing
	I	1	motory writing



LIGHT FOR US		1	1
4	P22HICC3A	Human Rights and	<ul> <li>to know the evolution of Human Rights in India</li> <li>to learn about the international organization on Human Rights in India</li> <li>to learn the activities of Human</li> </ul>
		Duties	Rights in India
5	P22HIE3A	Epigraphy	<ul> <li>to study about the evolution and development of inscriptions in India</li> <li>to know students about the various types of scripts</li> </ul>
6	P22HINME2	Heritage Tourism in India	<ul> <li>to know the concept and meaning of Tourism in India</li> <li>to reveal the scope of employability in the field of tourism</li> </ul>
IV S	emester		
1	P22HICC41	India Since 1947 C.E	<ul> <li>to know the development of Science and Technology after 1947</li> <li>to learn the significance of FiveYear Plan</li> <li>to know the educational policies and various Economic Movements after 1947</li> </ul>
2	P22HICC42	International Relations Since 1945 C.E	<ul> <li>to study the definition and scope of the International Politics</li> <li>to know the various theories of International Relations</li> <li>to acquire the role of World Organizations in peace making process</li> </ul>
3	P22HIIBC	General Studies for Competitive Examination	<ul> <li>to understand the functions of Solar System</li> <li>to learn the significant features of constitution</li> <li>to study the importance of Indian Economic Plan</li> </ul>
4	P22HIPW	Project	<ul> <li>to know the basics of research work</li> <li>to learn the methodology of the research</li> </ul>
5	P22HIVAC2	Introduction to Indian Polity	<ul> <li>to know the evolution of the Indian Constitution</li> <li>to study the basic structure of the Indian Constitutions</li> </ul>



### P.G. AND RESEARCH DEPARTMENT OF MATHEMATICS

#### **Programmes offered:**

- B.Sc. Mathematics (Aided)
- **B.Sc.** Mathematics (Unaided)
- > M.Sc. Mathematics (Unaided)
- > Ph.D. Mathematics

#### **Programme Outcomes: (For Bachelor of**

#### Science)

- The Mathematics UG students, after the completion of the course will gain a thorough knowledge in preparing competitive examinations conducted by TNPSC/UPSC/BSRB/SSB.
- The UG curriculum offers computer courses which enable the students to solve computer oriented numerical problems.
- Abstract courses and Mathematical structures included in the UG programme enable the students to prepare themselves for higher education leading to M.Sc/MCA degree courses at premier institutions like IIT, NIT and Central Universities.

#### **Programme Specific Outcome:**

- > Students are able to understand and view mathematical structures.
- Students will learn numerical aptitude, both qualitative and

quantitative knowledge for their future career.

S.No	Sub. Code	Name of the Course	Course Outcomes
1	22SCCMM1	Differential Calculus and Trigonometry	<ul> <li>Explain the relationship between the derivative of a function as a function and the notion of the derivative as the slope of the tangent line to a function at a point.</li> <li>Compare and contrast the ideas of continuity and differentiability.</li> </ul>



-		1	
			<ul> <li>Find maxima, minima, critical points and inflection points of functions and todetermine the concavity of curves.</li> <li>Convert angles from degrees to radians and vice versa.</li> <li>Compute the length of a circular arc given the radius and the interior angle.</li> <li>Understand the definitions of the inverse trigonometric functions, compute the domain and range of the hyperbolic and inverse trigonometric functionsand to find exact values of composite functions with inverse trigonometricfunctions</li> </ul>
2	22SCCMM2	Integral Calculus and Fourier Series	<ul> <li>Derive reduction formula and thereby evaluate some standard integrals.</li> <li>Explain the properties of Beta and Gamma functions and apply it to compute the integral.</li> <li>Identify odd and even functions and determine Fourier series expansion of these given functions.</li> <li>Apply change of variable method to evaluate double integral.</li> <li>Utilize double and triple integral to compute area and volume of a solid.</li> </ul>
3	22SCCMM3	Differential Equations	<ul> <li>Solve first-order ordinary differential equations.</li> <li>Solve higher order differential equations.</li> <li>Solve the Higher order differential equations using methods of variation ofparameter.</li> <li>Solve partial differential equations using Lagrange's Method.</li> </ul>
4	22SCCMM4	Analytical Geometry 3D	<ul> <li>Gain knowledge about the regular geometrical figures and their properties.</li> <li>Analyze condition of tangency and find the tangent plane to the sphere.</li> <li>Examine the condition for the general equation of the cone.</li> <li>Understand the concept of quadric cone and its properties.</li> <li>Acquire the basic knowledge of tangents and conicoid.</li> </ul>
5	22SCCMM5	Classical Algebra and Theory of Numbers	<ul> <li>Know the foundation of Theory of Equations.</li> <li>Applying the skills to solve problems in operative algebra.</li> </ul>



6	22SCCMM6	Sequence and Series	<ul> <li>Determine if an infinite sequence is bounded.</li> <li>Determine if an infinite sequence is monotonic.</li> <li>Determine if an infinite sequence is convergent or divergent.</li> <li>Find the sequence of partial sums of an infinite series.</li> <li>Determine if a geometric series is convergent or divergent.</li> <li>Find the sum of a convergent geometric series.</li> <li>Determine if an infinite series is convergent or divergent by selecting the appropriate test.</li> <li>Determine if an infinite series converges absolutely or conditionally.</li> </ul>
7	22SCCMM7	Vector Calculus and Laplace Transforms	<ul> <li>Learn the basic knowledge of vector differentiation and vector integration</li> <li>Solve vector differentiation and integration problems.</li> <li>Introduce the basic concepts of Laplace Transforms.</li> <li>Solve a differential equation by using Laplace Transforms</li> </ul>
8	22SCCMM8	Abstract Algebra	<ul> <li>Demonstrate the abstract structures of algebra</li> <li>Prove standard theorems of groups and rings</li> <li>Check irreducibility of polynomial and verify whether a function is anisomorphism or not</li> <li>Determine cosets, automorphism, kernel, maximal and prime ideals</li> <li>Develop examples of groups and rings with specific criterions</li> <li>Students will be able to determine whether a given group is abelian bychecking the properties.</li> <li>Prove that a given subset of a group is a subgroup by applying the properties.</li> <li>Describe all elements in a cyclic subgroup by using generators.</li> </ul>
9	22SCACMS1	Mathematical Statistics I	<ul> <li>Understand random variables and probability distributions.</li> <li>Know the difference between continuous and random variables.</li> <li>Acquire the knowledge by using Binomial and Poisson distribution.</li> </ul>



10	22SCACMS2	Mathematical Statistics II	<ul> <li>Understand the meaning of correlation, regression and its properties.</li> <li>Apply the concepts of t, F, z distributions and its applications.</li> <li>Apply the concepts of sampling techniques and procedure of testing ofhypothesis for large samples.</li> </ul>
11	22SCACMS1P	Mathematical Statistics Practical	<ul> <li>Understand and critically discuss the issues surrounding sampling and</li> <li>significance.</li> <li>Check the given data are correlated or not using Karl Pearson's coefficient of correlation or Spearman's rank correlation.</li> </ul>
12	16SCCMM9	Numerical Methods with MATLAB Programming	<ul> <li>Introduction to Programming and Numerical Methods</li> <li>Proficiency in MATLAB Programming</li> <li>Application of MATLAB to Solve Numerical Problems</li> </ul>
13	16SCCMM10	Real Analysis	<ul> <li>Solid Understanding of the Real Number System and Countability</li> <li>Conceptual Mastery of Continuity, Differentiation, and Riemann Integrals</li> <li>Application of Rolle's Theorem</li> </ul>
14	16SCCMM11	Statics	<ul> <li>Understanding the Principles of Equilibrium</li> <li>Application of Equilibrium Concepts to Solve Practical Problems</li> <li>Development of Problem-Solving Skills</li> </ul>
15	16SMBEMM1:1	Operations Research	<ul> <li>Understanding of Key Operations Research Techniques</li> <li>Problem-Solving Skills for Real-Life Business Challenges</li> <li>Enhanced Analytical and Decision- Making Abilities</li> </ul>
16	16SCCMM1P	Numerical Methods with MATLAB Programming (P)	<ul> <li>Familiarity with MATLAB Programming and Syntax</li> <li>Problem-Solving Skills with Numerical Methods</li> <li>Hands-On Experience with Real- World Applications</li> </ul>
17	16SCCMM12	Abstract Algebra	<ul> <li>Foundational Understanding of Set Theory and Functions</li> <li>Introduction to Group Theory</li> <li>Conceptual Mastery of Rings and Their Properties</li> </ul>



ADIRAMPATTINAM – 614 701

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18	16SCCMM13	Complex Analysis	<ul> <li>Understand the functions of complex variables, continuity and differentiation of complex variable functions, CR equations of analytic functions.</li> <li>Learn about elementary transformation concepts in complex variable.</li> <li>Know about complex Integral functions with Cauchy's Theorem, power series expansions of Taylor's and Laurant's series.</li> <li>Understand the singularity concepts and residues, solving definite integrals using the residue concepts</li> </ul>
19	16SCCMM14	Dynamics	<ul> <li>Understanding of Motion and Kinematic Principles</li> <li>Application of Newton's Laws of Motion</li> <li>Practical Problem-Solving Skills</li> </ul>
20	16SMBEMM2:1	Graph Theory	<ul> <li>Understanding the Fundamentals of Graph Theory</li> <li>Application of Graph Theory in Real- World Problems</li> <li>Mastering Combinatorics Techniques in Graph Theory</li> </ul>
21	16SMBEMM3:2	Number Theory	<ul> <li>Understanding the Theory and Applications of Number Systems</li> <li>Mastery of Congruence and Modular Arithmetic</li> <li>Preparation for Coding and Algorithmic Problem Solving</li> </ul>

#### **Programme Outcome: (For Master of Science)**

- After completing two years of M.Sc., Mathematics programme students are equipped with through knowledge in pure and applied mathematics.
- The mathematical curriculum offers a number of practical exposures which equips the students to face modern challenges in mathematics.
- The PG students, after the completion of the course will gain a thorough knowledge in preparing themselves for the CSIR NET, SET and GATE examinations.

#### **Programme Specific Outcome:**

- Students enable to apply the concepts of operations research, probability theory and fuzzy theory in real life problems.
- Elective papers in PG programme enable the students for real time applications.
- Further the elective paper, fuzzy theory impact through knowledge in fuzzy which is very use full for the students to peruse their research programme in future.



S.No	Sub. Code	Name of the Course	Course Outcomes
1	P22MACC11	Algebra	<ul> <li>Gain expertise in the basic concepts of group theory with the help of numerousexamples.</li> <li>Discuss in detail about permutation groups and Normal subgroups anddiscuss on counting tricks in algebra.</li> <li>Bring out the key steps involved in proving Sylow theorems and use Sylow'stheorems to classify groups of finite order upto 120.</li> <li>Learn the fundamental concept in field theory of field extensions and would see the idea of generating new fields.</li> <li>Have clear cut idea in the notions of Galois groups, normal extensions and illustrate them with various examples.</li> <li>Able to understand the Fundamental theorem of Galois theory.</li> </ul>
2	P22MACC12	Real Analysis	<ul> <li>Describe fundamental properties of the real numbers that lead to the formaldevelopment of real analysis.</li> <li>Demonstrate an understanding of limits and how that are used in sequences.</li> <li>Demonstrate an understanding of limits and how that are used in series.</li> <li>Demonstrate an understanding of limits and how that are used in series.</li> <li>Demonstrate an understanding of limits and how that are used in series.</li> <li>Demonstrate an understanding of limits and how that are used in sequences</li> <li>Examine and recognize the continuity of real functions.</li> <li>Demonstrate an intuitive and computational understanding of set theory, Continuity and solving application problems. This will be assessed throughhomework, class quizzes and tests, and a final exam.</li> </ul>
3	P22MACC13	Ordinary Differential Equations	<ul> <li>Find the general solution of the first order linear homogeneous equations.</li> <li>Understand the utility of the theory of power series which is studied in RealAnalysis course through solving various second order differential equations.</li> <li>Get introduced to the Hyper geometric functions which arises in</li> </ul>



			<ul> <li>connection with solutions of the second order ordinary differential equations with regularsingular points.</li> <li>Solve the problems arises in Mathematical physics using properties of specialfunctions.</li> <li>Understand the importance of studying well-posedness of the problem namely existence, uniqueness and continuous dependence of first order differentialequations through Picard's theorem.</li> <li>Understand the utility of the concepts from linear algebra and analysis in thestudy of system of first order equations.</li> <li>Discuss the Qualitative properties of solutions of first and second order equations. Also they will be able to work on numerous problems usingcomparison theorem in Sturm Liouville problems.</li> <li>Learn the nature of solutions which involves critical points and phase portreits for polinear and phase portreits for polinear and phase</li> </ul>
4	P22MACC1A	Classical Dynamics	<ul> <li>portraitof nonlinear equations.</li> <li>Understand the important definitions and introductory concepts like the ideasof virtual work and d'Alembert's principle.</li> <li>Derive Lagrange's equations of motion using d'Alembert's principle.</li> <li>Understand the nature of equations of motion for holonomic andnonholonomic systems.</li> <li>Understand the idea of impulsive constraints.</li> <li>Compare dissipative systems and velocity dependent potentials.</li> <li>Understand the Hamiltonian view point of dynamics in canonical equations ofmotion and phase space.</li> <li>Understand the concepts of Hamilton - Jacobi theory.</li> <li>Obtain some concrete procedure for solving problems using the theory of canonical transformations.</li> </ul>
5	P22MAE1C	Fuzzy Set Theory	<ul> <li>Interpret fuzzy set theory and uncertainty concepts.</li> <li>Identify the similarities and differences between probability</li> </ul>



			<ul> <li>theory and fuzzyset theory and their application conditions.</li> <li>Apply fuzzy set theory in modeling and analyzing uncertainty in a decisionproblem.</li> <li>Apply fuzzy control by examining simple control problem examples.</li> </ul>
6	P22MACC21	Complex Analysis	<ul> <li>Understand the complex number system from geometric view point. Will gainmastery in arguments on C* and logarithms.</li> <li>Get expertise in the concept of convergence of sequences and series of complex numbers, continuity and differentiability of function on complex numbers. Also the students will be able to thoroughly understand and knowthe importance of power series in complex analysis.</li> <li>Workout the path integrals on the complex plane.</li> <li>Understand the central theme of Cauchy theory, viz., existence of localprimitives and local power series expansion.</li> <li>Get acquainted with various techniques of proving fundamental theorem of algebra, open mapping theorem, maximum modulus theorem and Liouville'stheorem.</li> <li>Classify singularities, compute poles and residues and understand the Laurent series expansion.</li> <li>Appreciate and work on the topology of extended complex plane.</li> </ul>
7	P22MACC22	Linear Algebra	<ul> <li>Realise that the subject evolves as a generalization of solving a system oflinear equations.</li> <li>Discuss in detail the basic concepts of Linear dependence, basis and dimension of a vector space. The students will be able to demonstrate how thegeometric ideas turn into rigorous proofs.</li> <li>Master the dimension formula and rank and nullity theorem which are oftenexploited.</li> <li>Capture the idea of producing lot of structure preserving maps (Linear transformations). Further the study of algebras of linear maps would beaccomplished.</li> </ul>



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			<ul> <li>Having got trained in numerous examples the student realizes the isomorphictheory of linear transformations and matrices.</li> <li>Learn the theory of determinants and put them in practice.</li> <li>Understand that the central theme of structure theory of linear maps is to decompose the given vector space as a direct sum of generalized the Eigenspaces using the given map on it.</li> <li>Understand that linear Algebra plays a fundamental role in many areas ofmathematics including Algebra, Geometry, Functional analysis and whichfinds widest application in Physics, Chemistry and elsewhere.</li> </ul>
8	P22MACC2A	Partial Differential Equations	<ul> <li>Classify first order partial differential equations and their solutions.</li> <li>Solve first order equations and nonlinear partial differential equations usingvarious methods.</li> <li>Use the method of characteristics to solve first order partial differentialequations.</li> <li>Identify and solve the three main classes of second order equations, elliptic, parabolic and hyperbolic.</li> <li>Solve one dimensional wave equations using method of separation ofvariables.</li> <li>Classify the boundary value problems and analyse its solutions.</li> <li>Illustrate the use of PDE in problems from Engineering and BiologicalSciences.</li> </ul>
9	P22MAE2C	Stochastic Processes	<ul> <li>Acquire adequate knowledge about Continuous Time Markov chain andQueuing system.</li> <li>Gain understanding on the Renewal process, Cumulative process and Semi-Markov process.</li> <li>Apply different methods to solve birth and death queues.</li> <li>Examine the computations of renewal process and theory.</li> <li>Conclude the idea of Branching process.</li> </ul>



10	P22MAVAC1B	Introduction to MAT LAB	<ul> <li>Understand the main features of the MATLAB development environment.</li> <li>Use the MATLAB GUI effectively.</li> <li>Design simple algorithms to solve problems.</li> <li>Write simple programs in MATLAB to solve scientific and mathematicalproblems.</li> </ul>
11	P22MACC31	Topology	<ul> <li>Study and understand the concepts of metric spaces, topological spaces</li> <li>Understand the concepts of open bases and open sub bases</li> <li>Understand the concepts of Compactness, connectedness and separationaxioms</li> <li>Provide patience to grapple with life outside the campus.</li> </ul>
12	P22MACC32	Measure Theory and Integration	<ul> <li>Learn the basic concepts of measure and integration.</li> <li>Comprehend the differences between different types of convergences.</li> <li>Understand the concepts of Classical Banach Spaces</li> <li>Learn completeness and approximation in L□-spaces.</li> <li>An overview of the central results of the theory of Lebesgue integration.</li> </ul>
13	P22MACC3A	Advanced Numerical Analysis	<ul> <li>Solve algebraic and transcendental equations using various iterative methods andstudy the rate of convergence of those problems.</li> <li>Solve System of Linear Algebraic equations using direct methods and indirectmethods.</li> <li>Solve eigen value problems and study the error analysis.</li> <li>Solve algebraic equations and differential equations using the techniques of interpolation like Lagrange Interpolation, Hermite Interpolation etc.</li> <li>Perform curve fitting using least square approximation.</li> <li>Find the numerical value of the derivative of various functions using Euler methodand Runge-Kutta method.</li> <li>Calculate the numerical value of a definite integral using methods like quadraturerules in numerical integration.</li> </ul>



<b></b>			
			• Identify the suitable numerical method and perform error analysis.
14	P22MAE3A	Integral Equations and Calculus of Variations	<ul> <li>Understand the concepts of variation and its properties.</li> <li>Use Euler's equation to solve various types of variational problems with fixedboundaries.</li> <li>Modify the Euler's formula for a class of curves with moving boundary points.</li> <li>Solve problems related with reflection and refraction, diffraction of light rays.</li> <li>Derive sufficient conditions based on second variation.</li> <li>Classify Fredholm, Volterra and singular type integral equations.</li> <li>Solve integral equations using Fredholm theorem, Fredholm Alternativetheorem and method of successive approximations.</li> <li>Understand the classical Fredholm theory.</li> </ul>
15	P22MAVAC2A	Mathematics for Competitive Examinations	<ul> <li>Face competitive examinations with confidence.</li> <li>Solve a lot of problems on numbers and averages and problems on ages.</li> <li>Get a lot of training on percentage, profit and loss.</li> <li>Crack problems on calculating simple interest and compound Interest.</li> <li>Work on a plenty of problems on time and work.</li> <li>Get working knowledge on ratios and proportions.</li> <li>Calculate time, distance, speed given the other two and solve lot of problems.</li> <li>Acquire problem solving ideas on trains, boats and streams.</li> </ul>
16	P22MACC41	Functional Analysis	<ul> <li>Identify Banach spaces and analyse their properties with other types ofspaces.</li> <li>Examine and identify properties of complex Banach spaces- Hilbert spaces.</li> <li>Apply the analytical techniques and theoretical knowledge in Hilbert Spaces.Findout and determine orthonormal sets.</li> </ul>



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			<ul> <li>Explain various properties of Hilbert spaces.</li> <li>Attain knowledge and experience of working with many pure mathematicalproblems.</li> </ul>
17	P22MACC42	Differential Geometry	<ul> <li>Have a solid understanding of the subjects, linear algebra, multivariablecalculus and differential equations and a basic knowledge of theoreticalphysics.</li> <li>Sketch and workout graphs, level sets, tangent space and surfaces of givensmooth maps.</li> <li>Good knowledge on calculus of vector fields.</li> <li>Understand how Gauss map helps to identify the surfaces that are mappedonto the unit n-sphere.</li> <li>Describe surfaces as a solution set of differential equations.</li> <li>Exhibit geodesics on surfaces.</li> <li>Learn how parametrizations of plane curves can be used to evaluate integralsover the curve.</li> <li>Compute the Gaussian curvature of various surfaces.</li> </ul>
18	P22MACC43	Fluid Dynamics	<ul> <li>Understand the basic ideas of fluid velocity, streamlines and rotational andirrotationalflows.</li> <li>Understand the meanings of fundamental terms like pressure and body force.</li> <li>Develop special mathematical methods involving images and complex variables forincompressible fluids.</li> </ul>
19	P22MAE4A	Theory of Probability	<ul> <li>Understand Probability axioms and find conditional probabilities for lot ofcases</li> <li>Compute expectations and moments on a number of distributions.</li> <li>Gain mastery in the important probability distributions, viz., Binomial,</li> <li>Poisson and Normal.</li> </ul>



#### PG & RESEARCH DEPARTMENT OF PHYSICS

#### **Programme outcome: (For Bachelor of Science)**

Physics programme for Bachelor of Science aims to equip students to provide a firm foundation in every aspect of Physics and to explain a broad spectrum of modern trends in physics and to develop experimental, computational and mathematics skills of students.

#### **Programme Specific outcome**

B Sc Programme in Physics provides an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential. Use Information Communication Technology to gather knowledge at will.

Sl.No	Subject Code	Name of the course	Course outcome
1	22LCT1	Tamil Language Course -1	Studying modern poetry, grammar vocabulary, moral values of short stories, offices business letter, précis reports.
2	22ELCE1	English Language Course -1	Read and understand simple texts in English Answer simple comprehension questions and match sentences about texts
3	22SCCPH1	Properties of Matter and Acoustics	<ul> <li>Study the elastic behaviour and working of torsional pendulum</li> <li>Study of bending behaviour beams and analyse the expression for young's modulus</li> <li>Understand the surface tension and viscosity of fluid</li> <li>Analyse waves and oscillations</li> <li>Study the basic properties and production of ultrasonics by different methods</li> </ul>
4	22SCCPH1P	Core Practical Properties of Matter	<ul> <li>Study the elastic behaviour of materials</li> <li>Analyse the relationship between various types of experiments</li> <li>Perform the procedure as per standard values</li> <li>Understand the applications</li> </ul>
5	22SCACMM1A	First Allied Course -1 Mathematics Paper-1	<ul> <li>Understand concepts of limit and continuity on R through ε-δ definition.</li> <li>Learn the conceptual variations when advancing in calculus from one variable to multivariable discussions.</li> <li>Sketch curves in a plane using its mathematical properties in the</li> </ul>



6       22UGVED       Value Education       • Learn the applications of mean value theorem and Taylor's theorem.         6       22UGVED       Value Education       • Understand importance of role of Values, ethics, attitudes, inductate indiversitions, competitions and power of networking         6       23LGT2       Tamil Language Course -II       • Respond and relate with expectations, competitions and power of networking         7       23ELGE2       English Language Course -II       Middle age literature, different essay, translation, grammar.         7       23ELGE2       English Language Course -II       Reconstruct texts by reordering sentences         8       22SCCPH2       Mechanics       • Understand the definition for centre of gravity in hemisphere, hollow hemisphere etc., • Understand the dynamics and gravitation         9       22SCCPH2P       Core Major Practical - II       • Analyse the relationship between variations         10       22SCAMMIB       Allied Mathematics Paper-III       • Understand the significance of hydrostatic and hydrodynamics         11       22SCACMMIC       Allied Mathematics Paper-III       • Understand the spleations				<u>.</u>
6       22UGVED       Value Education       • Understand importance of role of Values in developing self - Inculate in fight values, ethics, attitudes, manners and behaviors for life         6       Respond and relate with expectations, competitions and power of networking       • Apply the values in order to live a positive, healthy and productive life.         7       23LGT2       Tamil Language Course -II       Middle age literature, different essays, translation, grammar.         7       23ELGE2       English Language Course -II       Reconstruct texts by reordering sentences Understand the significance of having appropriate attitude and balance towards work life as well as personal life.         8       22SCCPH2       English Language Course -II       Reconstruct texts by reordering sentences Understand the significance of faving appropriate attitude and balance towards work life as well as personal life.         8       22SCCPH2       Mechanics       Understand the definition for centre of gravity in hemisphere, hollow hemisphere etc., Understand the dynamics and gravitation         9       22SCCPH2P       Core Major Practical - II       • Analyse the relationship between various types of experiments         10       22SCACMM1B       Allied Mathematics Paper-II       • Understand the applications         10       22SCACMM1B       Allied Mathematics Paper-II       • Understand basic concepts of Differential equations of higher order using various technoley; and anon-linear differential equations of higher order         <				reference.
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methods in solving some physical problems				partial differential equations using
problems				
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11 22SUAUMINIU Allied Mathematics Paper-III • Understand different types of	11			*
	11	22SCACMMIC	Allied Mathematics Paper-III	• Understand different types of



12	22UGCES	Environmental Studies	<ul> <li>Matrices and their types.</li> <li>Find Rank and also find Eigen values and corresponding eigenvectors for a square matrix.</li> <li>Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix, using rank.</li> <li>Find matrix form of basic geometric transformations and interpretation of Eigen values and eigenvectors of such transformations.</li> <li>Gain in-depth knowledge on natural processes and resources that sustain</li> </ul>
			<ul> <li>life and govern economy.</li> <li>Understand the consequences of human actions on the web of life, global economy, and quality of human life.</li> <li>Develop critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.</li> <li>Acquire values and attitudes towards understanding complex environmental economic- social challenges, and active participation in solving current environmental problems and preventing the future ones.</li> </ul>
13	22PELPS1	Professional English for Physical Sciences-I	• Professional English (ESL) is a practical course for students who are still developing fluency in written and spoken English, and who wish to improve their expression in the context of business communications
14	22LCT3	Tamil Language course -III	Middle age poetry, grammar, learning about characters from the novel, essays related to current situations.
15	22ELCE3	English Language course - III	Skim for main ideas and scan for specific information Find information in documents Understand texts about familiar topics
16	22SCCPH3	Thermal Physics Major Paper	• Understand the nature of calorimetry by specific heat of solids and law of thermodynamics and entropy



<ul> <li>Analyses of Zeroth law of thermodynamics and entropy</li> <li>Understanding the low temper physics</li> <li>17 22SCCPH3P</li> <li>General Physics Major Practical – III</li> <li>Practical – III</li> <li>Analyse the relationship betwee various types of experiments</li> <li>Perform the procedure as per standard values</li> <li>Understand the applications</li> <li>18 22SCACCH1</li> <li>Allied Chemistry – I</li> <li>To understand the various theor of coordination chemistry.</li> <li>To study the various concepts resonance and halogen compounds and organic reaction</li> <li>To learn the concepts of solid-chemistry</li> <li>19 22SNMECH1</li> <li>Non-Major Elective - Drugs and Cosmetics</li> <li>To impart fundamental knowle in the field of Chemistry</li> <li>The theory and practical asper of the subject augment the abilit the learner to understand the</li> </ul>	en ories of nds. matic is. state
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implications of scientific and	
technical approaches	
•To mould the learner into a	
prospective skillful scientific workforce for the future	
• Study of Skill based papers and	1
Industrial visit help mutual	4
collaboration	
20     20PELPS2     Professional English –II     • The course is designed for students	lents
whose first language is not Engl	
Common business documents	
studied, as well as grammar, syr	
and style.	
21   22LCT4   Tamil Language course -IV   Ancient poetries with moral value	16
21 22LC14 Tahin Language course -1V Ancient poetries with moral val	
Acting as the character in the dr	ama.
reading and writing skills witho	
mistakes, learning to maintain	-
business files, good qualities of	
management.	
22 22ELCE4 English Language course - Answer multiple choice and sh	ort
answer questions about a text	
IV Use simple texts as models for	
writing.	
23 22SCCPH4 Electricity Magnetism and • Study the electric field using	
Coulombs inverse square law in	
Electromagnetism electrostatics of current	
Analyse the chemical and heat	
electromagnetism electrostatics of current	



			effect of current • Analyse the relations between b, h
			and m
			• Understand the faradays laws of
			electromagnetic induction by
			•
			Rayleigh's method
			• Analyse he value of Maxwell
			equation- boundary conditions
24	22SCCPH4P	General Physics Major	• Analyse the relationship between
		Dractical Electricity IV	various types of experiments
		Practical-Electricity –IV	• Perform the procedure as per
			standard values
			• Understand the applications
25	22SCACCH2	Allied Chemistry – II	• To learn the basics of nuclear
25	22001100112	Thine a chemistry Th	chemistry and metallic bond.
			• To understand the properties and
			applications of carbohydrates, amino
			acids and proteins.
			• To study the basic concepts of
			polymers, heterocyclic compounds
			and stereoisomerism
26	22SNMECH2	Non Major Elective -	• Chemistry is used in daily life for
		Chamistania Essential and life	numerous tasks, including eating safe
		Chemistry in Everyday life	foods, boiling water to kill bacteria,
			using antibacterial soap and more.
			• There are many applications of
			chemistry in daily life; you likely
			just don't recognize them.
27		Nan Mudhalvan Scheme –	Naan Mudhalvan is the flagship
27		Nan Muunaivan Scheme	Initiative by the government of
		Digital Skills for	Tamilnadu which will promote skill
		Emalorability	development in the State of
		Employability	-
			Tamilnadu by providing equal
			opportunities to all aspirants.
			• This platform aims to provide
			dynamic information for college
			students on courses and relevant
			information about industry specific
			skill offerings.
			•The MANDATORY courses are
			chosen specifically by the faculty of
			the colleges. These course
			requirements allow to develop
			knowledge beyond the subject that
			interests the student.
20	168000115	Ontion	Understand the natural behaviour of
28	16SCCPH5	Optics	
			aberration in lens
			• Study the theory and experiment of
			interference using air wedge,
			Newtons rings and Michelson
			interferometer
			• Study the theory and experimental
			past of diffraction by Fresnels and
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			<ul> <li>Fraunhoffer methods • Study the theories for production of polarization of light</li> <li>Understand the theory and application of microwave, infrared and Raman spectroscopy</li> </ul>
29	16SCCPH6	Atomic and Molecular Physics	<ul> <li>Understand the properties of positive rays, experimental proof by frank and hertz method</li> <li>Analyse the relationship between various types of couplings</li> <li>Understand the properties of x-ray s verification</li> <li>Analyse the ideas of basics of nucleus and their energy</li> <li>Perform the procedures for nuclear fission and fusion</li> </ul>
30	16SCCPH7	Electronics	<ul> <li>Understand the basics of diode and working of rectifier circuits and characteristics</li> <li>Analyse the characteristics of transistor and transistor biasing circuits</li> <li>Perform the procedures for the working of single stage and multistage amplifier</li> <li>Analyse the relationship between amplifier and oscillators</li> <li>Understand the applications of op- amps i inverting and non inverting modes</li> </ul>
31	16SMBEPH1	Material Science	<ul> <li>To impart comprehensive knowledge in theoretical, experimental and computational Physics and a better understanding of the materials.</li> <li>To train and empower to think creatively and critically about Physics in foundations and contemporary applications of material science.</li> </ul>
32	16SCCPH4P	Major Practical –IV	<ul> <li>Study the emf, resistance, behaviour of the materials</li> <li>Analyse the relationship between tan a and tan b</li> <li>Analyse the specific heat capacity, refractive index, as per the standard procedure</li> <li>Understand the standard values of the results</li> </ul>
33	16SCCPH8	Nuclear Physics	<ul> <li>To impart knowledge of radioactivity and related phenomena.</li> <li>To inculcate various interactions of</li> </ul>



			<ul> <li>nuclear radiation with matter.</li> <li>To make the students understand the fission and fusion reactions and their applications.</li> <li>To emphasize the understanding of nuclear forces, nuclear models, elementary particles and accelerators.</li> </ul>
34	16SCCPH9	Theoretical Physics	Understand the basic significance of mechanics of a system of particles • Understand the old quantum theory • Perform the theories of quantum mechanics into Schrodinger wave equation • Understand the application of Schrodinger equation into potential well, barrier • Analyse the basic functions of Eigen values and Eigen functions
35	16SMBEPH2	Microprocessor and C Programming	Understand the basic concepts of fundamentals of operators and expressions • Analyse the relationship between various statements • Analyse the various types of function • Perform the different types of arrays • Understand the structure and unions
36	16SMBEPH3	Communication Physics	<ul> <li>Understand the communication in digital and analog systems</li> <li>Design, construct and analyze basic electronic and digital circuits.</li> </ul>
37	16SCCPH4P	Major Practical – IV	To improvise the knowledge on utilization of electronic devices in electrical appliances by performing some experiments and executing programmes in order to realize the applications of microprocessors and computers
38	UGGS	Gender Studies	• Understand and solve problems of relevance to society to meet the specified needs using the knowledge, skills and attitudes acquired from humanities / sciences/ mathematics/ social sciences.
39		Nan Mudhalvan Scheme	<ul> <li>Naan Mudhalvan is the flagship Initiative by the government of Tamilnadu which will promote skill development in the State of Tamilnadu by providing equal opportunities to all aspirants.</li> <li>This platform aims to provide dynamic information for college</li> </ul>



	92.04		
			<ul> <li>students on courses and relevant information about industry specific skill offerings.</li> <li>•The MANDATORY courses are chosen specifically by the faculty of the colleges. These course requirements allow to develop knowledge beyond the subject that interests the student.</li> </ul>
I M.Sc Physics (ODD Semester)			
40	P22PYCC11	Classical Mechanics	<ul> <li>To provide in-depth knowledge on the foundations of Classical Mechanics. To familiarize the laws of motion and learn about their applications in other branches of Physics.</li> <li>To build a strong base on dynamical systems</li> </ul>
41	P22PYCC12	Mathematical Physics	<ul> <li>•To give a solid mathematical foundation in vector calculus, matrices and differential equations.</li> <li>•To help learn and appreciate the importance of Special functions and their applications in Physics. To develop mathematical skills and solve problems in various branches of Physics.</li> </ul>
42	P22PYCC1B	Optoelectronics	•To expose the fundamental principles behind the operation of various light sources and detectors. • To introduce fiber optic communications system and their widespread applications. To create awareness about the current scenario in fiber optic communications system and their mitigations
43	P22PYCC1P	General Physics and Electronics I Lab	•Experimental determination of certain physical constants and properties and verification of characteristics and applications of electronic components and devices.
44	P22PYE1B	Physics Simulation with Python	<ul> <li>To introduce Python language and different Python modules. Credit: 4 To give an exposure to solve and visualize the physical problems using Python.</li> <li>To develop the idea of writing programs using different numerical methods.</li> </ul>
45	P22PYVAC1	Research Publication and Ethics	•To provide the fundamental knowledge on basics of research ethics, research integrity and



### ADIRAMPATTINAM - 614 701

<ul><li>publication ethics.</li><li>To expose research misconduct and predatory publications.</li></ul>
•To explore citation databases, open access publications, research metrics (citations, h-index, Impact Factor,
etc.)



KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

I M.Sc Physics (EVEN Semester) P22PYCC21 **Ouantum Mechanics** •To enhance the knowledge of the 46 foundations of Quantum Mechanics. • To get acquainted with solving problems using the Schrödinger equation. •To provide a basic understanding of state vectors in abstract representation. •To impart an understanding of the 47 P22PYCC22 Electromagnetic Theory fundamental aspects of electromagnetic theory. • To build a strong base in Maxwell's equations. •To bestow knowledge about dispersion and scattering of electromagnetic waves. •To give a strong mathematical 48 P22PYCC2A **Advanced Mathematical Physics** foundation in linear vector space, tensors and complex analysis. • To provide a basic understanding of hypergeometric functions. •To impart knowledge on applying group theory to physical problems. •Experimental determination of certain 49 P22PYCC2P **General Physics and Electronics** physical constants and properties and II Lab verification of characteristics and applications of electronic components and devices **P22PYE2A** To learn the architecture and 50 Microprocessor and programming and applications of Intel Microcontroller 8085. • To know the various peripheral devices and interfacing applications. • To understand the architecture and programming, and applications of Intel 8051. P22CHNME1 •To understand the principles of Green 51 NME-1-Chemistry of Pollution chemistry. Food and Cosmetics • To learn the various pollutions affecting the environment. • To acquire basic knowledge about chemistry of food and cosmetics. II M.Sc Physics (ODD Semester) Thermodynamics and statistical •To understand what is temperature 52 P22PYCC31 and how to calculate it. mechanics •To give an exposure to various statistical ensembles and their applications in physics. • To get familiar with the foundations and applications of quantum statistics.



### ADIRAMPATTINAM – 614 701

P22PYCC32	Solid State Physics	•To give exposure to structural
1 0052		properties of crystals and the X-ray
		diffraction principle.
		• To enhance understanding of the
		properties of conductors and
		semiconductors.
		• To build a strong foundation for the
		materials' lattice dynamics and
		thermal, dielectric and electrical
		properties of materials.
P22PYCC3A	Advanced Quantum Mechanics	•To get acquainted with approximation
		methods for time-independent and
		time-dependent Hamiltonians.
		• To provide a sound knowledge of
		atomic and molecular structure
		through quantum formalism.
		•To give a basic understanding of the
		theory of relativistic quantum mechanics.
P22PVCC3P	Major Practical (Microprocessor	•To develop programming skills in
1221 10051		microprocessor and C++ programming
	and programming in $C^{++}$ )	to solve some mathematical problems
		and learn their applications.
Р22РУЕЗА	Physics of Nanomaterials	•To provide an introduction to
		nanomaterials and their peculiar
		properties.
		•To describe various techniques for the
		preparation of nanomaterials.
		<ul> <li>To introduce various applications</li> </ul>
		and characterization techniques.
P22PYVAC3	Chemistry in day to day life	•To acquire the fundamental concepts
		related to the chemistry in daily life
		• To understand the importance of
		different types of commercial products for the environment
		• To apply the basic concepts of
		chemistry in the manufacture of
		commercial products for the society
		• To find the efficiency and the utility
		of the byproducts derived from the
		basic and applied concepts of
		chemistry
		• To have knowledge about the basic
		concepts of various micronutrients,
		fertilizer, dyes, disinfectants and
		detergents.
		• To introduce the properties,
		structural elucidation, applications and
		the demerits of the products of the
	II M Sc Physics (FVFN Som	applied chemistry.
	•	
P22PYCC41	Crystal Growth and Thin film	•To introduce the knowledge of crystal
	P22PYCC3A P22PYCC3P P22PYE3A P22PYVAC3	P22PYCC3A       Advanced Quantum Mechanics         P22PYCC3P       Major Practical (Microprocessor and programming in C++)         P22PYE3A       Physics of Nanomaterials         P22PYVAC3       Chemistry in day to day life         P22PYVAC3       Image: Chemistry in day to day life         Main Pick Physics (EVEN Semicirc)       Main Pick Physics (EVEN Semicirc)



### KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

LIGHT			
		Physics	<ul><li>growth and its characterization.</li><li>To understand the basic ideas of thin film fabrication.</li></ul>
59	P22PYCC42	Nuclear and Particle Physics	<ul> <li>•To understand the nature of nuclear forces.</li> <li>• To have an idea of the nuclear shell model.</li> <li>• To gain knowledge of nuclear reaction and Quark structure.</li> </ul>
60	P22PY1BC	Analytical Characterization Techniques	<ul> <li>To provide fundamental features of analytical instrumentation to the students.</li> <li>To impart knowledge about the fundamental properties of the instrumental analysis and experimental and theoretical aspects of the characterization techniques.</li> <li>To know the basic theory of characterization techniques and application.</li> </ul>
61	P22PYVAC2	Medical Instrumentation	<ul> <li>•To provide fundamental features of analytical instrumentation to the students.</li> <li>•To impart knowledge about the fundamental properties of the instrumental analysis and experimental and theoretical aspects of the characterization techniques.</li> <li>•To know the basic theory of characterization techniques and application</li> </ul>
62	P22PYPW	Project	<ul> <li>Understand the basic ideas about the project</li> <li>Understand the working procedure of the project</li> <li>Perform the procedure as the labo rotary standards</li> <li>Understand the values obtained and its applications</li> </ul>



### PG AND RESEARCH DEPARTMENT OF TAMIL

S.NO	SUBJECT CODE	Name of the course	Course outcome
01	22LCT1	தமிழ் மரபுகக் விதை, புதுக்கவிதை முதலானவற்றை அறிமுகப்படுத்துதல். நாடகம்•, சிறுகதை, நாவல், கட்டுறை முதலான இலக்கிய வடிவங்களைக் கற்பித்தல். இக்கால இலக்கியத்தின் மீதான	தமிழ் மரபுகக் விதை, புதுக்கவிதை முதலானவற்றை அறிமுகப்படுத்துதல். நாடகம்●, சிறுகதை, நாவல், கட்டுறை முதலான லெக்கிய வடிவங்களைக் கற்பித்தல். டுக்கால டுலக்கியத்தின் மீதான
02	22ACCBL1	தமிழ் இலக்கியத்தின் மீதான ஆர்வம் மிகும். புதிய இலக்கிய வழவங்களை அறிவர். ● கவிதை●, சிறுகதை, நாவல் ஆகியவ	 தமிழ் இலக்கியத்தின் மீதான ஆர்வம் மிகும். புதிய இலக்கிய வடிவங்களை அறிவர். ● கவிதை●, சிறுகதை, நாவல் ஆகியவ
03	22ACCBL2	தமிழ் மரபுகக் விதை, புதுக்கவிதை முதலானவற்றை அறிமுக1யருத்துதல். நாடகம்●, சிறுகதை, நாவல், கட்டுறை முதலான இலக்கிய வடிவங்களைக் கற்பித்தல். இக்கால இலக்கியத்தின் மீதான●	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வொழி மரபறிந்து பிழைபற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
04	22AFACBL1	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வொழி மருபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் ●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமாழி மரபறிந்து பிழையற எமுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் ●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
05	22UGCES	To understands the philosophy of life and values through thirukural	Apply the values in thirukural to the speaceful tutiful and responsible in family and society
06	22LCT2	தமிழின் ஐந்திலக்கணாங்களுள் முதலாவதான எமுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமாழி மரபறிந்து பிழைபற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணந்தை அறிவுறுத்தல். தமிழ்வமாழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
07	22ACCBL3	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வொழி மரபறிந்து பிழையற எமுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமாழி மரபறிந்து பிழைபற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் ●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
08	22ACCBL4	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல்.●	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமா <u>ழி</u> மருபறிந்து பிழையற எழுதவும்



### ADIRAMPATTINAM - 614 701

		எமுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் யோன்றவற்றைக் கற்பித்தல்.	பேசவும் வ <u>மி</u> வகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி
			வகைகள்●, கூறுகள் யோன்றவற்றைக் கற்பித்தல்.
09	22AFACBL2	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணர்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமாழி மரபறிந்து பிழையற எமுதவும் பேசவும் வழிவகுத்தல்.● எழுத்திலக்கணத்தின் புணற்ச்சி
			வகைகள்●, கூறுகள் யோன்றவற்றைக் கற்பித்தல்.
10	22UGCES	To Appreciade the seope of environmental stuties comunuty ecology and the interdeciplinary nature of enviraonmental issues.	Unterstand the enviraiment importance including interactions across logal toglopal scales.r
11	22LCT3	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவறுத்தல். தமிழ்வொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். • எழுத்திலக்கணத்தின் புணற்ச்சி
			வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
12	22ACCBL5	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்வமாழி மருபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ●	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவறுத்தல். தமிழ்வமாழி மரபறிந்து பிழையற எழுதவும்
		எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் யோன்றவற்றைக் கற்பித்தல்.	பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
13	22ACCBL6	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் ●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவறுத்தல். தமிழ்வமாழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். • எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் •, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
14	22ASACBL1.	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிந்து பிறையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●,	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுக்தல். தமிழ்வமாழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். • எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள் •, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
15	22LCT4	ரிக்சும்டஙிசுபங்ழ!ரவமாதம்!ன/ஐம்சுமுமண்சுப்!வே?!உ ஒ!ானைணர்!டஎஉப்தவார்!ாழங்ஒசு ஒருங்மசு மணர்பஙழச்சுபவர்!பனைசுஆட்சு!ரனிசுரஙழணர்!6ஒ சசுபதவ!ன/ஐமசுமுமணரு.:!!	



### ADIRAMPATTINAM – 614 701

16	22ACCTL7	தமிழின் ஐந்திலக்கணங்களுள் முதலாவதான	தமிழின் ஐந்திலக்கணங்களுள்
10		தமதன் ஜாதலைகள்பகளுள் முதலாகதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிர்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல்.● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.	தமதுன் ஜாதல்லையாமனுள் முதலாவதான எழுத்திலக்கணத்தை அறிவுறுத்தல். தமிழ்மொழி மரபறிந்து பிழையற எழுதவும் பேசவும் வழிவகுத்தல். ● எழுத்திலக்கணத்தின் புணற்ச்சி வகைகள்●, கூறுகள் போன்றவற்றைக் கற்பித்தல்.
17	22ACCBL8	.ிற்றிலக்கியத்தின் பல்வேறு வகைமைகளை அறிமுகப்படுத்துதல். சிற்றிலக்கியங்களில் அமைந்துள்ள சமயம் சாற்ந்த செயத்ிகளைக் கற்பித்தல●	
18	22ASACBL2	<ul> <li>பற்கு மற்றின் சமயச் சிந்தனைகளை</li> <li>அறிவுறுத்தல். ப ந்தமிறிரின் கட்டடக்கலை அறிவு</li> <li>குறித்துத் தெளிவுபடுத்துல். ● தமிறிரின் நிர்வாகத்</li> <li>திறன் சாற்ந்த அறிவைப் பயிற்றுவித்தல். ●</li> </ul>	பழந்தமிழரின் கட்டடக்கலை அறிவைத் தெளிவர். ● தமிழக மன்னர்களின் பல்வேறுபட்ட கோயிற்கலை நுணுக்கங்களை அறிவர். ● தொல்பொருள் துறை●, அறஙிலையத்துறையின் செயல்பாடுகள், பொறுப்புகளைக் கற்பர். கோயில் நிர்வாகக் கலை பற்றி அறிவர். ● அரசுப் பணிவாயிப்புகளில் முன்னூரியை பெறுவர். ●
19	22ANNEHI2	தமிழ்ச் சொற்களின் ஆற்றல்மிகு பயன்பாடல் ட அறியச் செய்தல	
20	22ACCBL9	தமிழின் நீதி (அற) இலக்கியங்களைக் கற்பித்தல். தமிழ் நீதி இலக்கியங்களின் தனித்தன்மைகளை அறிவுறுத்தல். ● நீதி இலக்கியக் காலங்களின் சமூக●, அரசியல், வொருளாதாரப் பின்னணியை உண.	<ul> <li>. தமிழ்வமாழியின் நீதி (அற)</li> <li>இலக்கியங்கள் பற்றிய அறிவினைப் பெறுவர். தனிமனித வாழ்வியலுக்கான அழப்படை</li> <li>அறங்களைக் கற்பர். • சமூக வாழ்வியலுக்கான பொறுப்பு ஙிலைகளை உணர்வர். ●</li> <li>இலக்கியங்கள் வெளிப்படுத்தும் சமூகப் பொறுப்புணர்ச்சியை</li> <li>அறிவர். ● நீதி (அற)</li> <li>இலக்கியங்கள் உணர்த்தும் சமூக●, அரசியல் பறினாமங்களைக் கற்பர்.</li> </ul>
21	22ACCBL10	ஒப்பிலக்கியம் குறித்துப் பயிற்றுவித்தல். மொழியியல் கோட்பாகுகளை அறிமுகப்பகுத்துதல். ● அறிவியல் முறையில் வமாழியியல் மாற்றங்களை உணற்த்துதல●	ஒப்பிலக்கியம் குறித்த அறிவைப் ஒப்பிலக்கியம் குறித்த அறிவைப் பெறுவற். இலக்கிய வகைகளில் உள்ள கருத்தியல்புகளை அறிவற். ● காலந்தோறும் வளற்ந்துள்ள இலக்கியங்களின் வடிவம் ●, பொருண்மைகளை ஒப்பிடுவற். பல்வேறு இலகக்பியங்களுக்குள் இருக்கும் வாழ்வியல் விழுமியங்களைக் கற்பற். ● இலக்கியங்களை ஒப்பிடுவதன் வாயிலாகத் தாய்மொழி இலக்கியத்தின் சிறப்பினைத்● திறனாய்வு செய்வற்.
22	22ACCB11	தமிழின் யாயபிலக்கண மறபையும் செய்யுள் உறுப்புகளையும் கற்பித்தல். பாக்களின் வகைகளை•, இனங்களைக் கற்றுத் தருதல். தமிழ்மொழி அணி இலக்கணத்தைப் பயிற்றுவித்தல்.• தமிழில் அணி இலக்கியப் பறிணாம வளற்ச்சியைக் கற்றுத் தருதல்.•	தமிழ் இலக்கியப் பாடல்களின் செய்யுள் உறுப்பு முறைகளை அறிவர். பாக்களின் வகைகளையும் தௌங்களையும் தெளிவுறக் கற்பர். ● தமிழ் இலக்கிய வரலாற்றில் அணி இலக்கண மறயைத் தெளிவர். ● அணிகளின் நட்பமான வேறுபாகுகளை அறிவர். ● இலக்கியங்களில் கையாளப்பட்டிருக்கும் அணிகளின்



### ADIRAMPATTINAM - 614 701

23         22ACCBL12         தமிழ் மக்களின் வாழ்வியல் விழுமியச் சிந்தனைகளைப் பயிற்றுவித்தல         தமிழக அரச் ததேர்வுகளு பெறுவர	An Burr io
சிந்தனைகளைப் பயிற்றுவித்தல த்தேற்வுகளு	
	க்கு அறிவூட்டம்
24         22AMBEBL1         நாட்டுப்புற இலக்கியங்களின் சிறப்பை உணர்த்துதல். நாட்டுப்புற இலக்கியங்களின் அடிப்படைப் பண்புகளைக் கற்பித்தல். • நாட்டுப்புற இலக்கியங்களில் உள்ள சமுதாயப் பதிவுகளைப்         நாட்டுப்புற இலக்கியங்களில் சிழப்படைப் தனித்தன்பை சிறப்புகளை நாட்டுப்புற இலக்கியங்களில் உள்ள சமுதாயப் பதிவுகளைப்	இலக்கியங்களின் மகளையும் முர்வற். பிம் உணற்வற். இலக்கியங்கள்வழி ாழ்வியலை அறிவற். ●
தமிழ்ச் சமூக	த்தின் தொன்றுதொட்ட
<b>இலக்கியம்</b> (	) தெளிவற்∙ நாட்டுப்புற மூலம் வரலாற்றுச்
இலக்கியங்க	ாக் கற்பற்∙ நாட்டுப்புற களில் ஆய்வு செய்யும்
	றவர. ● லக்கண மரபை லக்கியப் படைப்பாக்கத்
	வர். ● நாடகங்களைப்
	றென் பெறுவற். ● தாகுப்புகளுக்கான களைபம்
திறன்களை	- யும் அறிவற். ●பல்வேறு வகைகளைக்
26RUCSPCTo develop communicativeDevelop	listening speaking
in english	
	சமயங்களும் ம் மனிதம் ஒன்றே ணர்வர்.
	ூறைசசி போன்ற ங்களைத் தெளிவரு.
29 22ACCBL15 தமிழ் மொழிநடையின் முக்கியத்துவத்தைக் கற்பித்தல செய்யுள் மர பயன்பருத்த குறியீருகளை	
30 22AMBEBEBL3 தமிழில் நாடக இலக்கியம் தோன்றி வளற்ந்த தமிழ் நாடக	ைக்கியத்தின் வையும் சிறப்பையும்
ແລະບານການອີດເຫຼັດ ແລະການການ ແມ່ນການຄະດາ ແມ່ນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັ	ண்டைய காலம் முதல் பந்த நாடகத்தின்
சமுக மாற்ற	களைக் கற்பற். ●தமிழ்ச் நீதோரு நாடகக்கலை வரும் தன்மையை
	் தமி <u>ற்</u> நாடகங்களால் க மாற்றங்களை
அறிவர். ●ா படைப்பாக்க	
	லப் பெறுவர். •
கலை குறித்து மாணவற்களுக்குக் கற்பித்தல். அறிவைப் வ	செய்திகள் குறித்த பறுவர். செய்திகளைத் றறமைகளை
தை <u>நி</u> யலின் சட்டங்களை மாணவற்களுக்கு மாணவற்கள் உடல்கள்	ர் அறிவர். ● ⊤சட்டங்களை
மாணவர்கள்	ர் தெளிவுறக் கற்பர். ● ரி பதிப்பிக்கும் நுடப்
	றிவர.் • மாணவர்கள் 
ிம்களை உல செய்திகளை	പ്പെക്കുന
செய்திகளை பறக்கத்திற்கு தைறியல் சா	த உள்ளாகுவற். ●



### KHADIR MOHIDEEN COLLEGE, ADIRAMPATTINAM – 614 701

32	UGGS	Studends would have gained a	Exposed to the kind of
		perspective understood the social reality	initiatives of the state
		of gender society.	towards genter equalty
33P	PROJECT	The Project will be evaluated by an	A candidate who gets less
		internal and an external examiner	than 40% in the Project
		nominated by the University. The	must resubmit the Project
		candidate concerned will have to	Report. Such candidates
		defend his/her Project through a Viva-	need to defend the
		voce.	resubmitted Project at the
			Viva-voce within a month.
			A maximum of 2 chances
			will be given to the
			candidate.



### PG AND RESEARCH DEPARTMENT OF ZOOLOGY

#### **Programmes offered:**

- B.Sc. Zoology (Aided)
- > M.Sc. Zoology (Aided)
- > M.Phil. Zoology (Unaided)
- > Ph.D. Zoology

#### B.Sc. ZOOLOGY: PROGRAMME OUTCOMES(PO)

#### At the completion of B. Sc. in Zoology the students will be able to:

- 1. Acquire knowledge and skill about the basics of animal sciences.
- 2. Understand the nature and basic concepts of cell biology
- 3. Understand the process of evolution.
- 4. Understand the physiological processes and organ systems of animals.
- 5. Understand the basics of genetics in animals and human.
- 6. Understand the various Applications of Biotechnology
- 7. Understand the diversity and distribution of animals.
- 8. Acquire the practical knowledge of all subjects of zoology.
- 9. Understand the diversity and distribution of animals.
- 10. Understand the applied Economic Entomology, Aquaculture and Vermiculture.

#### B.Sc. ZOOLOGY: PROGRAM SPECIFIC OUTCOMES (PSO)

- 1. Analyse complex interactions among the various animals of different phyla of Invertebrates and Chordates..
- 2. Apply the knowledge of structural organization of cell and metabolic functions.
- 3. Realize the complexity of evolutionary processes and behaviour of animals.
- 4. Analyse the physiological processes of animals and role of organ systems.
- 5. Understand the concepts of genetics and its importance in human health and animal life.
- 6. Realize the diversity and distribution of animals and their interaction with the environment.
- 7. To involve in environmental conservation and protection of endangered species.

- 8. Perform laboratory procedures and animal experiments in Physiology, Ecology, Cell biology, Genetics, Embryology, Biochemistry, Fish biology, Animal biotechnology and Immunology.
- 9. Analyse the diverse distribution of animals with the environment.
- 10. Apply the knowledge gained in silk, honey, fish and vermicompost production.

#### **B.Sc.ZOOLOGY: COURSE OBJECTIVES (CO)**

S.No.	Subject Code	Name of the Course	Course outcomes
1.	22SCCZO1	Invertebrata	<ul> <li>Understand the principles of taxonomy and classification of invertebrates.</li> <li>Acquire knowledge on the characteristic features of invertebrates.</li> <li>Identify the any species at basic level of morphology.</li> <li>Aware of the multiparasitism of helminthes and their dynamics in a changing</li> <li>world.</li> <li>Understand the economic and ecological importance of Porifera, Coelenterata</li> <li>and Mollusca.</li> <li>Realize the significance of larval forms of Echinoderms in understanding as</li> <li>model organisms</li> </ul>
2.	22SCCZO1P	Practical – I Invertebrata	<ul> <li>Gain first-hand knowledge to identify and group non-chordate (species of fresh and</li> <li>preserved) along with larval forms.</li> <li>Analyze the relationship between organisms and their environment.</li> <li>Recognize the diversity from Protozoa to Echinodermata using their morphological</li> <li>structures.</li> <li>Virtually visualize and understand the anatomy and functional features of</li> <li>invertebrates.</li> <li>Fortify the ecological and economic importance of invertebrate diversity in their</li> <li>habitat.</li> </ul>
3.	22SCCZO2	Chordata	<ul> <li>Understand about the vertebrates up to order level with suitable examples.</li> <li>Gain knowledge about the adaptation and migration of important tetrapods.</li> <li>Understand about the vertebrates in the food web and its diversity.</li> <li>Relate about the adaptations of flightless birds and migration of birds.</li> </ul>

			•
4.	22SCCZO2P	Practical – II Chordata	<ul> <li>Understand the classification of vertebrates.</li> <li>Identify and recognize the organisms by key characters.</li> <li>Integrate the ecological adaptation of the studied species.</li> <li>Relate the adaptive behaviour of vertebrates.</li> <li>□ Virtually clarify the functional structure in tetrapods</li> </ul>
5.	22SCCZO3	Cell and Molecular Biology	<ul> <li>Understand the principles of microscopes and cytological techniques.</li> <li>Describe the structure and functions cell and cell organelles.</li> <li>Recognize the properties of cytoplasm and ultra-structure of nucleus and the</li> <li>metabolic machinery of the cell.</li> <li>Explain cell cycle and types of cell division.</li> <li>□ Relate on molecular events of cell and in cancer biology.</li> </ul>
6.	22SCCZO3P	Practical – III Cell and Molecular Biology	<ul> <li>Familiarize on the handling of microscopes and its applications.</li> <li>Differentiate the cell cycle stages in plant / animal cells.</li> <li>Infer the importance of giant chromosomes during the development of larval</li> <li>stages.</li> <li>Handle and perform the histological procedures and observation of stages.</li> <li>□ Relate the fundamental composition of blood components.</li> </ul>
7.	22SCCZO4	Microbiology	<ul> <li>Apply knowledge to understand classification of microbes and its basic</li> <li>characteristics.</li> <li>Acquire information on methods of sterilization of microbial cultures and</li> <li>requirements for the media preparation.</li> <li>Attain knowledge about the interactions of microbes with their ecosystem.</li> <li>Perceive the role / action mechanism microbes on food spoilage and the</li> <li>principles of food preservation.</li> <li>Comprehend various diseases caused by the microbes and its treatments.</li> </ul>
8.	22SCCZO4P	Practical – IV Microbiology	Enrich the knowledge on handling microbes in laboratory conditions.

			• Comprehend the diversity of microbes in
			various environments.
			• Understand the methods of the culture of
			bacterial strains in laboratory
			• conditions.
			• Perceive information on the morphological
			identification of various microbes.
			•
			non-pathogenic microbes.
9.	16SCCZO5	Animal Physiology	• Understand and analyze the nutritional
		,	requirements and its calorific values.
			• Explain and recognize the physiological
			structure and functions of various
			• organs.
			• Gain anatomical knowledge in predicting
			<ul><li>the physiological changes and its</li><li>consequences.</li></ul>
			1
			• Understand and relate the physiological activity of sensory organs.
			• Distinguish the types and functions of
			endocrine glands.
10.	16SCCZO6	Genetics and	• Comprehend and understand the chemical
		Evolution	basis of evolution.
			• Understand about one role of genetics in
			evolution.
			<ul> <li>Evolve conclusion that are based on genetics data.</li> </ul>
			• Relate the origin of species on earth by
			observed theories and experiments.
			• Describe evolutionary history of
			Vertebrates.
11.	16SCCZO7	Microbiology	<ul> <li>Apply knowledge to understand</li> </ul>
			classification of microbes and its basic
			• characteristics.
			• Acquire information on methods of
			sterilization of microbial cultures and
			• requirements for the media preparation.
			• Attain knowledge about the interactions of
			microbes with their ecosystem.
			• Perceive the role / action mechanism
			microbes on food spoilage and the
			• principles of food preservation.
			• Comprehend various diseases caused by
10	1/0000000		the microbes and its treatments.
12.	16SCCZO3P	Practical – III	• Perform physiological and biochemical
		Animal physiology, Genetics	assays.
		and Evolution &	<ul> <li>Carry out qualitative and quantitative estimations of various biomolecules.</li> </ul>
		Microbiology	
		inition of the second s	• Expertise in the quantification of RBC and WBC of human blood and identify
			WBC of human blood and identify

			• pH of any sample.
			<ul><li>Gain knowledge on the importance of</li></ul>
			heredity of all living organisms.
			• Acquire idea about the blood types and its
			grouping.
			• Understand the concept of Mendelian traits
			and pedigree concept.
			• Realize the paleontological evidences of
			evolution of organisms.
			• Be aware on the concept of mimicry and
			colouration.
			• Enrich the knowledge on handling
			microbes in laboratory conditions.
			• Comprehend the diversity of microbes in
			various environments.
			• Understand the methods of the culture of
			bacterial strains in laboratory
			• conditions.
			• Perceive information on the morphological
			identification of various microbes.
			•
			non-pathogenic microbes
13.	16SMBEZO1:2	Economic	• Acquire knowledge on classification of
		entomology	pests and beneficial insects.
			• Have an elaborative idea about pests on
			stored products.
			• Gain Knowledge on commercial insects
			and usage in the field of agriculture.
			• Learn in depth on ideas about role of
			vectors in medicinal purposes.
			<ul> <li>Attain deep knowledge on pest management strategies</li> </ul>
14.	16SCCZO8	Environmental	nderstand the basic components on
17.	TODECLOU	Biology	environment.
		Diology	<ul> <li>Acquire knowledge on complex food</li> </ul>
			chain/web of different ecosystems.
			<ul> <li>Create ideology and promotes to conserve /</li> </ul>
			formation of community / an ecosystem.
			Know about various effects of pollutions
			and its preventing measures.
			• Gain knowledge and awareness about
			conservation / management of biodiversity.
15.	16SCCZO9	Developmental	• Understand the basic theories of
		Biology	development of embryo and its stages.
			• Compare the formation of gametogenesis
			in the various Invertebrate and
			• Vertebrates.
			• Relate the process of fertilization with the
			onset of cleavage and gastrulation
	i i i i i i i i i i i i i i i i i i i	1	• process.

			<ul> <li>Know the basics of development of organs, functions of extra embryonic</li> <li>membranes and physiology of placenta.</li> <li>Logically view the concept infertility, birth control and applications of</li> <li>cryopreservation techniques</li> </ul>
16.	16SMBEZO2:2	Immunology	<ul> <li>Understand the difference types of natural and acquired immunity.</li> <li>Comprehend the Classification of immunoglobulins and their roles during</li> <li>antigenic response.</li> <li>Relate various mechanisms that regulate immune responses.</li> <li>Realize the adverse effects of immune system causing autoimmune disorders and</li> <li>therapeutic advancements.</li> <li>Perceive the applications antigen-antibody interactions by immunological</li> <li>techniques.</li> </ul>
17.	16SMBEZO3:2	Biophysics & Biostatistics	<ul> <li>etrieve molecular information from a variety of databases.</li> <li>Understand the theory behind the sequential analysis and apply the</li> <li>bioinformatics tools used in the sequence alignment</li> <li>Perceive the micro techniques for the detection of molecules in living cells.</li> </ul>
18.	16SCCZO4P	Practical – IV Environmental Biology & Developmental Biology	<ul> <li>Focus and differentiate the cell morphology and count of blood cells.</li> <li>Get practice on methods of cell study.</li> <li>Gain knowledge and skill to measure the size and volume of cells using ocular and</li> <li>stagemicrometers.</li> <li>Know the cause and impact of environmental pollution and the steps to</li> <li>control it.</li> <li>Be aware on environmental toxins and toxicological screening methods</li> <li>Gain knowledge of different components of ecosystems</li> </ul>

#### M.Sc. ZOOLOGY: PROGRAMME OUTCOMES (PO)

- 1. Identify the common animals and comprehend the taxonomy, phylogeny and biodiversity of animals.
- 2. Demonstrateand solve major concepts in all disciplines of Zoology.
- 3. Enhance the technical skills for experimental purposes.
- 4. Correlate the diversity of animals and their interaction with the environment.

- 5. Analyse the morphology and functional characteristics at cellular and sub-cellular (molecular) level.
- 6. Strengthen the genetics and cytogenetics principle in light of advancements in understanding human genome and genomes of other model organisms.
- 7. Development of zoological science for its application in aquaculture, fishery biology andvermitechnology.
- 8. Focusing to prepare them with research-oriented approach in frontier areas of research in Zoology
- 9. Understand the basic principle of instruments and application of techniques.
- 10. Development of theoretical and practical knowledge in handling the animals and using them as model organism.

#### $\label{eq:main_scalar} \textbf{M.sc. ZOOLOGY: PROGRAM SPECIFIC OUTCOMES}(PSO)$

- 1. Apply the concepts of taxonomy, cytology, physiology, genetics, ecology and applied zoology.
- 2. Perform laboratory procedures in Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Toxicology, Sericulture, Biochemistry, Fish biology, Biotechnology, Immunology and Research methodology.
- 3. Use of biostatical tools and computer applications for all biological activities related to human beings.
- 4. Create Perspectives and positive attitude towards sustainable development and selfemployment.
- 5. Gain knowledge about research methodologies, bioethics, effective communication and skills of problem solving methods.
- 6. Advanced applications of the scientific method and use in the basic and applied zoological sciences.
- 7. Lead to advances in immunity to prevent disease human beings.
- 8. Carry out the experimental techniques and statistical analysis methods appropriate to the course.
- 9. Develop competence in the design and execution of researchand key transferable skills such as group work, presentation and report writing.
- 10. Make use of critical analysis of the principles of modern techniques, recent equipments, Zoology softwares for biological experiments.

S.No.	Subject Code	Name of the Course	Course outcomes
1	P22ZOCC11	Structure and Function	*Classify the animal species based on
		of Invertebrates	the characteristic features.
			* Identify the behavior pattern of
			various invertebrates.

#### M.Sc. ZOOLOGY: COURSE OBJECTIVES (CO)

			* Explain the similarities and
			differences in the morphology of
			organs in a functional view.
			*Describe and signify the role of
			larval forms of invertebrates in the
			ecosystem.
			*Understand the concept of regulation
			among species.
2	P22ZOCC12	Comparative Anatomy	*Understand the morphology and
		of Vertebrates	functional anatomy of chordates.
			• Relate the comparative anatomy of
			vertebrate integument and digestive
			system according to their habit and
			habitat.
			*Analyze the integration of
			physiology of circulation and
			respiration in Vertebrates.
			*Compare the distinct organ structure
			of vision, hearing, olfaction, taste, etc.,
			<ul> <li>Gain detailed knowledge about the</li> </ul>
			complexity of the skeletal and
			urinogenital systems in vertebrates.
3	P22ZOCC1A	Molecular Genetics	*Comprehend the ultra-structure of a
5	F222OCCIA	Wolceular Geneties	gene.
			-
			• Acquire wide knowledge of the
			organization of genome.• Learn the
			techniques and tools in molecular
			genetics.
			• Gain knowledge on DNA
			sequencing and construction of
			genomic library.
			• Understand the techniques in
			construction of transgenic organisms
			and pharmacogenomics.
4	P22ZOCC1P	Structure and Function	*Comprehend the adaptation and
		of Invertebrates and	interactions of various species of
		Comparative Anatomy	invertebrates.
		of Vertebrates	*Understand the importance of
			protozoan and helminth parasites
			• Identify the behavior and
			significance of various invertebrates
			and their larval forms.
			*Compare the functional morphology
			and regulation of vertebrates.
			<ul> <li>Acquire knowledge about</li> </ul>
			morphological features and ecological
			significance• of minor phyla
5	P22ZOEIA	Applied Biotechnology	*Understand the diverse
			role/applications of rDNA technology
			in human welfare.
			*Analyse the methods of expression of
			transgenics and their usage.
			• Evaluate the role of genetically
			modified organisms in the sustenance
			of the green revolution.
L		1	Brown to constrom

			<ul> <li>Comprehend the designing of fermentors and the selection of potential microbes used widely in fermentation technology.</li> <li>Enrich the knowledge on the usage of suitable microorganisms in in-situ and ex-situ bioremediation techniques.</li> </ul>
6	P22ZOVAC1	Ornamental Fish culture	<ul> <li>*Discuss proficiently about the strategies involving in ornamental fish culture.</li> <li>* Understand the current status of ornamental fish marketing.</li> <li>Gain practical knowledge of culturing of live feed.</li> <li>Create their own idea on aquascaping technique for the ornamental fish culture maintenance.</li> <li>*Identify and know the preventive strategies on ornamental fish diseases and management.</li> </ul>
7	P22ZOCC21	Developmental Biology	<ul> <li>*Understand the basic concepts of development. Compare the formation of gametes and their molecular regulation.</li> <li>Understanding the knowledge of fertilization initiates the cleavage and gastrulation process.</li> <li>*Integrate organogenesis in frogs and metamorphosis in amphibians and insects.</li> <li>*Stimulate the functional importance of hormones in aging, infertility, birth• control, and superovulation.</li> </ul>
8	P22ZOCC22	Cell and Molecular Biology	<ul> <li>*Obtain knowledge of membrane structure and functional organization.</li> <li>*Understand the ultra-structure and functions of vital cellular organelles and specialized giant chromosomes.</li> <li>*Compare the intracellular and extracellular responses in the cell cycle, DNA replication, and DNA repair mechanisms.</li> <li>*Understand the process of gene expression and relay knowledge on molecular mechanisms of protein synthesis.</li> <li>* Perceive the complexities in membrane transport and cell communications.</li> <li>Relate the normal and cancer cells and types of tumor.</li> </ul>
9	P22ZOCC2A	Environmental Biology	<ul> <li>and types of tumor.</li> <li>*Gain knowledge of different components of ecosystems.</li> <li>*Obtain practical ideology/knowledge on environmental monitoring software</li> </ul>

			like GIS and GPS. *Understand the
			basic ecoinformatics and its role.
			• Know the cause and impact of
			environmental pollution and the steps
			to control it.
			*Be aware on environmental toxins
			and toxicological screening methods.
10	P22ZOCC2P	Developmental Biology	*Understand the principles involved in
		and Cell and Molecular	the isolation of DNA / plasmid DNA.
		Biology	*Focus and differentiate the cell
			morphology and count of blood cells.
			• Get practice on methods of cell
			study.
			<ul> <li>Understand the process and gains</li> </ul>
			- · ·
			the skill to prepare slides for different
			stages of mitosis.
			*Gain knowledge and skill to measure
			the size and volume of cells using
11	Daarosas	A 1:	ocular and stage micrometers.
11	P22ZOE2B	Aquaculture	*Proficiently discuss the basics of
			aquaculture practices.
			*Understand the types of aquaculture
			systems and its significance.
			• Differentiate the types of
			mariculture and its management for
			various culture systems.
			* Gain knowledge on major bacterial,
			viral, protozoan, and fungal diseases
			in aquaculture.
			*Signify the current status of the fish
			trade and marketing methodologies
			in• India.
12	P22ZOCHNME1	Chemistry of pollution,	
		Food and cosmetics	
13	P22ZOCC31	Biochemistry	*Understand the major interactive
			forces on biomolecules.
			* Explain the metabolism of
			biomolecules and their functions.
			<ul> <li>Highlight the enzymatic role of</li> </ul>
			molecules and their reactions.
			• Correlate physiological and
			biochemical pathways.
			• Discuss and solve the
			thermodynamic principles and
			problems respectively.
14	P22ZOCC32	Comparative Animal	*Understand and relation of
		Physiology	adaptations and mechanism of
			homeostasis in Vertebrates.
			*Know the importance of nutrients
			and the controlling process in the•
			regulation of digestion.
			*Comprehend the mode of action of
			circulation, respiration, and excretion.
			• Analyze the physiology of effectors,
			receptors, and neuronal conduction in
			somatic regulation.
1	1		somatic regulation.

			*Perceive the physiology of
			reproductive organs and apply the
1.7			techniques for infertility management.
15	P22ZOCC3A	Microbiology	*Understand the fundamental concepts
			and characteristic nature of the
			microbes.
			*Perceive knowledge about microbial
			genetics, culture, and its applications.
			• Aware about the beneficial
			microbes for the safeguarding of the environment.
			• Analyze the importance of microbes
			in product commercialization.
			Comprehend microbial disease
			management, symptoms, diagnosis,
			and treatments.
16	P22ZOCC3P	Comparative Animal	*Enrich their practical knowledge of
		Physiology and	various sample biochemical analyses.
		Biochemistry	*Understand the physiology of
			circulation, respiration, excretion, and
			muscle structure from a laboratory.
			*Relate the adaptations, mechanism of
			homeostasis, and osmoregulation in
			aquatic vertebrates.
			* Identify the components of blood
			that are capable of fine smearing.
			• Determine the amount of
			carbohydrates, proteins, and lipids in
			any biological samples.
17	P22ZOE3B	Sericulture	*Understand the economic and
			ecological impacts and income
			generation by sericulture as an agro-
			based industry.
			*Enrich the knowledge about the basic
			biology of silkworm production.
			• Expertise in taxonomy,
			morphology, and identifying life cycle
			stages of the silkworm.
			• Relate the strategies involved in the
			sericulture management system.
			• Acquire knowledge about the
			technologies and the role of
			government and nongovernmental
			sectors in sericulture.
18	P22ZOCHNME2	Chemistry in day- to- day life	
19	P22ZOCC41	Immunology	*Understand the difference between
17			natural and acquired immunity.
			Classify the role of immunoglobulins
			and understand vaccine production.
			<ul> <li>Realize the various mechanisms that</li> </ul>
			• Realize the various mechanisms that regulate immune responses.
			<ul> <li>Understand the structure and</li> </ul>
			function of antibodies and
			immunological techniques.
1	1		*Comprehend the adverse effect of the

			immune system causing autoimmune disorder.
20	P22ZOCC42	Evolution	<ul> <li>*Understand the process and evidence of evolution. Gain knowledge of the theories regarding evolution.</li> <li>Get deep knowledge of types of the evolutionary process.</li> <li>Comprehend the population genetics and conservation.</li> <li>Get an in-depth understanding of molecular evolution.</li> </ul>
21	P22ZOIBC	Vermitechnology	<ul> <li>*Acquire knowledge about the scope of vermitechnology.</li> <li>* Differentiate the environmental factors affecting the vermicompost unit.</li> <li>• Generate income from selling organic manures made from household - solid• wastes.</li> <li>* Be aware of the impact of vermicompost over other fertilizers for a sustainable environment.</li> <li>*Understand the advantages of vermitechnology and can implement environment-friendly techniques in the future.</li> </ul>
22	P22ZOPW	Project Work	
23	P22ZOVAC2	Nanobiotechnology	<ul> <li>*Acquire mastery of synthesis procedures and their chemical interactions.</li> <li>*Understand the fundamental applications of various analytical instruments.</li> <li>Understand the usage of biosensor devices for the early detection of infectious• diseases.</li> <li>*Apply bionanomaterials in biomedical research and therapeutic applications.</li> <li>Profile the individual nanomaterial toxicity profile and mechanistic pathways.•</li> </ul>