DR.R.K.Shanmugam College of Arts and Science
Department of English
B.A.English
Programme Outcome

S.No.	PO N0.	PO Statements
1	PO1	An understanding English Literature
2	PO2	Providing english as a Global language
3	PO3	Developing language skill
4	PO4	learning LSRW

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	PO1	Acquiring KNOWLEDGE about literature
2	PO2	Ability to understand the literary genere
3	PO3	Demonstrate effectively oral and written communication
4	PO4	Demonstrate ability to linguastics and phonetics

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Core-I	Indian writing in english	CO1: To know about Indian writer and their poems, plays, and novels
			CO2: Accuring knowledge and skill about indian culture
			CO3 : To know about indian famous writers and their unique qualities
	Core-II	Advanced English Grammar	CO1 : To know the basic grammar and usage
			CO2 : To give knowledge of parts of speeach,sentence pattern and articles
			CO3 : To knowthe way of usage grammar and rules. Teach about modern grammar

I	Allied	Literary forms amd terms	CO1: To provide the knoweledge of literary genere.
			CO2: Enable students to acquire and exibit knowledge skills in literature.
			CO3 : To give insight on figures of speeach and various types of genere.
	Core-I	Environmental Studies	CO1 : Understand and evaluate the globalscale of environmental problems
			CO2 : Communicate complex environmental information to both technical and non - technical audiences
			CO3 : Articulate interconnected and interdisciplinary nature of environment studies
II	Core	British Literature-I	
			CO2 : Explain the differences between British Literatre and American Literature
		American Literature-1	CO1 : To know current literary trends in literature.
			CO2 :Critically evaluate the poems american writers and their life
			CO3 : Accuring the knowledge of american culture and movement of literature
II	Core	Value Education	CO1 : Students will understand the importance of value based living.
			CO2 : Students will gain deeper understanding about the purpose of their life.
			CO3 : Students will understand and start applying the essential steps to become good leaders

II	Core	Soft Skill	communication and improve the listening skills
			CO2 : Write precise briefs or reports and technical documents
			CO3 : Actively participate in group discussion / meetings .
II	Allied	The social History England	CO1 : To know about england history and people life
			CO2 : To provide revolution of england. To know about victorian age and the refoms bills.
			CO3 : To distinguish among various levels of Revolutions and life of senenties and Eighties.
III	Core	British Literature-II	CO1 : students know about classical poems and thems.
			CO2 : Analyze and evaluate prose amd poetry in neo-classical age
			CO3 : theme of neo-classical novels and poetry
		American Literature-II	CO1 : Acquire conceptual knowledge of american writers and theirs works
			CO2 : Identify the american life of people and culture in prose and plays.
			CO3 : Describe the role of porse and poetry.
	Allied	History of english Literature-I	CO1 : students knows various age of writers and their themes
			CO2 :Discuss the major works shakespeare and his plays
			CO3 : Discuss the life of Milton and Dryden

III	Skill Based	skill for employment-I	CO1 : Understand the basic concepts of oral communication
			CO2 : To understand LSRW
			CO3 : Learn the basics of documentation and reading strategies
	Non Major Elective	internet it application	CO1 : To know about word.word process and data entering.
			CO2 : To understand the email and web quest.
			CO3 : To understand the concept of searching engine
IV	Core-I	British Literature-III	CO1 : To understan the romantic writers and works
			CO2 : To know about the life of romatic writers and the style
			CO3 : Identify, study, compare, and evaluate the prose and poetry in romantic age.
		The history of English Language	CO1 : Acquire conceptual knowledge of origin of english language.
			CO2 : Identify the Ino-eropean family language
			CO3 : Develop the skill of Pronunciation ,spelling,and vocabulary.
IV	Allied	History of English Literature II	CO1 : To know about the age of Pope and Johanson
			CO2 : To know about the age of wordsworth and Tennyson
			CO3 : To know about the age of hardy and present age

IV	Skill Based subject	Skill for Employment II	CO1 : Understanding the basic concepts of Interpersonal communication
			CO2 : To know about body language and facial language
			CO3 : To know about job application and interview and resume.
IV	Non Major Elective	Internet it applications II	CO1 : To develop an understanding of internet and process
			CO2 : To provide knoweledge about internet programes
			CO3 : To understand the concept web and web sources.
V	Core	British Literature IV	CO1 : Students will be know strong conceptual knowledge in the british literature.
			CO2 : Students will demonstrate effective understanding of prose and drama
			CO3 : Students know about fiction and critical ananlysis of literature
		Language and Linguastics	CO1 : Explain the concepts of language and linguastics
			CO2 : Apply the global business language of english in communication
			communication. Verbal and non-verbal communication
V	Core	Introduction to Literary Criticism	CO1 : Acquire conceptual knowledge of basic literary criticism
			CO2 : Identify classical criticism and modern criticism and their works
			classical and modern criticism

V	Core	Indian Literature In Translation	CO1 : key concepts of Translation
			CO2 : Develop, interpret, and express ideas through written communication and growth of translation.
			CO3 : Analyze, evaluate, and synthesize of translation and communication
V	Elective	Journalism and Mass Communication	CO1 : To develop the understanding of the concept journalism and mass communication
			CO2 : To develop necessary skill for writing journalism and news
			report writing in journalism
V	Skill Based Subject	Conversational english	CO1 : Understand the basic concepts and technologies used in the field of conversation and english language
			CO2 : the knowledge of the different types of asking permission and making request.
			CO3 : Understand the processes of developing and implementing information systems;
VI	Core	shakespeare	CO1 : The students should able to know abput shakespeare life and his works
			CO2 : To know about comedy and tragedy of shakespeare plays
			CO3 : Students should able to know about theaters and characters of shakespeare plays
		british literature V	CO1 : To know about modern writers poems and life style.
			CO2 :Understand the 20th century poet and their works.
			CO3 : To give the students knowledge of literature.

VI	Core	New literature in English	CO1 : Understand about modern poems and novels of Africa
			CO2 : Understand the life African peple and their culture.
			CO3 : Analyze the learning and understand Afro-American literature.
VI	Elective	Technology Mediated English	CO1 : Explain the concept of fundamental NET and WWW
			CO2 : To give practice of writing of News and projects
			CO3 : review of text book and Puzzle maker and online games.
VI	Skill Based Subject	English Language Teaching	CO1 : To analysis of problems of the teaching of english and teaching of poetry.
			CO2 : students know about teaching of prose and grammar.
			CO3 : Methods of teaching of english and teaching compotions
VI	Elective	copy editing and proof reading	CO1 : To know about the rule of copy editing and legal aspects
			CO2 : Apply capital letters and using traditional methods.
			CO3 : To know about headlines and title page and running leters

DR.R.K.Shanmugam College of Arts and Sciecne
Department of English
M.A.English
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Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	Acquiring KNOWLEDGE about literature
2	POS02	Ability to understand the literary genere
3	POS03	Demonstrate effectively oral and written communication
4	POS04	Demonstrate ability to linguastics and phonetics

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Core-I	Chaucer and Elizabethan Literature	CO1:To expore the literary traditions of the elizabethan period
			CO2:To promoted the indigenization of the european forms such as the Sonnet,Allegory and the Romance Poem etc.
			CO3 : To examine the cultural practices of the age which reflects in the writings and the transition from 11th to the 17th century
	Core-II	American Literature	CO1 :To enable the students to have on overview of major authors in American Literature
			CO2 :Students to know the authors who have givensignificant contributions to the development of American Literature
			CO3 :The social and political events that have influenced the literary movements can be understand by the study of Authors
	Core-III	Indian Literature in English	CO1: To help the students appreciate the richness in Indian Writing in English
			CO2: To acquaint the students to the eminent Indian Writers in English

			CO3 : To reach the students knowledge about Indian Literature In english
I	Core-I	Modern English grammer	CO1 : To enable the students to acquire a high proficiency in the use of english
			CO2 :To enable the students to know the dynamic and analytical aspects of the use of language
			CO3 : To enable the students to knowthe contemporary English Grammer
	Elective I c	Women's Writing	CO1 :To acquaint the students to the recent views of womens writers.
			CO2:To enable the students to know the position of women in anciant india
			CO3:To enable the students to know about the contemporary women writer's.
II	Core 5	Restoration and eighteenth century lit	CO1:To survey the emergence of new models of poetry.
			CO2 :To know the drama in this period of high ideals combined with wit and language.
			more of the middle class
		The Romantic Revival lit	CO1:To provide an overview of the transformation of the literary climate where the romantic sensibilityfinds an authentic voice,touch and
			the representative writers of the period.
			CO3 : Accuring the knowledge of Romantic period.
		language and linguistics	CO1 : To enhance the basic Knowledge of the structure of English and the theoretical background to Phonatics and English Phonology.
			CO2 : To introduce the students to basic conceptsin Morphology,Syntax,Semantics and pragmatics.

II	Core		CO3 : To equip the students with the Knowledge of applications of linguistics.
		Literary criticism	CO1 : To examine the representative text of the seminal literary critics to understand intrinsic and extrinsic criticism
			CO2 :To expose the students to the concepts of the historical perceptions over the centuries.
			CO3 : Students to know about the literary criticism
II		**Human rights**	CO1: To know about the Indian Constitution
			CO2 : To know about the basic fundamental rights.
			CO3 : To know about the Indian Penal Code ,and basic human rights
II	Elective IIB	Post Colonial Studies	CO1 :To introduce the political and socio cultural discourse of the developing countries through the study of key authors and poets who
			CO2 :To trace the historical contents laying emphasis on the development of post colonial literature and theory.
			CO3 : To help the students to appreciate the post colonial authors and their works.
III	Core	Shakespeare Studies	CO1 : To enable the students to read the plays in the light of the critical approaches that has emerged prominent.
			CO2 : To study the plays of shakespeare in the critical,textual,and theatrical contexts.
			CO3:Students to know about the sixteenth century.
		The Victorian Literature	CO1 :To study Victorian Literature in the background of the changing views.
			CO2 : To study victorian literature impromentsns technologyand the poor conditionof the working class people.

			CO3 :To analyse Victorian Literature as an art that encouraged higher good as righteous and instilled social consciousness.
III	IIIB Elective	Contemporary Literary Theory I	CO1 :To help the students to understand literary theory as a system to critically interpret literay texts.
			CO2:To enable the students to understand the broad spectrum of thought that iscoverd by literary theory and also to enhance their literary research.
			CO3 : To help the students to understand the literary theory.
		Research Methodology	CO1 : To facilitate students to gain knowledge to pursue research.
			CO2 :To enable the students to present the researchfindings through the application of systamatic and scientific methods.
			CO3 : Learn the basics methods of research.
		Literature:Analysis,approaches,Applications	CO1 : To develop the reading and writing skills of the students for professional and academic purposes.
			CO2 : To enhance the interpretation skills
			CO3 : TO the students to critically analysis appreciate literary text
IV	Core-I	twentieth centuryjliterature	CO1 : To help the sudents retrace the diversity of literary schools.
			CO2 : To introduce the students throughly competent and litertate authors.
			CO3 : to enable the students to know about modern writers
		English Language Teaching	CO1 : Acquire conceptual knowledge of origin of english language.
			CO2 : Identify the Ino-eropean family language

			CO3 : Develop the skill of Pronunciation ,spelling,and vocabulary.
IV		contemperaryn literary theroy ii	critically interpret literay texts
			CO2 :To enable the students to understand the broad spectrum of thought that iscoverd by literary theory and also to enhance their literary research.
			CO3 :To help the students to understand the literary theory.
		Project	CO1 : To provide an opportunity for the students to pursue topic of individual interest.
			CO2 : To develop the students in the ability to carry out research project
			CO3 : To know about basics concept of project
IV	Elective	Children's literature	CO1 : To develop an understanding of children's story
			CO2 : To provide knoweledge about children's literature
			CO3 : To understand the concept of indian moral stories.

DR.R.K.Shanmugam College of Arts And Science
Department of Mathematics
B.Sc.Mathematices
Programme Outcome(POs)

S.No.	PO No.	PO Statements
1	PO1	Promotion of self study
2	PO2	Promotion of thinking
3	PO3	Problem Solving
4	PO4	Understanding Concepts

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	To enable the students to quantify their experiences in other subjects they study.
2	POS02	To enable the students to study mathematics for themselves.
3	POS03	To provide high quality mathematical education at all levels that will be vital for scientific and technological developments.
4	POS04	To enable the students to learn the basic structures of mathematics through unifying concepts and to motivate these structures through applications.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Core-I	Algebra	CO1 Prove results involving divisibility and greatest common divisors
			CO2 Applications of Modular Arithmatics
			CO3 Solve systems of linear equations
			CO4 Polynomial addition, subtraction, division, multiplication, roots of polynomials.
			CO5Transformation, translation and reflection
	Core-II	Trigonometry	CO1 Expansions of cosnθ , sin nθ ; Expansion of tan nθ in terms of tan θ
			CO2 Powers of sines and cosines of θ in terms of functions of multiples of θ; Expansion of Inverse Circular Functions
			CO3 Relation between Hyperbolic Functions ; Inverse Hyperbolic Functions

			CO4 Resolution into Factors ;Logarithm of complex quantities
			CO5 Summation of Trigonometric Series
	Allied	NUMERICAL METHODS - I	CO1 First and higher order differences-forward differences and Backward differences
			CO2 Central difference Operators-Central differences formulae: Gauss Forward and Backward formulae
			CO3 Divided differences-Newton‟s divided differences formula and Lagrange‟s
			CO4 Lagrange‟s method and Reversion of series method . Summation of series
II	Core-I	Calculus	CO1 Be able to recognize odd, even, periodic, increasing, decreasing functions
			CO2 Be able to calculate limits at infinity of rational functions
			CO3 Be able to calculate limits in indeterminate forms by a repeated use ofLagrange's method
			CO4 Understand the concept of indefinite integral as anti-derivative
			CO5 To find Double Integrals,Change of order of Integration ,Triple Integrals.
	Core-II	ANALYTICAL GEOMETRY OF THREE DIMENSIONS	CO1 Form the equation of plan and angle between plane
			CO2 Symmetrical form of a straight line and find the coplanar line
			CO3 Find the equation of sphere and Equation of a sphere through a given circle
			CO4 To find nature of general conics
			CO5 Find equation of spheres, cylinders and cones from different given

	Allied	NUMERICAL METHODS - II	CO1 To find Newton‟s forward and backward differences to compute derivatives.
			CO2 General Quadrature formula,Trapezoidal rule,Simpson's one third rule,Simpson's three-eight rule.
			CO3 Divided differences-Newton‟s divided differences formula and Lagrange‟s
			CO4 To find the linear homogeneous difference equation with constant co-efficient.
			CO5 Solution of Algebraic and Transcendental Equations
III	Core-I	Differential Equations	CO1 Be able to solve differential equation solve by p,x,y
			CO2 To solve the Method of Variation of Parameters ,2nd order Differential Equations with Constant Coefficients for finding the P.I
			CO3 To solve the total differantial equations
			CO4 Able to understand the Laplace transform of elementary functions.
			CO5Understand the difference between ordinary & partial differential
	Allied	Mathematical statistics- I	concept of the transformation of variables and moment-generating functions.
			CO2 Define and examine the random sampling (population and sample, param
			CO3 Be able Characteristic Function Properties , Uniqueness and Chebychev
			CO4 To find Correlation ,Karl Pearson's Coefficient of Correlation , Rank Cor
			CO5 To find the various type of distributions

	Skill based	Linear programming	some convex analysis.
			CO2 Find the dual Transportation problem ,Degeneracy in transportation prob
			CO3 To solve the Assignment problem and Travelling salesman method
			and such as the minimum spanning tree problem Summation of series
IV	Core-I	ctor analysis and fourier analy	CO1 Assess properties implied by the definitions of groups and rings,
			CO2 Scalar and vector valued functions of 2 and 3 variables and surfaces, and in turn the geometry of surfaces,
			CO3Gradient vector fields and constructing potentials
			CO4 Integral curves of vector fields and solving differential equations to find such curves
			turn the geometry of such curves including curvature, torsion and the Frenet-Serre frame and intrinsic geometry
	Allied	Mathematical statistics- II	CO1 Identify and demonstrate appropriate sampling and data collection processes,
			CO2 Recognize and compute the sampling distributions, sampling distributions of means and variances (S2) and the t- and F-distributions.
			CO3 Understand, apply and compute in one- and two- sample estimation problems
			CO4 Understand, apply and compute maximum likelihood estimation.
			CO5 Understand, apply and compute in one- and two- sample tests of hypotheses problems.

	Skill based	MATHEMATICS FOR COMPETETIVE EXAMINATIONS-I	CO1 To find H.C.F. and L.C.M. of numbers, Decimal Fractions .
			CO2 To solve the Square roots and Cube Roots, Average.
			CO3 Problem solving for Surds and Indices, Percentage, Profit and Loss
			CO4 Problems on numbers and Ages
			CO5 To find Ratio and Proportion, Partnership
	Core-I	Abstract algebra	CO1 Assess properties implied by the definitions of groups and rings,
			CO2 Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and modular rings)
			CO3 Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups
			CO4 Analyze and demonstrate examples of ideals and quotient rings
			CO5 Use the concepts of isomorphism and homomorphism for groups and rings
	Core-II	Real analysis- I	CO1 Describe the real line as a complete, ordered field
			CO2 Define and utilize the following concepts: sequence, subsequence, monotone sequence, Cauchy sequence.
			CO3 Define Convergence and Divergence,Test for Absolute convergence
			CO4 Use the definitions of convergence as they apply to sequences, series, and functions
			CO5 Prove some of the classical theorems of real analysis.

V	Core-III	Complex analysis-I	CO1 Represent complex numbers algebraically and geometrically.
			CO2 Define and analyze limits and continuity for complex functions as well as consequences of continuity,
			CO3 Apply the concept and consequences of analyticity and the Cauchy-Riemann equations and of results on harmonic ,
			CO4 Entire functions including the fundamental theorem of algebra,
			CO5 Evaluate complex contour integrals directly and by the fundamental theorem, apply the Cauchy integral theorem in its various versions.
	Core-IV	Statics	
			of equilibrium
			of areas, lines and volumes and apply these properties in equilibrium problems.
			CO4 Apply and demonstrate the principles and tools of STATICS in the analysis and solution of equilibrium problems based on a real-world scenario.
			CO5 Calculate the Center of mass,Center of mass of a triangular lamina andTh
	Core V	Dynamics	method
			CO2 Perform kinematic analysis of particle motion for curvilinear motion. Calc
			CO3Use Newton's Second Law to solve for rectilinear and curvilinear motion of a particle and system of particles
			CO4Perform kinematic analysis of rigid bodies including translation, rotation, and general plane motion
			CO5 Use principle of work and energy to solve problems involving particle mo
			CO1 Describe and demonstrate basic properties of graphs.

	Elective	Graph theory	CO2 Describe the concept of isomorphic graphs and isomorphism invariant properties of graphs.
			CO3 Describe knowledgeably special classes of graphs that arise frequently in graph theory.
			CO4 Describe one real-world application of graph theory.
			CO5 Produce rigorous proofs of results that arise within the context of graph theory.
	Skill based	MATHEMATICS FOR COMPETETIVE EXAMINATIONS-II	CO1 To find Chain rule ,Time and work
			Time and Distance Time and Distance
			CO3 Problem solving on trains.
			CO4 Problems on boats and streams.
			CO5 To find Alligation or Mixture.
	Core-I	Linear algebra	CO1 Analyze finite and infinite dimensional vector spaces and subspaces over a field and their properties, including the basis structure of vector spaces.
			groups of permutations) and canonical types of rings (including polynomial rings and modular rings) CO2 Use the definition and properties of linear transformations and matrices
			CO3 Be familiar with the notion of a linear transformation and its matrix
			CO4 Find the Gram-Schmidt orthogonalization of a matrix.
			CO5 Understand the basic ideas of vector algebra: linear dependence and independence and spanning

VI	Core-II	Real analysis- II	
			CO2 Prove a theorem about Riemann sums and Riemann integrals
			CO3 Knowledge of some simple techniques for testing the convergence of sequences and series of functions, and confidence in applying them.
			CO4 Recognize the difference between pointwise and uniform convergence of a sequence of functions,
			CO5 Illustrate the convergence properties of power series.
	Core-III	Complex analysis-II	CO1 Evaluate complex integrals by using Cauchy-Goursat Integral Theorem.
			CO2Define the simple and multiple connected domains,
			CO3Express Morera's Theorem
			CO4 Express Lioville's theorem and the fundamental theorem of the algebra.
			CO5 Express concepts of convergence sequences and series of the complex functions.
	Core-IV	Programming in C Language	
			CO2 Ability to define and manage data structures based on problem subject domain
			CO3 Ability to work with textual information, characters and strings.
			CO4Ability to work with arrays of complex objects.
			CO5 Understanding a concept of object thinking within the framework of functional mode.

	Elective	Operations Research	system. CO2Understand the mathematical tools that are needed to solve optimisation p CO3Determine critical path analysis to solve real life project scheduling time and timely. and timely CO5 Decision making under uncertainty and risk.
	Elective	Fuzzy Mathematics	CO1To know the fundamentals of fuzzy Algebra CO2 To know the basic definitions of fuzzy theory. CO3To know the applications of fuzzy Technology. CO4 Analyze and demonstrate examples of fuzzy subgroup-homomorphic image. CO5 Use the concepts of Fuzzy invariant subgroups fuzzy subrings.
	Skill based	MATHEMATICS FOR COMPETETIVE EXAMINATIONS-III	CO1 To find simple Interest Time and Distance Time and Distance CO3 Problem solving for Logarithms , Races and Games of Skill. CO4 To find volume. CO5 To solve the surface of area.

DR R.K.Shanmugam College of Arts and Science

Department of Mathematics

M.Sc.Mathematices

Programme Outcomes

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Course Outcome(Cos)

Semster		Course	Title of the Course	Course Outcome
		Core-I	Algebra-I	CO1 Utilize the class equation and Sylow theorems to solve different related problems
				CO2 Use various types of Direct products ,Finite abelian groups, Modules
				CO3 Analyze of Linear Transformations: Canonical forms , Triangular form and Nilpotent transformations.

			CO4 Analyze and demonstrate Jordan form and rational canonical form
			CO5 Use the concepts of Trace and transpose - Hermitian, unitary, normal transformations, real quadratic form
	Core-II	Real analysis- I	CO1 Define Riemann integrable and Riemann sums
			CO2 Prove a theorem about Riemann sums and Riemann integrals
			CO3 Knowledge of some simple techniques for testing the convergence of sequences and series of functions, and confidence in applying them.
			CO4 Recognize the difference between pointwise and uniform convergence of a sequence of functions,
			CO5 Illustrate the convergence properties of power series.
I	Core-III	Ordinary differential equations	CO1 Distinguish between linear, nonlinear, partial and ordinary differential equations.
			CO2 State the basic existence theorem for 1st order ODE's and use the theorem to determine a solution interval.
			CO3Recognize and solve a variable separable differential equation.
			CO4 Recognize and solve an exact differential equation.
			CO5 Make a change of variables to reduce a differential equation to a known f
	Core-IV	Differential geometry	CO1Calculate the curvature and torsion of a curve.
			CO2 Find the moving trihedron of a curve and write its intrinsic and canonical equations.
			CO3 Find the osculating surface and the osculating curve at any point of a given curve

			CO4 Calculate the first and the second fundamental forms of a surface.
			CO5 Use efficiently the mathematical tool of tensor calculus in the study of surfaces
	Elective	Discrete mathematics	
			CO2 Formulate and interpret statements presented in Boolean logic. Reformulate statements from common language to formal logic. Apply truth tables and the rules of propositional and predicate calculus,
			CO3Formulate short proofs using the following methods: direct proof, indirect proof, proof by contradiction, and case analysis,
			CO4 Apply the different properties of injections, surjections, bijections, compositions, and inverse functions,
			CO5Gain an historical perspective of the development of modern discrete mathematics.
	Core-I	Algebra-II	
			CO2 Use the definition and properties of linear transformations and matrices of linear transformations and change of basis, including kernel, range and
			CO3 Express Wedderburn's theorem on finite division rings
			CO4 Design, analyze and implement the concepts of Gauss Lemma, Einstein's irreducibility criterion, separable extensions etc.
			CO5 Utilize the Polynomial rings, UFD, ED, PID to solve different related problems.
	Core-II	Real analysis- II	CO1 Define Riemann integrable and Riemann sums
			CO2 Prove a theorem about Riemann sums and Riemann integrals
			CO3 Explain Functions with non-zero Jacobian determinants ,The inverse function theorem and The Implicit function theorem.

II			CO4 Describe basic topology of Metric spaces, Compact sets Perfect sets, Conn
			CO5Properties of the Lebesgue integral for bounded measurable functions.
	Core-III	Partial differential equations	CO1 Define genesis of First Order P.D.E and Prove the Pfaffian Differential Eq
			CO2 Determine integral surfaces passing through a curve, characteristic curves of second order PDE and compatible systems.
			CO3 Be competent in solving linear PDEs using classical solution methods.
			CO4 Understand partial differential equations of first order (linear and nonlinear), second and higher order.
			CO5Apply the knowledge of PDEs and their solutions in order to understand physical phenomena.
	Core-IV	Mechanics	
			CO2 Describe and understand the motion of a mechanical system using Lagrange Hamilton formalism.
			CO3 Define Kinematics of Velocity, Impact and law of impact.
			CO4 Explain Types of forces and Equilibrium of a uniform homogeneous string
			CO5Define Force and Newton's Laws of motion and Forces on a rigid body.
	Core-I	Complex analysis-I	CO1 Know the fundamental concepts of complex analysis.
			CO2 Evaluate Complex Integration using Cauchy's theorem.
			theorem, apply the Cauchy integral theorem in its various versions, and the Cauchy integral formula.

			CO4 Classify Removable singularities, Zeros and poles.
			CO5 Prove that Cauchy's theorem for a rectangle and disk.
	Core-II	Topology	
			CO2 Describe the properties on metric topology, connected spaces and compact space.
			CO3 State and prove Tychonoff theorem, Urysohn Metrization theorem and Baire Spaces theorem
			CO4 Understand how points of space are separated by open sets, Housdroff spaces and their importance.
			CO5 Understand regular and normal spaces and some important theorems in these spaces.
III	Core-III	Operations research	CO1 Study the concept of Operations Research and Mathematical Formulation of the Problems.
			CO2 Solving a LPP by Graphical Method and Simplex Method.
			CO3Obtain Initial Basic Feasible Solution (IBFS) Transportation Problems.
			CO4 Describe Integer Linear Programming and Gomory's all integer cutting plane method.
			CO5 Extend knowledge to Non Linear Programming Problems.
	Core-IV	Probability theory	
			CO2 Apply Chebyshev's theorem
			CO3 Define, illustrate and apply certain frequently used discrete and continuou

			CO4 Illustrate and apply theorems concerning the distributions of functions of random variables and the moment-generating functions..
			CO5 Define probability and axiomatic
	Elective	sor analysis and Relativity theo	CO1 Understand the concept of Tensor and their properties
			CO2 Understand the conventions like summation convention and comma notations
			apply the knowledge in solving real world problems related to continuum mechanics
			CO4 Christoffel Symbols and their properties
			CO5 Explain Galilean Transformation and Maxwell's equations
	Core-I	Complex analysis-II	CO1 Express the Cauchy's Derivative formulas
			CO2 Evaluate Complex Integration using Cauchy's theorem.
			CO3 Calculate the Schwarz-Christoffel formula and Mapping on a rectangle.
			CO4 Express general properties of Elliptic functions.
			CO5 Prove that the Weierstrass ρ-function.
	Core-II	Functional analysis	CO1 Define and illustrate Banach Space.
			CO2 State and Prove Hahn Banach theorem and open mapping theorem.
			CO3 Define and illustrate Hilbert spaces and orthogonal.

IV			CO4 Prove Spectral theorem
			CO5 Understand the nature of abstract mathematics and explore the concepts in further details.
	Core-III	Mathematical statistics	CO1 Tackle big data and draw inferences form it by applying appropriate statistical techniques.
			CO2Explore the basic ideas about measures of central tendency, dispersion and their applications in other statistical problems.
			CO3 Explain the different types of discrete and continuous distributions and their utilization.
			CO4 Briefly study about Student's t-distribution, χ2distribution and tests of significance.
			CO5 : Gains knowledge in theory of estimation, methods of finding estimates, confidence intervals and Theory of hypothesis.
	Core-IV	Difference equation	CO1 Understands the concept of difference equations.
			CO2 Solve linear homogeneous equations with constant coefficients and linear non-homogeneous equations.
			CO3 Express system of difference equation
			CO4 Apply the Z- transform for analyze of difference systems.
			CO5 Prove the Poincare's Theorem of difference equation.

DR.R.K.Shanmugam College of Arts and Sciecne
Department of Chemistry
B.SC. CHEMISTRY
Programme Outcome(POs)

S.No.	PO No.	PO Statements

1	PO1	Demonstrate, solve and an understanding of major concepts in alldisciplines of chemistry.
2	PO2	out, record and analyze the results of chemical reactions.
3	PO3	society, and development outside the scientific community.
4	PO4	Find out the green route for chemical reaction for sustainabledevelopment.

Programme Specific Outcome(PSO)

S.No.	No.	POS Statements
1	PO1	Gain the knowledge of Chemistry through theory and practical‟s.
2	PO2	To explain nomenclature, stereochemistry, structures, reactivity,and mechanism of the chemical reactions.
3	PO3	Identify chemical formulae and solve numerical problems.
4	PO4	Know structure-activity relationship.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Core Theory	General Chemistry - I	CO1 Basic concepts regarding Atomic structure, Periodic properties
			CO2 Bonding concepts, VSEPR and MO theories
			CO3 Basic concepts of organic chemistry
			CO4 To know about the states of matter
			CO5 Application of volumetric analysis
	Allied-I	Allied Physics -l	CO1 Know properties of matter
			CO2 Basic knowledge on specific heat and Newtons Law
			CO3 Basic concepts of electricity and magnetism
			CO4 To know about sound and acoustics Building

			CO5 coulumb law
II	Core Theory	General Chemistry - II	CO1 Know the Alkali metals, Alkaline Earth Metals, P-block Elements and their properties
			CO2 Learning the preparation and properties of Alkanes, Alkenes and Alkynes
			CO3 Know the Dienes and Cycloalkanes with their Stability
			CO4 Study the Planck's Quantum theory of radiation, Schrodinger wave equation and Basics of Thermodynamics
			CO5 Understand the Thermodynamic process, First Law of Thermodynamics and Their relationship
	Core Practical	Volumetric Analysis	CO1 Study the Volumetric analysis of Acidimetry Iodometry and Potentiometr
			CO2 Understand to calculate the strength of solutions
	Allied-I	Physics –II	CO1 Know the experimental study of Matter Wave
			CO2 Learn the Particle accelerators and Conservation Laws
			CO3 Understanding conventional energy and Non-conventional energy
			CO4 Study the Crystal structures, Unit cell, Latticess and Miller Indicess
			CO5 Learn Electronics and Digital Electronics
	Allied Practical	Physics	CO1 Experiments based on Young's and Rigidity modulus
			CO2 Practical in Surface Tension and Sonometer

			CO3 Experiments based on Spectrometer and Potentiometer
III	Core Theory-Ill	General Chemistry-Ill	CO1- Know the principles and application of inorganic qualitative analysis and acid base equilibria,solubility product,spot test reagent types of solvent
			CO2- study about carbon,nitrogen,oxygen family for oxide, hydride,oxyacides
			CO3- Study a.aliphatic and aromatic nucleophilic substitution reaction.Elimina
			CO4 study the aromaticity,Huckel rule,Electrophilic substution reaction reaction,ortho and para ratio
			CO5- Study second law of thermodynamics, carnot cycle entropy, reversible irreversible process
	Allied-I(Theory)	Biochemistry-I	CO1- Know the complete study about carbohydrates
			CO2- Study the amino acides reaction with ninhydrin and common properties
			CO3- Study and learning for primary, secondary, tertiary,quaranary structure of protein
			CO4- Study the concept of DNA and RNA biological function and their type difference between DNA,RNA
			CO5- Study about classification and function of lipids.simple and compound lipids and their properties
	SBS-l	Water treatment and analysis	CO1- Understand chrecteristic of water, units of water purification of water by various method
			CO2- Explained softening of water by various method. Determination of hardness of water
			CO3-Study about the industrial treatment of water.Effluent treatment of water
			CO4- Studying water analysis of colour,odur,turbidity,taste, temperature,ph.Analysis of solids

			CO5- analysis of chemical substance affecting health.measurments of toxic chemical substance.
	NME I	Introduction to Information Technoloy	CO1- study about introduction computer
			CO2- crarify the concept of web browser
			CO3- demondstrating the concept of web browser
			CO4- Learning HTML programs
			CO5- get knowledge about web marketting
	Core Theory-IV	General Chemistry-IV	CO1- Know the Electronic configuration of Noble gases, Compounds of Xenon
			CO2- study about Carboxylic acid, Amines
			CO3- Have a Knowledge about Alcohols, Phenols
			CO4- Derive Maxwell relation, free energies
			CO5- Study Third law of thermodynamics, Partial Molar properties
	Core Practical-II	Inorganic qualitative analysis and Preparations	CO1- Have a complete Knowledge about salt analysis
			CO2- Prepare some inoranic compounds
			CO3- Glarify Basic knowledge of inoranic practicals
			CO1- Know the complete study about Metobolism of Glycolysis, TCA cycle

IV	Allied-II(Theory)	Biochemistry-II	CO2- Studying metobolic disorders such as Jaundice, Ketosis,, Dehydration
			CO3- Have a knowledge of Enzymes and its classification, Mechanism.
			CO4- Identify the concept of DNA and RNA
			CO5- Study about types of vitamins
	Allied Practical-II	Biochemistry Practical	CO1- Have a complete Knowledge about volumetric estimation of amino acids
			CO2- Qualitative Analysis of Carbohydrates
			CO3- Qualitative analysis of Amino Acids
	SBS II	Food Chemistry	CO1- Impart Knowledge about Cereals and it classification
			CO2- ExplainVegetabls, Fungies,algaes.
			CO3- Have knowledge about beverages , appetizers
			CO4- Studying beveraes, Preservatives
			CO5- knowing food additives , food colors
	NME II	Introduction to Information Technoloy	CO1- study about introduction computer
			CO2- crarify the concept of web browser
			CO3- demondstrating the concept of web browser

			CO4- Learning HTML programs
			CO5- get knowledge about web marketting
	Core Theory-V	INORGANIC CHEMISTRY-l	CO1- Study about the halogen family and related components
			CO2- study about the coordination compounds,structural,geometrical,optical isomerism
			CO3- Understandig sidwick theory VBT AND CFT
			CO4- knowledge about copare VBT,CFT.Bonding,hybridization structure of carbonyls.application of coordination compound
			CO5- Study about the nature and structure of solid, defects of solid and semiconductor
	Core theory-V	organic Chemistry I	CO1- Know the complete study about carbohydrates
			CO2- Understanding stereo isomerism,geometrical isomerism and optical activity of compounds
			CO3- Study about the nitroalkane preparation properties,structure.Reagent and their application mechanism of naming reaction .
			CO4- know the completely study of conformation analysis of compounds
			CO5- Study about the hetrocyclic compounds
	Core theory-V	Physical chemistry	CO1- know about the completely study of solutions derivation of Gibbs duhem equation, nertst distribution law
			CO2- Study about the phase rule.application of phase rule and thermal analysis,cooling curve
			CO3- completely study of colligative properties and chemical equilibrium,vont Hoff reaction

V			CO4- Studying about specific and equivalent conductance,Debye Huckels theory and mobility of ions
			CO5- knowing about application of conductometric measurements,concept of pH,buffer solutions, Henderson equation and hydrolysis of solid
	Elective paper I	Analytical Chemistry I	CO1- Important knowledge about data analysis, purification of organic compound
			CO2- Study about purification of liquid, gravimetric analysis and electro magnetic radiation
			CO3- Study about the micro wave spectroscopy,UV visible spectroscopy and types of electronic transition
			CO4- Study about IR spectroscopy and their application
			CO5- know about the completely study of Raman spectroscopy and their application
	Elective paper Il	pharmaceutical Chemistry	CO1- impart knowledge about various disease and their treatment
			CO2- knowing about Indian medicinal plants and their uses,blood function, control of anemia and diabetes
			CO3- study about sulpha drugs vitamins,antiseptic and disinfection
			CO-4 Knowing completely study of analgesics and anesthetic,drugs affecting CNS
			CO5- Study about antineoplastic drugs,Harmons and their classification
	SBS-l	Applied Chemistry	CO1- know about completely study of gases fuel
			CO2- knowing about manufacturing pulp and paper technology
			CO3- study about sugar industry in India,recovery of glucose from molasses and preparation of Bagasse

			CO-4 Study the explosive,photography and coal
			CO5- know about the completely study of milk and milk product,chemical change in milk
	Core Theory-VI	INORGANIC CHEMISTRYII	CO1- Know the important knowledge of nuclear chemistry
			CO2- study about Radio activirty
			CO3- Have a Know about metallurge
			CO4- Kown the inner transition elements
			CO5- Studythe organometalic and Bioinorganic compounds
	Core Practical-III	Gravimetric estimation	CO1- Estimation of Sulphate as Barium sulphate
			CO2- Estimation of Barium as Barium sulphate
			CO3- Estimation of Barium as Barium chromate
	Core theory-VI	organic Chemistry II	CO1- Know the complete study about Molecular rearrangement
			CO2- Studying Amino acids and Polypeptides
			CO3- Have a knowledge Protin and Nuclic acid
			CO4- Identify the concept chemistry of natural product
			CO5- Study about Organo- synthsis reagents

VI	Core Practical-III	Organic qualitative analysis and prepartion	CO1- Idendification of Fuctional group
			CO2- Organic prepation Nitration, Acylation
			CO3- Organic prepation Oxidation, halogenationand hydrolysis
	Core theory-VI	Physical chemistry	CO1- Impart Knowledge about electrochemistry
			CO2- Derivation og Nernst equation and polarization
			CO3- Impart Knowledge about surface chemistry
			CO4- Studying about chemical kinetics
			CO5- knowing about photochemistry
	Core Practical-III	Physical chemistry practical I	CO1- knowing kinetic reaction
			CO2- Finding molecular weight
			CO3- Knowing electrochemistry reaction
			CO4- kown the potentiometric titration
			CO5- Knowing about calorimetric reaction
			CO1- Important knowledge about Chromatography
			CO2- Study about TLC and paper , ion exchange Chromatography

	Elective paper III	Analytical Chemistry II	CO3- Knowing ideas about HPLC
			CO4- Study about NMR spectroscopy
			CO5- Study about mass specroscopy
	SBS IV	Agricultureand leather Chemistry	CO1- Study about soil Chemistry
			CO2- knowing about Fertilizer and Manures
			CO3- study about Insecticides and Fungius
			CO-4 Knowing about leather Chemistry
			CO5- Study about Tannery effuents

DR.R.K.Shanmugam College of Arts and Sciecne
Department of Chemistry
M.SC. CHEMISTRY
Programme Outcome(POs)

S.No.	PO No.	PO Statements
1	PO1	Determine molecular structure by using UV, IR and NMR.
2	PO2	Synthesis of Natural products and drugs by using proper mechanisms
3	PO3	Solve the reaction mechanisms and assign the final product.
4	PO4	. Determine the aromaticity of different compounds.

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	Know the structure and bonding in molecules/ ions and predict theStructure of molecule/ions.
2	POS02	Study of free radical,bycyclic compound, conjugate addition ofEnolates and pericyclic reactions.
3	POS03	Study of free radical,bycyclic compound, conjugate addition ofEnolates and pericyclic reactions.
4	POS04	Understand good laboratory practices and safety.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Main	Organic Chemistry- I	CO1 Concept of stereochemistry
			CO2 Conformational analysis and their application
			CO3 Mechanism of aliphatic substitution reactions
			CO4 To understand the Elimination reactions
			CO5 Mechanism of nucleophilic and electrophilic substitution reactions
	Main	Inorganic Chemistry- l	CO1 To learn about the Inorganic polymers
			CO2 To know the Boron hydrides
			CO3 Concept of coordination chemistry
			CO4 Stability of the complexes
			CO5 To know about the structure of bonding of inorganic compounds
			CO1 To study the partial molar property

	Main	Physical Chemistry- I	CO2 To acquire knowledge on phase equilibria of three component system
			CO3 To study the basics of colloids
			CO4 Theories and basic concept of chemical kinetics
			CO5 Mechanism of acid, base and enzyme catalysis reaction
	ELECTIVE	Advanced polymer chemistry	CO1 To learn about basic concept of polymers
			CO2 Kinetics and mechanism of polymers
			CO3 Structure and properties of polymers
			CO4 To learn about industrial and natural polymers
			CO5 Advances in polymers
	Core Theory-II	Organic Chemistry-II	CO1- Know the addition to carbon-carbon and carbon hetero multiple bonds
			CO2- study about oxidation and reduction reacion of some organic compounds
			CO3- Have a Knowledge about molecular rearangement
			CO4- the modern synthetic methods reaction and reagent
			CO5- Study heterocycles, vitamine and steroids compound
			CO1- Have a complete Knowledge about the chemistry of solid state

II	Core Theory-II	Inorganic chemistry-II	CO2- study the introduction of nuclear chemistry
			CO3- Have a complete Knowledge about nuclear reactor in varies method
			CO4- to studythe chemistry of lanthanides and actinides in nanotech
			CO5- Glarify Basic knowledge of bioinorganic chemistry
	Core Theory-II	physical chemistry-II	CO1- Know the complete study about chemical kinetics and fast reaction
			CO2- Studying in basic electrochemistry reation
			CO3- Have a knowledge of anode and cathode reaction
			CO4- Identify the group theory in elements
			CO5- Study about types of group theory and its application
	Elective-II	Green chemistry	CO1- Have a complete Knowledge about the basic principle of green chemistry
			CO2- study the uv sound and microwaves
			CO3- Have a complete Knowledge about the green synthesis compounds
			CO4- have a knowledge of ionic liq and green solvents
			CO5- studied about the industrial case studies
	core	organic Chemistry-I	CO1- Impart Knowledge about identification of organic compound in mixture

	practical-I	organic Chemistry-I	CO2- to get knowledge about the preparation of some organic compounds
	core practical-I	inorganic chemistry-I	CO1- study about the knowledge semimicro qualitative analysis of mixture contain two common and two rare cation
			CO2- to get knowledge about the comlexometric titration
			CO3- to get knowledge of the preparation inorganic complex
	core practical-I	physical chemistry-I	CO1- knowledge about physical methods in non electrical instruments
			CO2- crarify the concept of thermodynamically colligative properties
			CO3- to study the experiments of phase rule and chemical equalibrium
	Main	Organic Chemistry- III	CO1 Understand the factors affecting UV-absorption spectra, Interpret IR-spectra on basic values of IR-frequencies.
			CO2 Discuss the problem of Proton NMR and Carbon-13 NMR
			ionization. Different detectors rules of fragmentations of different functional groups.
			CO4 Study alkaloids and Teroenoids with their structure elucidation
			CO5 Learning the free radicals and understanding name reactions based on free radicals
	Main	Inorganic Chemistry- III	CO1 Study the different types of Carbon Donars And different types of Reactions
			CO2 Know the Various Catalysis
			CO3 Learning Complementary, non-complementary electron transfer reactions

III			CO4 Understand the Substitution in square planar complexes and reactivity
			CO5 Know Photo-substitution, Photoredox and isomerisation process Inorganic Photochemistry
	Main	Physical Chemistry- III	CO1 Learn Mechanism of electrode reactions
			CO2 Know Classification of Solids and Magnetic properties
			CO3 Learn the Raman, Electronic and Microwave Spectrascopy and its application.
			CO4 Study the Zeeman effect, 13C, 19F, 31P NMR spectra - applications
			CO5 Understand Fermi - Dirac and Bose - Einstein statistics, Partition function
	ELECTIVE	Scientific Research Methodology	CO1 Know Nature and importance of research
			CO2 Learn Analysis and methods of separation Techniques
			CO3 Understand the accuracy and precision and classification error.
			CO4 Know the students test, F test and Q test
			CO5 Realise Thesis and Assignment writing format
	Main	Organic Chemistry-IV	CO1- Know the study of aromaticity
			CO2- study about the introduction of photochemistry
			CO3- Have a Knowledge about protein and nuclic acid

			CO4- Have study of the human antibiotics compounds
			CO5- Study of organic dyes compounds
	Main	Inorganic chemistry-IV	CO1- Have a complete Knowledge about the basic inorganic spectra
			CO2- study the introduction of inorganic spectra
			CO3- Have a complete Knowledge about instrumentation of inorganic spectra
			CO4- To study the inorganic compound instrumental analysis
			CO5- Glarify Basic knowledge of spectra in inorganic chemistry
	Main	physical chemistry-IV	CO1- Know the complete study about the introduction of inorganic photochemistry
			CO2- Studying in basic elemental analysis
			CO3- Have a knowledge of photo reduction and oxidation
IV			CO4- Identify the basic quantum chemistry
			CO5- Study about the statistical thermodynamics
	Elective-IV	Environmentol chemistry	CO1- Have a complete Knowledge about the air and water pollution
			CO2- study the air and water pollution controled
			CO3- Have a complete Knowledge about the sampling and analysis of air and water

			CO4- have a knowledge of noise pollution
			CO5- studied about the indian and other radio active pollution in some material
	core practical-II	organic Chemistry-II	CO1- Impart Knowledge about two stage preparation of organic compounds
			CO2- to get knowledge about the estimation of some organic compounds
	core practical-II	Inorganic chemistry-II	CO1- study about the knowledge of valumetrical and gravimetrical estimated
			CO2- to get knowledge about the comlexometric titration
			CO3- to get knowledge of the preparation inorganic complex
	core practical-II	physical chemistry-II	CO1- knowledge about the conductometric titration method
			CO2- crarify the concept of the phototiometric titration methods
			CO3- to study the experiments related interpritation of the spectrum

DR.R.K.Shanmugham College of Arts and Science
Department of Computer Science
B.Sc.Computer Science

Programme Outcome(POs)		
S.No.	**PO No.**	**PO Statements**
1	PO1	Understand fundamental concepts of key areas in Computer Science and enable
2	PO2	Build student's effective communication, ethical attitudes, team work and logical
3	PO3	Students are to be passionately engaged in primary learning with intend to think
4	PO4	Students are to be imparted with a broad conceptual background in the

Programme Specific Outcome(PSO)		
S.No.	**POS No.**	**POS Statements**
1	PO1	Possess basic knowledge on core concepts of Computer Science the knowledge
2	PO2	Apply problem-solving skills and the knowledge of programming languages in
3	PO3	Empowered with analytical mind and critical thinking.
4	PO4	Develop practical skills to fulfill the needs of industry and society

Course Outcome(Cos)				
Semster		**Course**	**Title of the Course**	**Course Outcome**
I		Core-I	Digital Logic & Programming in C	CO1 The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions
				CO2 The Student will be able to understand the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping
				CO3 The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions.
				CO4 The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C.
				CO5 The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods
		Allied - I	Mathematics - I	CO1 Evaluate the validity of logical argumentsand construct mathematical proofs.
				CO2 Analyse whether given graphs are isomorphic and apply different algorithms to find the shortest path
				CO3 Apply the concept of two dimensional random variables to correlation, regression and Central limit theorem
				CO4 Learn and apply multivariate analysis necessary for Principal Component Analysis

			CO5 Identify the Mark ovian queueing model in the given system, find the performance measures and analyse the results.
	Practical - I	Programming in C Lab	CO1 Enhance the analyzing and problem solving skills and use the same for writing programs in C
			CO2 Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards
			CO3 Learn to debug a given program and execute the C program.
			CO4 To have enough practice the use of conditional and looping statements.
			CO5 To implement arrays, functions and pointers.
II	Core-II	C++& Data Structures	CO1 The Student will be able to understand the concepts of object oriented programming Apply structure and inline functions.
			CO2 The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time problems Apply the OOPs concepts class and object. Understand Explain the
			CO3 The Student will be able to understand the concepts of Stacks and Queue using array and pointers.
			CO4 The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs.
			CO5 The Student will be able to understand the concepts of Sorting and Searching Algorithms.
	Allied - I	Mathematics - II	CO1 Ability to apply mathematical logic to solve problems.
			CO2 Understand sets, relations, functions, and discrete structures.
			CO3 Able to use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions

			CO4 Able to formulate problems and solve recurrence relations.
			CO5 Able to model and solve real-world problems using graphs and trees.
	Practical - II	C++ and Data Structure lab	CO1 Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors.
			CO2 Demonstrate the Polymorphism Concepts and Operator Overloading.
			CO3 Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion.
			CO4 Apply Algorithm for solving problems like Sorting and Searching.
			CO5 Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems
	Core-III	Java Programming	CO1 Identify classes, objects, members of a class and relationships among them needed for a specific problem
			CO2 Write Java application programs using OOP principles and proper program structuring
			CO3 Demonstrate the concepts of polymorphism and inheritance
			CO4 Write, compile, and execute Java programs that may include basic data types and control flow constructs using J2SE
			CO5 Write Java programs to implement error handling techniques using exception handling
			CO1 Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events

III	Allied - II	Statistical Methods and their Applications - II	CO2 Analyze statistical data graphically using frequency distributions and cummulative frequency distributions
			CO3 Derive the probability density function of transformation of random variables
			CO4 Calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables
			CO5 Translate real-world problems into probability models
	Practical - III	Java Programming Lab	CO1 Describe the features of Java
			CO2 Design classes with object-oriented features
			CO3 Describe advanced features of Java like exception handling, multithreading etc.
			CO4 Write programs in JAVA featuring its core capabilities
			CO5 Able to know JDBC and ODBC Connectivity
	Skill Based - I	Design & Analysis of Algorithm	CO1. Analyze algorithms and improve the efficiency of algorithm.
			CO2.Apply different designing methods for development of algorithms realistic problems, such as divide and conquer, greedy method and etc.
			CO3.Construct minimal spanning trees and find shortest path Between source and sink.
			CO4. Analyze and estimate the performance of algorithm.

			CO5.Describe the notations of P, NP, NP-complete, and N Phard.
IV	Core-IV	Database Management Systems	CO1. Demonstrate the basic elements of a relational database management system.
			CO2. Identify data models for relevant problems.
			CO3. Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respect data.
			CO4. Apply normalization for the development of application software's.
			CO5. Design and implement a full real size database system
	Allied - II	Statistical Methods and their Applications II	CO1 Describe and discuss the key terminology, concepts tools and techniques used in business statistical analysis
			CO2 Critically evaluate the underlying assumptions of analysis tools
			CO3 Understand and critically discuss the issues surrounding sampling and si
			CO4 Discuss critically the uses and limitations of statistical analysis
			CO5 Solve a range of problems using the techniques covered
			CO1.Design and implement a database schema for given problem.
			CO2. Capable to design and build a GUI application.

	Practical - IV	RDBMS LAB	CO3. Apply the normalization techniques for development of application software to realistic problems.
			CO4. Formulate queries using SQL DML/DDL/DCL commands.
			CO5. Search trees, and hash tables to solve various computing problems
	Skill Based - II	Computer Organisation and Architecture	CO1 Describe the fundamental organisation of a computer system
			CO2 Explain the functional units of a processor
			CO3 Explain addressing modes, instruction formats and program control statements
			CO4 Distinguish the organization of various parts of a system memory hierarchy
			CO5 Describe fundamentals concepts of pipeline and vector processing
	Core-V	Mobile Application Development	CO1 Understands the basic technologies used by the Android platform. Recognizes the structure of an Android application project. Uses the tools necessary for Android application project.
			CO2 Use built-in widgets and components
			CO3 Work with the database to store data locally,
			CO4 Recognizes and uses Android Environment Emulator and Application life cycle
			CO5 Defines user interfaces using XML layouts

	Core-VI	Operating System	CO1 To understand the main components of an OS & their Functions
			CO2 To study the process management and scheduling.
			CO3 To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC.
			CO4 To understand the concepts and implementation Memory management policies and virtual memory.
			CO5 To understand the working of an OS asa resource manager, file system manager, process manager, memory manager and I/O manager and methods used to.
	Core-VII	Data Communication & Network	CO1 Understand the rudiments of how computers communicate
			CO2 Be familiar with the architecture of a number of different networks
			CO3 Understand the principles of protocol layering
			CO4 Be familiar with modern telecommunications.
			CO5 Understand about WWW and Working of E-Mail
V	Practical - V	Mobile Applications Development - Lab	CO1 Demonstrate the android features and create ,develop using android
			CO2 Demonstrate and Understanding anatomy of an Android application
			CO3 Apply the android geo location based services
			CO4 Illustrate the android wifi features and advance android development

		CO5 Demonstrate the linux security and implement ADL interface
Practical - VI	Operating System - Lab	CO1 Demonstrate the fundamental UNIX commands & system calls
		CO2 Apply the scheduling algorithms for the given problem
		CO3 Apply the process synchronous concept using message queue, shared memory, semaphore and Dekker's algorithm for the given situation
		CO4 Experiment an algorithm to detect and avoid dead lock
		CO5 Demonstrate the various operations of file system
Skill Based - II	Software Engineering	CO1.Adapt the basic software engineering methods and practices in their appropriate applications
		CO2. Distinguish the various software process models such as waterfall model, evolutionary models, etc.
		CO3. Compose the requirements document by understanding the software requirements
		CO4. Relate the software architectural styles to the suitable applications.
		CO5. Determine the need for, and an ability to engage in, life-long learning.
Elective - I	Computer Graphics	CO1: Understand input and output devices of computer.
		CO2: Understand how to scan convert the basic geometrical primitives, how to transform the shapes to fit them as per the picture definition.
		CO3: Visualize the colors in computer graphics.

			CO4: Comprehend and analyze the fundamentals of animation.
			CO5 : Knowing about virtual reality, underlying technologies, principles, and applications.
	Core-VIII	Cloud Computing	CO1. Analyze the virtualization and cloud computing concepts.
			CO2. Learn the architecture, deployment models, and infrastructure models of Cloud Computing.
			CO3. Demonstrate knowledge on the cloud computing security, federation, presence, identity, and privacy
			CO4. Familiar with open source cloud computing software, and free/commercial cloud services.
			CO5.Learn the privacy policy of cloud providers
	Core-IX	Open Source Programming	CO1 Implement various applications using build systems
			CO2 Understand the installation of various packages in open source operating systems
			CO3 Create simple GUI applications Using Visual Basic.
			CO4 Understand various version control sytems
			CO5 Understand the kernel configuration and virtual environment
			CO1 Able to design web applications using ASP.NET
			CO2 Students will be able to use ASP.NET controls in web applications

	Practical - VII	ASP .NET Lab	CO3 Students will be able to debug and deploy ASP.NET web applications
			CO4 Students will be able to create database driven ASP.NET web applications and web services
			CO5 Performing Database operations for Windows Form and web applications.
VI	Practical - VIII	Open Source Programming - Lab	CO1 Demonstrate the installation process of various operating systems.
			CO2 Implement virtualization by installing Virtual Machine software.
			CO3 Apply UNIX/LINUX operating system commands.
			CO4 Understand different UNIX/LINUX shell scripts
			CO5 execute various shell programs.
	Elective II	Mobile Computing	CO1 Understand and identify the GSM, GPRS and Bluetooth software model for mobile computing
			CO2 The ability to develop applications that are mobile-device specific and demonstrate current practice in mobile computing contexts.
			CO3 Understanding of the characteristics and limitations of mobile hardware devices including their user-interface modalities
			CO4 Analyze QoS over wire and wireless channels
			CO5 Able to promote the awareness of the life-long learning,business ethics, professional ethics and currentmarketing scenarios.
			CO1 To learn and understand technical aspect of Multimedia Systems.

	Elective III	Multimedia Systems	CO2 To understand the standards available for different audio, video and text applications.
			CO3 To Design and develop various Multimedia Systems applicable in real time.
			CO4 To learn various multimedia authoring systems.
			CO5 To understand various networking aspects used for multimedia applications.
	Skill Based - IV	ASP .NET	CO1 Understand and explain ASP.NET Programming.
			CO2 Interpret the fundamental ASP.NET syntax and semantics.
			CO3 Understand the concept of scripting and the contributions of scripting languages.
			CO4 Articulate the Object-Oriented Programming concepts used in ASP.NET
			CO5 Connect a ASP.NET program with a database.

DR.R.K.Shanmugam College of Arts and Sciecne

Department of Computer Science

MSc Computer Science

Programme Outcome(POs)

S.No.	PO Number	PO Statements
1	PO1	Understand the advanced concepts of key areas in Computer Science and enable students to expose technical, analytical and creative skills
2	PO2	Understanding and applying knowledge of mathematics, science, algorithmic and computing skills to acquire solution of complex scientific problems.

3	PO3	Students are to be imparted with a broad conceptual background in the Computing sciences to design, implement and evaluate a computational system.
4	PO4	Develop research oriented skills to identify, analyze and synthesize scholarly literature relating to the field of Computer Science.

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	Posses the knowledge in the field of Computer Science through theory and practicals.
2	PO2	Students will demonstrate high-level expertise in computer Science research and in the synthesis of research.
3	PO3	Communicate computer science concepts, designs, and solutions effectively and professionally.
4	PO4	Use software development tools, software systems, and modern computing platforms.

Course Outcome(COs)

Semster		Course	Title of the Course	Course Outcome
		Core-I	Formal Languages and Automata Theory	CO1 Acquire a fundamental understanding of the core concepts in automata theory and formal languages.
				CO2 An ability to design grammars and automata (recognizers) for different language classes.
				CO3 An ability to identify formal language classes and prove language membership properties.
				CO4 An ability to prove and disprove theorems establishing key properties of formal languages and automata.
				CO5 Acquire a fundamental understanding of core concepts relating to the theory of computation and computational models including (but not limited to) decidability and intractability.
				CO1 Able to understand basics of Java programming

Core-II	Advanced Java Programming	CO2 Create ability to handle exceptions in Java.
		CO3 Able to develop a Graphical User Interface (GUI) with Applet and Swing.
		CO4 Create interactive applications using AWT components.
		CO5 Understand JDBC and Network programming concepts in Java.
Core-III	Web Application using C#	CO1 Learn about MS.NET framework developed by Microsoft.
		CO2 Can able to use XML in C#.NET specifically ADO.NET and SQL server
		CO3 Be able to understand use of C# basics, Objects and Types, Inheritance
		CO4 To develop, implement and creating Applications with C#.
		CO5 To develop, implement, and demonstrate Component Services, Threading, Remoting, Windows services, web
Core-IV	DataBaseManagement Systems	CO1 Know about relational model and SQL.
		CO2 Understand the basic concepts of E-R model, relational database and normalization.
		CO3 Learnparallel,distributed and Object Oriented Databases
		CO4 Student will be proficient in XML database
		CO5 Students will understand the concept of Spatial, Temporal databases and transaction processing.

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Core Practical I	Advanced Java ProgrammingLab	CO1 Learn the Internet Programming, using Java Applets.
		CO2 Apply event handling on AWT and Swing components.
		CO3 Create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings.
		CO4 Learn to access database through Java programs, using Java Data Base Connectivity (JDBC).
		CO5 Create dynamic web pages, using Servlets and JSP.
Core Practical II	Web Application using C# Lab	CO1 Create user interactive web pages using ASP.Net.
		CO2 Create simple data binding applications using ADO.Net connectivity.
		CO3 Performing Database operations for Windows Form and web applications.
		CO4 Develop dynamic web applications, create and consume web services.
		CO5 Use appropriate data sources and data bindings in ASP.NET web applications.
Core Practical III	DataBase Management Systems Lab	CO1 Apply the basic concepts of Database Systems and Applications.
		CO2 Use the basics of SQL and construct queries using SQL in database creation and interaction.
		CO3 Design a commercial relational database system (Oracle, MySQL) by writing SQL using the system.

			CO4 Analyze and Select storage and recovery techniques of database system.
			CO5 Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing.
	Elective I	Object Oriented Analysis and Design	CO1 Can able to use an object-oriented method for analysis and design
			CO2 Can able to analyse information systems in real-world settings and to conduct methods such as interviews and observations
			CO3 have a general understanding of a variety of approaches and perspectives of systems development, and to evaluate other IS development methods and techniques
			CO4 know techniques aimed to achieve the objective and expected results of a systems development process
			CO5 know different types of prototyping and how to use UML for notation
	Core-V	Compiler Design	CO1 Posses knowledge about finite automata and regular expressions.
			CO2 Understand Lexical, syntax and Semantic analysis
			CO3 Learn the concept ofcontext free grammars, compiler parsing techniques.
			CO4 Learn Code Generation and Code Optimization
			CO5 Use the knowledge of patterns, tokens & regular expressions for solving a problem in the field of data mining.
			CO1 Can learn the Internet Programming, using Java Applets.

Core-VI	Enterprise Java Programming	CO2 create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings
		CO3 create dynamic web pages, using Servlets and JSP.
		CO4 make a resusable software component, using Java Bean.
		CO5 use Struts frameworks, which gives the opportunity to reuse the codes for quick development.
Core-VII	Enterprise Applications using C#	CO1 Understand basic concept of .NET using C#
		CO2 Design and develop web app interfaces with database connectivity
		CO3 Can know about web services, AJAX and MVC
		CO4 Build a graphical user interface by using XML.
		CO5 Create and use an entity data model for accessing a database and use LINQ to query and update data.
Core-VIII	Unix Network Programming	CO1 Learn UNIX structure, commands, and utilities.
		CO2 Describe and understand the UNIX file system.
		CO3 Write shell scripts in order to perform shell programming.
		CO4 Acquire knowledge about text processing utilities, process management and system operation of UNIX.

II			CO5 Understand the basic concepts, design and structure of the UNIX operating system.
	Core Practical IV	Enterprise Java ProgrammingLab.	CO1 Enhanced Java Programming Skills such as abstract Windows Toolkit, Java Input Output, Networking
			CO2 Develop applications using JDBC, RMI ,Java Beans
			CO3 Develop applications using servlets, JSP and spring-hibernate
			CO4 Design and develop applications using servlets, JSP and spring-hibernate
			CO5 Design and Develop server side applications with database Connectivity
	Core Practical V	Enterprise Applications using C# Lab	CO1 Implement the basic concepts of C#.
			CO2 Demonstrate the concepts of Object Oriented Concepts in C#
			CO3 Use Exception Handling for testing and debugging.
			CO4 Develop Graphical User Interface and work with database.
			CO5 Develop a real world projects using C# and Evaluate it.
	Core Practical VI	Unix Programming Lab	CO1 Describe the architecture and features of UNIX Operating System and distinguish it from other Operating System
			CO2 Demonstrate UNIX commands for file handling and process control
			CO3 WriteRegular expressions for pattern matching and apply them to various filters for a specific task

			CO4 Analyze a given problem and apply requisite facets of SHELL programming in order to devise a SHELL script to solve the problem
			CO5 Differentiate between internal and external commands and Illustrate job control commands
	Elective II	Software Testing	CO1 Various test procesess and continuous quality improvement and knnw about Types of errors and fault models
			CO2 Behavior modeling using UML: Finite state machines (FSM) and Test generation from FSM models
			CO3 Input space modeling using combinatorial designs
			CO4 Test adequacy assessment using: control flow, data flow, and program mutations and the use of various test tools
			CO5 Application of software testing techniques in commercial environments
	Core-IX	Distributed Operating Systems	CO1 Clear understanding on several resource management techniques like distributed shared memory and other resources.
			CO2 Knowledge on mutual exclusion and Deadlock detection of Distributed operating system.
			CO3 Able to design and implement algorithms of distributed shared memory and commit protocols.
			CO4 Able to design and implement fault tolerant distributed systems
			CO5 Learn the structure and design issues of Multiprocessor and Database Operating Systems.
			CO1 Analyze the scope, cost, timing, and quality of the project, at all times focused on project success as defined byproject stakeholders.
			CO2 Align the project to the organization's strategic plans and business justification throughout its lifecycle/

	Core-X	Software Project Management	CO3 Identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements in consultation with stakeholders.
			CO4 Implementproject management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.
			CO5 Adapt projects in response to issues that arise internally and externally.
	Core-XI	Mobile Computing	CO1 Understandand identify the GSM, GPRS and Bluetooth software model for mobile computing
			CO2 The ability to develop applications that are mobile-device specific and demonstrate current practice in mobile computing contexts
			CO3 Understanding of the characteristics and limitations of mobile hardware devices including their user-interface modalities
			CO4 Analyze QoS over wire and wireless channels
			CO5 Able to know about different types of OS that are used in different devices.
	Core-XII	Design and Analysis of Algorithms	CO1 Understand fundamental algorithmic design concepts andtechniques for computational problem solving.
			CO2 Apply an appropriate algorithm design techniques for solvingproblem.
			CO3 Ability to analyze the performance of algorithms by comparing the efficiency of algorithms with asymptotic complexity.
			CO4 Ability to design algorithms using standard paradigms like:Greedy, Divide and Conquer, Dynamic Programming Backtracking and branch and bound.
			CO5 Ability to understand P & NP class problems for formulatingsolutions using standard approaches.
III			CO1 demonstratetheirunderstandingofthefundamentalsofAndroidoperatingsystems

Core Practical VII	Mobile Computing Lab	CO2 demonstrate their skills of using Android software developmenttools
		CO3 demonstrate their ability to develop software with reasonable complexity on mobile platform
		CO4 Demonstrate their ability to deploy software to mobile devices
		CO5 Demonstrate their ability to debug programs running on mobile devices
Core Practical VIII	Design and Analysis of Algorithms Lab	CO1 Ability to analyze the performance of algorithms
		CO2 Ability to choose appropriate algorithm design techniques for solving problems.
		CO3 Ability to understand how the choice of data structures and the algorithm design methods impact the performance of programs.
		CO4 To clear up troubles the usage of set of rules design methods including the grasping approach, divide and overcome, dynamic programming, backtracking and department and certain.
		CO5 To understand the variations among tractable and intractable problems.
Core Practical IX	Mini Project	CO1 Studentswill be able to practice acquired knowledge within the chosen area of technology for project development.
		CO2 Identify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematic approach.
		CO3 Reproduce, improve and refine technical aspects for engineering projects.
		CO4 Work as an individual or in a team in development of technical projects.

			CO5 Communicate and report effectively project related activities and findings.
	Elective III	Software Quality Assurance	CO1 Describe fundamental concepts of software quality assurance.
			CO2 Understand fundamental concepts of software automation.
			CO3 Apply Selenium automation tool for testing web based application.
			CO4 Demonstrate the quality management, assurance, and quality standard to software system.
			CO5 Demonstrate Software Quality Tools and analyze their effectiveness.
IV	Core-XIII	Project work	CO1 Understand project domain knowledge
			CO2 Analyze and Design project documentation
			CO3 Complete an independent research project, resulting in at least a thesis publication, and research outputs in terms of publications in high impact factor journals, conference proceedings, and patents.
			CO4 Demonstrate knowledge of contemporary issues in their chosen field of research.
			CO5 Demonstrate an ability to present and defend their research work to a panel of experts.

DR.RK.Shanmugham College of Arts and Science
Department of Computer Sciecne
M.Sc. Information technology
Programme Outcomes

S.No.	PO Number	PO Statements
1	PO1	An ability to apply knowledge of computing, mathematics, and basic sciences appropriate to the
2	PO2	An ability to analyze a problem, and identify and define the computing requirements appropriate
3	PO3	An ability to design, implements, and evaluate a computer-based system, process, component,
4	PO4	An ability to identify and analyze user needs and take them into account in the selection,

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	PO1	It gives ability to use and apply current technical concepts and practices in the core information
2	PO2	It creates to effectively integrate IT-based solutions into the user environment
3	PO3	An understanding of best practices and standards and their application
4	PO4	It makes ability to assist in the creation of an effective project plan.

Course Outcome(COs)

Semster		Course	Title of the Course	Course Outcome
		Core I	Principles of Communication System	CO1 Describe the basic principle of communication system
				CO2 Demonstrate and solve communication system parameters for various types of modulation and demodulation techniques
				CO3 Apply the concepts to practical applications in telecommunication
				CO4 Demonstrate ability to communicate effectively and working as individual or as a team member
				CO5 Analog Modulation Techniques and their comparative analysis and applications suitability. Process of Modulation and Demodulation

I	Core II	Object Oriented Programming	CO1 Articulate the principles of object-oriented problem solving and programming.
			CO2 Explain programming fundamentals, including statement and control flow and recursion.
			CO3 Can understand the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.
			CO4 Program using objects and data abstraction, class, and methods in function abstraction.
			CO5 Apply virtual and pure virtual function & complex programming situations
	Core III	Data Base Management System	CO1 Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
			CO2 Design ER-models to represent simple database application scenarios
			CO3 Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data
			CO4 Improve the database design by normalization.
			CO5 Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing
			CO1 To understand the main components of an OS & their functions.
			CO2 To study the process management and scheduling.

	Elective I	Operating System	CO3 To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC.
			CO4 To understand the concepts and implementation Memory management policies and virtual memory.
			CO5 To study the need for special purpose operating system with the advent of new emerging technologies
	Core IV	Visual Programming	CO1 Develop windows Applications using visual programming.
			CO2 User Interface Design using VB
			CO3 Application Development using VC++
			CO4 Students code visual programs by using Visual Basic work environment.
			CO5 Students prepare various projects by helping visual programming.
	Core V	Computer Networks	CO1 Learn data transmission models, modulation, multiplexing.
			CO2 Understand applications of layers such as application layer, transport layer, network layer, data link layer.
			CO3 Understand fundamental concepts in Routing, Addressing & working of Transport Protocols
			CO4 Understand Wireless LANs & Wireless Sensor Networks Operations.
			CO5 Evaluate the challenges in building networks and solutions to those.

II	Core Practical I	Object Oriented Programming Lab	CO1 Creating simple programs using classes and objects in C++
			CO2 Implement Object Oriented Programming Concepts in C++.
			CO3 Develop applications using stream I/O and file I/O.
			CO4 Implement simple graphical user interfaces.
			CO5 Implement Object Oriented Programs using templates and exceptional handling concepts.
	Core Practical II	RDBMS Lab	CO1 Apply the basic concepts of Database Systems and Applications.
			CO2 Use the basics of SQL and construct queries using SQL in database creation and interaction.
			CO3 Design a commercial relational database system (Oracle, MySQL) by writing SQL using the system.
			CO4 Analyze and Select storage and recovery techniques of database system.
			CO5 Develop appropriate input screens, menu driven query processing and pleasing report.
	Core Practical III	Visual Programming Lab	CO1 Design, create, build, and debug Visual Basic applications.
			CO2 Apply arithmetic operations for displaying numeric output.
			CO3 Apply decision structures for determining different operations.

			CO4 Write and apply procedures, sub-procedures, and functions to create manageable code.
			CO5 Write Windows applications using forms, controls, and events.
	Elective II	Software Engimeering	CO1 An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
			CO2 An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
			CO3 An ability to use current techniques, skills, and tools necessary for computing practice
			CO4 An ability to apply design and development principles in the construction of software systems of varying complexity.
			CO5 An ability to applyalgorithmic principles, and computer science theory in the modeling and design of computerbased systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
	Core VI	Internet Programming	CO1 Explain how the client-server model of Internet programming works.
			CO2 Design and develop interactive, client-side, executable web applications.
			CO3 Demonstrate how Internet programming tasks are accomplished.
			CO4 Build tools that assist in automating data transfer over the Internet.
			CO5 Compare the advantages and disadvantages of the core Internet protocols.

III	Core VII	Mobile Computing	CO1 Understand and identify the GSM, GPRS and Bluetooth software model for mobile computing
			CO2 :The ability to develop applications that are mobile-device specific and demonstrate current practice in mobile computing contexts.
			CO3 Understanding of the characteristics and limitations of mobile hardware devices including their user-interface modalities
			CO4 Demonstrate basic skills for cellular networks design.
			CO5 Apply knowledge of TCP/IP extensions for mobile and wireless networking.
	Core VIII	Computer Graphics and Multimedia	CO1 To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and algorithms related with them
			CO2 To learn the basic principles of 3- dimensional computer graphics
			CO3 Provide an understanding of how to scan convert the basic geometrical primitives, how to transform the shapes to fit them as per the picture definition
			CO4 Provide an understanding of mapping from a world coordinates to device coordinates, clipping, andprojections.
			CO5 To comprehend and analyze the fundamentals of animation, virtual reality, underlying technologies and principles.
	Elective III	Client Server Computing	CO1 Comprehend the basic concepts of the client-server model
			CO2 Understand how Client-Server systems work.
			CO3 Differentiate between two-tier and three-tier architectures.

			CO4 Improve the performance and reliability of Client Server based systems.
			CO5 Identify security and ethical issues in Client Server Computing.
	Core IX	Software Project Management	CO1 Develop the model from the conventional software product to the modern.
			CO2 Have an exposure for organizing and managing a software project
			CO3 Practice the role of professional ethics insuccessful software development
			CO4 Acquire the knowledge of managing, economics for conventional, modern and future software projects.
			CO5Determine an appropriate project management approach through an evaluation of the business context and scope of the project.
	Core X	Network Security	CO1 Exhibit knowledge to secure corrupted systems, protect personal data, and secure computer networks in an Organization
			CO2 Practice with an expertise in academics to design and implement security solutions.
			CO3 Understand key terms and concepts in Cryptography, Governance and Compliance.
			CO4 Understand principles of web security and to guarantee a secure network by monitoring and analyzing the nature of attacks through cyber/computer forensics software/tools.
			CO5 compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the characteristics of hybrid systems.

IV	Core Practical IV	Network Lab	CO1 Understand the structure and organization of computer networks, including the division into network layers, role of each layer, and relationships between the layers
			CO2 Understand the basic concepts of application layer protocol design, including client/server models, peer to peer models, and network naming.
			CO3 In depth understanding of transport layer concepts and protocol design; including connection oriented and connection-less models, techniques to provide reliable data delivery and algorithms for congestion control and flow control
			CO4 Student will become familiar with the network simulator Packet Tracer
			CO5 Student will have the ability to create straight-through and cross over cables.
	Core Practical V	Internet Programming Lab	CO1 Analyze a web page and identify its elements and attributes.
			CO2 Design and implement dynamic websites with good aesthetic sense of designing and latest technical know-how's.
			CO3 Have a Good grounding of Web Application Terminologies, Internet Tools, E – Commerce and other web services.
			CO4 Create web pages using XHTML and Cascading Style Sheets.
			CO5 Build dynamic web pages using JavaScript (Client side programming). ·and Create XML documents and Schemas.
			CO1 1. Understand how to generate line, circle and ellipse also how to create 2D object and various transformation techniques.

Core Practical VI	Graphics and Multimedia Lab	CO2 Understand various 3D Transformation techniques using OpenGL.
		CO3 Understand multimedia compression techniques and applications.
		CO4 Able to understand graphics concepts and develop, design and implement two and three dimensional graphical structures using OpenGL.
		CO5 To understand multimedia compression techniques and applications of multimedia
Elective IV	High speed Networks	CO1 Demonstrate the knowledge of network planning and optimization
		CO2 Develop an in-depth understanding, in terms of architecture, protocols and applications, of major highspeed networking technologies
		CO3 Evaluate various technologies and identify the most suitable one to meet a given set of requirements for a hypothetical corporate network
		CO4 Develop necessary background to be able to manage projects involving any of the high-speed networking and fiber optics technologies
		CO5 Develop necessary background to be able to manage projects involving any of the high-speed networking technologies
		CO1 Identify, define and justify scope of the proposed problem
		CO2 Develop a functional application based on the software design

	Core XI	Project Work / Dissertation and viva voce	CO3 Apply coding, debugging and testing tools to enhance the quality of the software
			CO4 Construct new software system based on the theory and practice gained through this exercise
			CO5 Prepare the proper documentation of software projects following the standard guidelines

DR.R.K.Shanmugam College of Arts and Science

Department of Computer Application

B.C.A

Programme Outcome(POs)

S.No.	PO Number	PO Statements
1	PO1	Understand fundamental concepts of key areas in Computer Application and enable
2	PO2	Build student's effective communication, ethical attitudes, team work and logical
3	PO3	Students are to be passionately engaged in primary learning with intend to think
4	PO4	Students are to be imparted with a broad conceptual background in the

Programme Specific Outcome(PSO)

S.No.	POS Number	POS Statements
1	POS01	Possess basic knowledge on core concepts of Computer Application the knowledge
2	POS02	Apply problem-solving skills and the knowledge of programming languages in
3	POS03	Empowered with analytical mind and critical thinking.
4	POS04	Develop practical skills to fulfill the needs of industry and society

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
			CO1 The Student will be able to understand the concepts of Constants, Variables, and Data Types, Operators and Expressions

I	Core-I	Digital Logic & Programming in C	and Output Operations, Decision Making and Branching, Decision Making and Looping
			CO3 The Student will be able to understand the concepts of Arrays, Character Arrays and Strings, User Defined Functions.
			CO4 The Student will be able to understand the concepts of Structure and Unions, Pointers, File Management in C.
			CO5 The Student will be able to understand the concepts of Fundamental Algorithms, Factoring Methods
	Allied - I	Mathematics - I	CO1 Evaluate the validity of logical argumentsand construct mathematical proofs.
			CO2 Analyse whether given graphs are isomorphic and apply different algorithms to find the shortest path
			CO3 Apply the concept of two dimensional random variables to correlation, regression and Central limit theorem
			CO4 Learn and apply multivariate analysis necessary for Principal Component
			CO5 Identify the Markovian queueing model in the given system, find the performance measures and analyse the results
	Practical - I	Programming in C Lab	CO1 Enhance the analyzing and problem solving skills and use the same for writing programs in C
			CO2 Write diversified solutions, draw flowcharts and develop a well-documented and indented program according to coding standards
			CO3 Learn to debug a given program and execute the C program.
			CO4 To have enough practice the use of conditional and looping statements.
			CO5 To implement arrays, functions and pointers.
			CO1 The Student will be able to understand the concepts of object oriented programming Apply structure and inline functions.

II	Core-II	C++& Data Structures	CO2 The Student will be able to understand the concepts of the types of inheritances and Applying various levels of Inheritance for real time problems Apply the OOPs concepts class and object Understand Explain the
			CO3 The Student will be able to understand the concepts of Stacks and Queue using array and pointers.
			CO4 The Student will be able to understand the concepts of Recursion, Binary Search Tree and graphs.
			CO5 The Student will be able to understand the concepts of Sorting and Searching Algorithms.
	Allied - I	Mathematics - II	CO1 Ability to apply mathematical logic to solve problems.
			CO2 Understand sets, relations, functions, and discrete structures.
			CO3 Able to use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions
			CO4 Able to formulate problems and solve recurrence relations.
			CO5 Able to model and solve real-world problems using graphs and trees.
	Practical - II	C++ and Data Structure lab	CO1 Understand the Creating and Deleting the Objects with the Concepts of Constructors and Destructors
			CO2 Demonstrate the Polymorphism Concepts and Operator Overloading.
			CO3 Understand basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion
			CO4 Apply Algorithm for solving problems like Sorting and Searching.
			CO5 Apply Algorithms and use Graphs and Trees as tools to visualize and simplify Problems
			CO1 Identify classes, objects, members of a class and relationships among them needed for a specific problem

III	Core-III	Java Programming	CO2 Write Java application programs using OOP principles and proper program structuring
			CO3 Demonstrate the concepts of polymorphism and inheritance
			CO4 Write, compile, and execute Java programs that may include basic data types and control flow constructs using J2SE
			CO5 Write Java programs to implement error handling techniques using exception handling
	Allied - II	Financial Accounting I	CO1 Define book keepting and accounting
			CO2 Explain the general purpose and functions of accounting
			CO3 Explain the difference between financial and manageent accounting
			CO4 Describe the main element of financial accounting information - assets, liabilities, revenue and expenses
			CO5 Identify the main financial statements and their purposes
	Practical - III	Java Programming Lab	CO1 Describe the features of Java
			CO2 Design classes with object-oriented features
			CO3 Describe advanced features of Java like exception handling, multithreading etc.
			CO4 Write programs in JAVA featuring its core capabilities
			CO5 Able to know JDBC and ODBC Connectivity
			CO1. Analyze algorithms and improve the efficiency of algorithm.

	Skill Based - I	Design & Analysis of Algorithm	CO2.Apply different designing methods for development of algorithms realistic problems, such as divide and conquer, greedy method and etc.
			CO3.Construct minimal spanning trees and find shortest path Between source and sink.
			CO4. Analyze and estimate the performance of algorithm.
			CO5.Describe the notations of P, NP, NP-complete, and N Phard.
IV	Core-IV	Database Management Systems	CO1. Demonstrate the basic elements of a relational database management system.
			CO2. Identify data models for relevant problems.
			CO3. Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respect data.
			CO4. Apply normalization for the development of application software's.
			CO5. Design and implement a full real size database system
	Allied - II	Financial Accounting II	CO1 Preparing financial statements in accordance with appropriate standards.
			CO2 Prepare ledger accounts using double entry bookkeeping and record journal entries accordingly
			CO3 Preparing accounting information for planning and control and for the evaluation of finance
			CO4 Interpreting the business implications of financial statement information
			CO5 Prepare Bank reconciliation statement from incomplete statement
			CO1.Design and implement a database schema for given problem.

	Practical - IV	RDBMS LAB	CO2. Capable to design and build a GUI application.
			CO3. Apply the normalization techniques for development of application software to realistic problems.
			CO4. Formulate queries using SQL DML/DDL/DCL commands.
			CO5. Search trees, and hash tables to solve various computing problems
	Skill Based - II	Computer Organisation and Architecture	CO1 Describe the fundamental organisation of a computer system
			CO2 Explain the functional units of a processor
			CO3 Explain addressing modes, instruction formats and program control statements
			CO4 Distinguish the organization of various parts of a system memory hierarchy
			CO5 Describe fundamentals concepts of pipeline and vector processing
	Core-V	Mobile Application Development	CO1 Understands the basic technologies used by the Android platform. Recognizes the structure of an Android application project. Uses the tools necessary for Android application project
			CO2 Use built-in widgets and components
			CO3 Work with the database to store data locally,
			CO4 Recognizes and uses Android Environment Emulator and Application life cycle
			CO5 Defines user interfaces using XML layouts
			CO1 To understand the main components of an OS & their Functions

	Core-VI	Operating System	CO2 To study the process management and scheduling.
			CO3 To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC.
			policies and virtual memory
			manager, process manager, memory manager and I/O manager and methods used to
	Core-VII	Data Communication & Network	CO1 Understand the rudiments of how computers communicate
			CO2 Be familiar with the architecture of a number of different networks
			CO3 Understand the principles of protocol layering
			CO4 Be familiar with modern telecommunications.
			CO5 Understand about WWW and Working of E-Mail
V	Practical - V	Mobile Applications Development - Lab	CO1 Demonstrate the android features and create ,develop using android
			CO2 Demonstrate and Understanding anatomy of an Android application
			CO3 Apply the android geo location based services
			CO4 Illustrate the android wifi features and advance android development
			CO5 Demonstrate the linux security and implement ADL interface
			CO1 Demonstrate the fundamental UNIX commands & system calls

	Practical - VI	Operating System - Lab	CO2 Apply the scheduling algorithms for the given problem
			CO3 Apply the process synchronous concept using message queue, shared memory, semaphore and Dekker's algorithm for the given situation
			CO4 Experiment an algorithm to detect and avoid dead lock
			CO5 Demonstrate the various operations of file system
	Skill Based - III	Software Engineering	CO1.Adapt the basic software engineering methods and practices in their appropriate applications
			CO2. Distinguish the various software process models such as waterfall model, evolutionary models, etc.
			CO3. Compose the requirements document by understanding the software requirements
			CO4. Relate the software architectural styles to the suitable applications.
			CO5. Determine the need for, and an ability to engage in, life-long learning.
	Elective - I	Data Mining	CO1 Understand Data Warehouse fundamentals and datamining Principles
			CO2 Design data warehouse with dimensional modelling and apply OLAP operations
			CO3 Identify appropriate data mining algorithms to solve real world problems
			classification, prediction, clustering and association rule mining
			CO5 Describe complex data types with respect to spatial and web mining
			CO1. Analyze the virtualization and cloud computing concepts.

Core-VIII	Cloud Computing	CO2. Learn the architecture, deployment models, and infrastructure models of Cloud Computing.
		CO3. Demonstrate knowledge on the cloud computing security, federation, presence, identity, and privacy
		CO4. Familiar with open source cloud computing software, and free/commercial cloud services.
		CO5.Learn the privacy policy of cloud providers
Core-IX	Open Source Programming	CO1 Implement various applications using build systems
		CO2 Understand the installation of various packages in open source operating systems
		CO3 Create simple GUI applications Using Visual Basic.
		CO4 Understand various version control sytems
		CO5 Understand the kernel configuration and virtual environment
Practical - VII	ASP .NET Lab	CO1 Able to design web applications using ASP.NET
		CO2 Students will be able to use ASP.NET controls in web applications
		CO3 Students will be able to debug and deploy ASP.NET web applications
		applications and web services
		CO5 Performing Database operations for Windows Form and web applications.
		CO1 Demonstrate the installation process of various operating systems.

VI	Practical - VIII	Open Source Programming - Lab	CO2 Implement virtualization by installing Virtual Machine software.
			CO3 Apply UNIX/LINUX operating system commands.
			CO4 Understand different UNIX/LINUX shell scripts
			CO5 execute various shell programs.
	Elective II	Mobile Computing	CO1 Understand and identify the GSM, GPRS and Bluetooth software model for mobile computing
			CO2 The ability to develop applications that are mobile-device specific and demonstrate current practice in mobile computing contexts
			CO3 Understanding of the characteristics and limitations of mobile hardware devices including their user-interface modalities
			CO4 Analyze QoS over wire and wireless channels
			CO5 Able to promote the awareness of the life-long learning,business ethics, professional ethics and currentmarketing scenarios.
	Elective III	Multimedia Systems	CO1 To learn and understand technical aspect of Multimedia Systems.
			CO2 To understand the standards available for different audio, video and text applications.
			CO3 To Design and develop various Multimedia Systems applicable in real time.
			CO4 To learn various multimedia authoring systems.
			CO5 To understand various networking aspects used for multimedia applications.
			CO1 Understand and explain ASP.NET Programming.

	Skill Based - IV	ASP .NET	CO2 Interpret the fundamental ASP.NET syntax and semantics.
			CO3 Understand the concept of scripting and the contributions of scripting languages.
			CO4 Articulate the Object-Oriented Programming concepts used in ASP.NET
			CO5 Connect a ASP.NET program with a database.

DR.R.K.Shanmugam College of Arts and Science
Department of Commerce
B.Com
Programme Outcome(POs)

S.No.	PO No.	PO Statements
1	PO1	Students are able to gain a thorough basic knowledge in the fundamental of Commerce and Accounting.
2	PO2	Curriculum offers a number of specializations and practical disclosures which overcome the student to face the contemporary challenge business activities
3	PO3	Further the students are encouraged with add on value based and job oriented courses which ensure them to the sustained in the organization level.
4	PO4	3. Develop the ability to use a basic accounting system to create (record, classify, and summarize) the data needed to solve a variety of business problems.

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	Develop the ability to interact well with team members.
2	POS02	Employ marginal analysis for decision making

3	POS03	Analyze causes and consequences ofunemployment, inflation and economic growth
4	POS04	Describe the concept of buyer persona and its importance for constructing effective marketing campaigns.

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcomes
I	**CORE - I**	**FINANCIAL ACCOUNTING -I**	CO1To learn the Accounting methods
			CO2To become an accountant by profession
			CO3To know the accounting methods.
			CO4To operate the accounting transactions into systems without any mistakes.
			CO5The students can gain knowledge about the basic principles and functions of Accountancy.
	CORE -II	**BUSINESS ORGANISATION**	CO1To critically evaluate the underlaying assumptios ofany business organisation.
			CO2 Classification of Business Orgaqnisation
			CO3 To discuss critically the uses and limitations of all the types of organisations
			CO4 To solve a range of problems faced by a business man in the market
			CO5To conduct the important meetings along with the co operation of all the employees
			CO1To understand the expectations of consumer and the ways to satisfy them

	ALLIED	**CONSUMER PROTECTION**	CO2 To understand the concept consumer protection
			CO3To understand the rights of consumers
			CO4 To know the key points of the consumer protection act 2019
			CO5 To outline machinery for settlement of consumer grievances
II	**ALLIED**	**MERCHANT BANKING**	CO1To know the types of services of Merchant Bankers
			CO2To know the procedures for providing all necessary documrentation and information
			CO3To identify the Merchant bankers to kknow who can be a consultant, advisor, and underwriter.
			CO4 To classify the services provided by the merchant bankers
			CO5 To know the High exposure to risk since they deal with businesses
	CORE - III	**FINANCIAL ACCOUNTG -II**	CO1To learn the Accounting methods
			CO2 To identify the accounting methods followed in branches of head offices of MNCs
			CO3To Describe the ethical and social responsibilities of accountants in ensuring the integrity of financial formation
			CO4To Apply knowledge of federal tax laws and procedures to individuals and businesses
			CO5To know the accounting systems followed in partnership form of business

	CORE -IV	**ELEMENTS OF INSURANCE**	CO1To know the types of insurance schemes•Evaluating the firm's operating results.
			CO2To Evaluating the varieties of insurance schemes.
			CO3 To know the benefits to the business people when they avail the insurance policies
			CO4To know the procedures for claiming the policy amount after the incidence happens
			CO5To learn the procedures for compensation for the maturity of the policy
	CORE -V	**CORPORATE ACCOUNTG -I**	CO1To know the Accounts maintained by the corporates
			CO2To learn the methods to Prepare the final accounts of Joint Stock companies
			CO3To know the ways and Explain the concepts of Amalgamation and External Reconstruction
			CO4To learn the ways to Prepare Liquidators Final Statement of Accounts
			CO5To Explain the concepts of Liquidation of companies.
	CORE- VI	**BUSINESS LAW**	CO1To demonstrate an understanding of the Legal Environment of Business.
			CO2To Apply basic legal knowledge to business transactions.
			CO3To Communicate effectively using standard business and legal terminology
			CO4To Demonstrate knowledge of basic court procedures

			CO5To Identify contract remedies
	CORE -VII	BANKING	CO1To know the origination of banks in the world and in India
			CO2To Identify the contract laws and agreements
			CO3To know the various types of banking services and also The Banking and financial system in India
			CO4To learn About commercial banks and its products.
			CO5To know How to build customer relationship in banking sector.
III	CORE -VIII	BUSINESS STATISCTICS	CO1To learn How to apply mathematical tools in business decision
			CO2To know How to do comparative study of two or moreobservations
			CO3To know The basic concepts of statistics and its use in business
			CO4To know the various statistical methods followed in business organisations
			CO5To develop group and creating high performance in the areas where statistical method
	ALLIED- III	BUSINESS ECONIMICS	CO1To know the economical condition of a countryand The fundamental conceptual foundations of microeconomics.
			CO2To know How to analyze the behavior of consumers in terms of the demand for products.
			CO3To know How to evaluate the factors affecting firm behavior

			CO4To analyze the performance of firms under different market structures.
			CO5To identify the fundamental conceptual foundations of microeconomics
	SBS	**E-COMMERCE**	CO1To Analyze the impact of E-commerce on business models and strategy.
			CO2To Describe the major types of E-commerce.
			CO3To Explain the process that should be followed in building an E-commerce presence.
			CO4To Identify the key security threats in the E-commerce environment.
			CO5To l;earn how procurement and supply chains relate to B2B E-commerce.
	NMEC	**MANAGEMENT CONCEPT**	CO1To Describe what a management is and what are the needs to have it
			CO2To know the primary functions of management.
			CO3To know the primary types of managers and the roles they play.
			CO4To know the advantages that arise from managing people well.
			CO5To Explain the key aspects of the environment that can affect strategy.
			CO1To learn the Account for the various adjustments related to share capital
			CO2To learn and Prepare the final accounts of Joint Stock companies

CORE- IX	**CORPORATE ACCOUNTING - II**	CO3To Prepare Liquidators Final Statement of Accounts
		CO4To Explain the concepts of Liquidation of companies.
		CO5To know the concepts of Amalgamation and External Reconstruction
CORE -X	**COMPANY LAW**	CO1To Explain the concepts in business laws with respect to foreign trade
		CO2To know the ways to Apply the global business laws to current business environment
		CO3To Analyse the principle of international busines
		CO4To Integrate concept of business law
		CO5To Analyse the principle of business laws and its applications
CORE -X1	**BUSINESS COMMUNICATION**	CO1To know the importance of effective communication in business
		CO2To Differentiate between different methods of communication Methods of Communication
		CO3To know the importance of Ethics in Business Communication
		CO4To Identify the three parts of the writing process in communication
		CO5To know the common word processing software to write business messages
		CO1To Describe and discuss the key terminology, concepts tools and techniques used in business statistical analysis

IV	**CORE -XII**	**BUSINESS STATISTICS**	CO2To know the Discrete data are the values assumed by a discrete variable
			CO3To know the defective items in a consignment received for sale,are all examples of discrete data
			CO4To know the Qualitative data refer to qualitative characteristics of a
			CO5To learn the Nominal data are the outcome of classification into two or more categories of items
	ALLIED -IV	**BUSINESS ECONOMICS -II**	CO1To know How to evaluate the factors affecting firm behavior
			CO2To analyze the performance of firms under different market structures.
			CO3To know the fundamental conceptual foundations of microeconomics
			CO4To know the economical policies of a country in mananasging its own resources
			CO5To learn and evaluate the factors affecting firm behavior
	NMEC	**TRANING AND DEVELOPMENT**	CO1To learn the Development of new skills
			CO2To identify and Helps to adjust with changing Technology
			CO3To create the various types of Trust in the organisations
			CO4To identify the vacancies for Filling human resource requirements
			CO5To Analyse the human reosurce planning process and its procedures

	SBS	**INDUSTRIAL ORGANISATION**	CO1To know the various tpes of industries operating in the countries
			CO2To identyify the workplace and active environmental conditions
			CO3To learn the types of industries producing the necessary goods
			CO4To learn the industrial objectives of business people in satisfying the various expectations of customers in the market
			CO5To Realize that the overall structure is important and has an impact to people
	CORE -XIII	**COST ACCOUNTING-I**	CO1To know the difference between Cost Accounting , Cost Accountancy and Costing
			CO2To identify the role of cost accountant
			CO3To identify the objectives of cost accounting
			CO4To understand the Management information needs
			CO5To learn cost accounting as a tool of management, provides management with detailed records of costs relating to products
	CORE - IV	**PRACTICAL AUDITING**	CO1To learn the auditiong nature followed in companiers
			CO2To know the various types of audits
			CO3To know the needs for auditing a companys accounts
			CO4To know the necessity to audit a company accounts and its benefits

			CO5To know the functions of auditors in auditing practices
V	**CORE-XV**	**BUSINESS MANAGEMENT**	CO1To learn the role of a Business manager in managing a business org
			CO2To know the Requirements to start a business Finance /Money Labor / People Customers Suppliers
			CO3To know the Organizational Structure dealing in Product or Service
			CO4To learn the principles of management for the successful of a business undertaking
			CO5To know the functions performed a manager of a business organisation
	CORE-XVI	**INCOME TAX**	CO1To familiar with the computation of capital gain
			CO2To know the types of taxes levied in the country
			CO3To know the exemptions available to an assessee
			CO4To learn the ways to determine who are responsible to pay the tax
			CO5To identiofy the various sources if incomes can be earned by an assessee
	ELECTIVE	**ENTTREPRENEURIAL DEVELOPMENT**	CO1To identify the sources available to a person to do a businerss and the ways availble to do it
			CO2To identify the various types of incentives provided to an entrepreneur
			CO3To know the types of entrepreneur and the benefits to become a business man

			CO4To inform the procedures to be followed by a business man to avail loans form financial institutions
			CO5To know the concessions provided to an entreprenur in innovating his business firm
	SBS	PRINCIPLES OF MARKETING	CO1To identify the opportunities availbale to a businessman to shine in the markets for a long time
			CO2To know the marketing technologies available to a businessman to develop new advertisemnt copies
			CO3To know the channels of distribution and to choose the best one
			CO4To learn the general idea about framing advertisements.
			CO5To know the methods followed to expand thwe market size
	CORE-XVIII	COST ACCOUNTING - II	CO1To enable the students to understand about job costing, batch costing and contract costing.
			CO2To understand the students the different operating methods to control and reduce cost of rendering services
			CO3To inform the students about the methods of costing and also used to ascertain the cost
			CO4To know to formulate their own strategies in deciding a best method to control the costs
			CO5To learn the different ways to control the costs of a product or service
			CO1To familiar with the computation of capital gain
			CO2To know the various processes to be followed in seizure of the properties of those who evade from tax payment

	CORE - XIX	**INCOMETAX, LAW AND PRACTICE**	CO3To know about the tax payments in advance and the interest for the advance amount
			CO4To know how the income tax is calculated as per income tax rules
			CO5To learn about the income tax authorities and their powers and duties.
VI	**ELECTIVE-II**	**BUSINESS ENVIRONMENT**	CO1To learn the understanding of natural resources and ecosystems
			CO2To know the awareness about the importance of presrving natural resources in improving a vbusiness organisation
			CO3To identify the consequences of pollution and possible solutions to avoid pollution in improving a business undertaking
			CO1To have an understanding of natural resources and ecosystems
			CO5To know the factors affecting a business undertaking in its performance
	ELECTIVE-III	**HUMAN RESOURCE MANAGEMENT**	CO1To know how to Effectively manage and plan key human resource functions within organizations
			CO2To Examine current issues, trends, practices, and processes in HRM
			CO3To Contribute to employee performance management and organizational effectiveness
			CO4To know the various Problem-solve human resource challenges
			CO5To Develop employability skills for the smooth workplace condition of an organisation
			CO1To Gain familiarity with the concepts and terminology used in the development of systems used in an organisation

	SBS	COMPUTER APPLICATION IN BUSINESS	CO2To Explore various methods that Information Technology processes used in an organisation
			CO3To know the applications of computers in managing a business undertakings
			CO4To Accomplish projects utilizing computers in solving the business issues
			CO5To understand the purpopses of computers in dealing with the accounts related informations

DR. R.K.Shanmugam College of Arts and Science

Department of Commerce - M.Com.

Programme Outcome(POs)

S.No.	PO No.	PO Statements
1	PO1	To gain knowledge about Indian ethical practices. To familiarize the students to acquire sound knowledge of
2	PO2	The students can get the placement for jobs in all industries in Corporate Finance or you can apply to Banks,
3	PO3	To inculcate the knowledge of business and the techniques of managing the business with special focus on
4	PO4	To impart the knowledge basic accounting principles and the latest application oriented corporate accounting m

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	To develop the decision making skill through costing methods and practical application of management accounting principles.
2	POS02	To enhance the horizon of knowledge in various field of commerce through advertising and sales promotion, auditing and entrepreneurial development.
3	POS03	To create awareness in application oriented research through research for business decisions.
4	POS04	To Develop the skills of analysis and capability of making business decisions.

Course Outcome(COs)

Semster	Course	Title of the Course	Course Outcomes
I	**Main I**	**Advanced Financial Management**	CO 1 Understand concepts of Financial Management
			CO2 Enumerate the Capital Structure
			CO 3 Analyse Cost of Capital measurement
			CO 4 Evaluate Investment decisions process
			CO 5 Analyse Working capital management
	Main II	**Accounting for Managerial Decisions**	CO 1 Analyse Financial Statement analysis
			CO 2 Apply Cost Volume Profit analysis
			CO 3 Knowing the capital budgeting appraisal methods
			CO 4 Evaluation of capital structure factors
			CO 5 Analysing the dividend calculation methods
	Main III	**Global Marketing**	CO 1 Understand Classification of services and implications
			CO 2 Identify Marketing strategies for service firms
			CO 3 Understand Pricing of services
			CO 4 Understand Marketing of financial services

			CO 5 Identify Customer Relationship Marketing
	Main IV	**Advanced Business statistics**	CO 1 Develop the skills of analysis and capability of making business decisions.
			CO 2 Apply mathematical tools in business decision
			CO 3 Basic concepts of statistics and its use in business
			CO 4 Key terminology, concepts tools and techniques used in business statistical analysis
			CO 5 Qualitative data refer to qualitative characteristics of a subject or an object
	Elective	**Managerial Economics**	CO 1 Analyse Scope and methods of Managerial Economics
			CO 2 Apply Concept and tools of demand analysis
			CO 3 Enumerate Concepts in resource allocation
			CO 4 Evaluate Market Structure and Advertisement budgeting
			CO 5 Apply Pricing methods and approaches
	Main V	**Corporate Laws**	CO 1 Enumerate Problems of Industrial Relations and Growth of Trade Union
			CO 2 Understand and solve Disputes
			CO 3 Evaluate Labour Welfare Measures
			CO 4 Analyse Industrial Accidents and Safety measures

			CO 5 Analyse Types of Labour
	Main VI	**HRM**	CO 1 Understand the Dimensions of managerial jobs
			CO 2 Plan and Identifying managerial talent and career management
			CO 3 Use measuring managerial effectiveness
			CO 4 Generate Organisational processes
			CO 5 Understand the Self- development skills and creativity
II	**Main VII**	**Advanced Accounts**	CO 1 Solve the Problems in Share capital, Debentures, Valuation of Goodwill
			CO 2 Apply the procedures Acquisition, amalgamation, Absorption and
			CO 3 Compare the Holding and Subsidiary companies procedures & process.
			CO 4 Compute Liquidation
			CO 5 Recollect Accounting Principles and practices to apply in Problem solving.
	Main VIII	**QT for Business Decisions**	CO 1 Understand Probability Theory
			CO 2 Analyse Sampling Techniques
			CO 3 Apply Testing Hypothesis, Chi-square, f-test
			CO 4 Comprehend Correlation and Regression

			CO 5 Apply linear programming
	Elective	**Retail Management**	CO 1 Understand Classification of services and implications
			CO 2 Identify Marketing strategies for service firms
			CO 3 Understand Pricing of services
			CO 4 Understand Marketing of financial services
			CO 5 Identify Customer Relationship Marketing
	Main IX	**GST**	CO 1 Enumerate Problems of Industrial Relations and Growth of Trade Union
			CO 2 Understand and solve Disputes in GST
			CO 3 Evaluate GST related Measures
			CO 4 Analyse Industrial Accidents and Safety measures
			CO 5 Analyse issues related to GST calculation
	Main X	**Organisational Behaviour**	CO 1 Identify the Approaches and models of Organizational behavior
			CO 2 Compare the Individual and group behavior in work place
			CO 3 Evaluate Organizational Communication effectiveness
			CO 4 Enumerate Organizational Dynamics and Climate

			CO 5 Analyse Organizational Change
III	**Main XI**	**Advanced Cost Accounting**	CO 1 Analyse Cost Control and Reduction
			CO 2 Understand Costing Methods
			CO 3 Determine the Budgeting Control methods
			CO 4 Apply Cost Volume Profit analysis
			CO 5 Analyse Financial Statement analysis
	Main XII	**Research Mathodology**	CO 1 Understand Meaning of Research and research design.
			CO 2 Create Hypothesis and testing
			CO 3 Identify Methods of Data collection and pilot study
			CO 4 Develop Processing and Analysis of data and SPSS packaging
			CO 5 Apply Report writing and drafting of report
	Elective III	**Services Marketing**	CO 1 Understand Classification of services and implications
			CO 2 Identify Marketing strategies for service firms
			CO 3 Understand Pricing of services
			CO 4 Understand Marketing of financial services

			CO 5 Identify Customer Relationship Marketing
IV	**Main XIII**	**Direct Taxes**	CO 1 Identify Tax calculation considerations
			CO 2 Computation of tax payment
			CO 3 Understand the rules of IT Dept.
			CO 4 Identify the methods of calculating the tax from various sources.
			CO 5 Understand the procedures for the relief
	Main XIV	**Investment Management**	CO 1 Understand Knowledge economy and Knowledge management strategy
			CO 2 Identify Knowledge Attributes
			CO 3 Understand Infrastructure of Knowledge Management and Applications
			CO 4 Develop Knowledge Culture
			CO 5 Comprehend Knowledge Management tools, techniques and knowledge audit
	Main XV	**Project work**	CO 1 Learning the process of prject preparation
			CO 2 Analysing the data collected
			CO 3 Preparation of Questionnaire
			CO 4 Collecting the respondent opinions

			CO 5 Suggesting the remedies
	Elective IV	**Sales and Advertising Management**	CO 1 Learning the basic in marketing
			CO 2 Knowing the types of advertising media
			CO 3 Channels of Distribution
			CO 4 Salesman administration
			CO 5 Consumer Protection Activities

DR.R.k.Shanmugam College of Arts and Science

Department of Business Administration

B.B.A

Programme Outcome(POs)

S.No.	PO No.	PO Statements
1	PO1	An understanding of Business Functions
2	PO2	Providing Global Perspectives
3	PO3	Developing Critical and Analytical Thinking
4	PO4	Interpersonal Skill Development

Programme Specific Outcome(PSO)

S.No.	POS No.	POS Statements
1	POS01	Acquiring conceptual clarity various functional areas
2	POS02	Ability to analyze variuos functional issues affecting Organization
3	POS03	Demonstrate effectively oral and written communication
4	POS04	Demonstrate ability to work in groups

Course Outcome(Cos)

Semster	Course	Title of the Course	Course Outcome
I	Core-I	Principals of Management	knowledge and understanding of various areas of management
			CO2: Exibit knowledge and skill required to administer the affairs of management
			CO3 : Familiarizes students with concept and Principles of management
	Core-I	Business Mathematics and Statistics -I	CO1 : To know the basic mathemetical calculations.
			methods and its applications in commercial situation for decision making.
			CO3 : To analyze different tools of progression theories of equation and number system
I	Allied	Business Organization	CO1: Provides with logic and working of organization and outlines the major function of Business organization
			needed to successfully manage the organization with different environmental situations.
			CO3 : To give insight on Memorandum of Association, Article of Association, impact of globalization and technology of Indian business.
	Core-I	Environmental Studies	CO1 : Understand and evaluate the globalscale of environmental problems
			CO2 : Communicate complex environmental information to both technical and non - technical audiences
			CO3 : Articulate interconnected and interdisciplinary nature of environment studies
		Financial Accounting	CO1 : Explain the general purposes and functions of accounting
			CO2 : Explain the differences between management and financial accounting

II	Core	Business Mathematics and Statistics II	concepts tools and techniques used in business statistical analysis
			CO2 :Critically evaluate the underlying assumptions of analysis tools
			CO3 : Solve a range of problems using the techniques covered
II	Core	Value Education	CO1 : Students will understand the importance of value based living.
			CO2 : Students will gain deeper understanding about the purpose of their life.
			CO3 : Students will understand and start applying the essential steps to become good leaders
		Soft Skill	communication and improve the listening skills
			CO2 : Write precise briefs or reports and technical documents
			CO3 : Actively participate in group discussion / meetings .
II	Allied	Business Communication	optimum use of correct Business Vocabulary & Grammar.
			developing the implication-based understanding of Paraphrasing, deciphering instructions,
			and communication barriers while developing an understanding of
III	Core	Production Management	management and various transformation processes to
			alternatives and their capacity decisions, develop a balanced line of production &
			CO3 : Develop aggregate capacity plans and MPS in operation environments.

III	Core	Management Accounting I	CO1 : Acquire conceptual knowledge of basics of accounting
			CO2 : Identify events that need to be recorded in the accounting records
			CO3 : Describe the role of accounting information and its limitations
III	Core	Strategic Management	output in the field of strategic management.
			understanding of the concepts, tools & techniques used by executives in developing
			tools & techniques to practical situations for diagnosing and solving organisational problems.
		Managerial Economics	CO1 : Understand the roles of managers in firms
			CO2 : Understand the internal and external decisions to be made by managers
			pricing, product differentiation, and market environment according to the natures of products and
III	Allied	Office Management	CO1 : Identify and describe challenges that affect administrative managers.
			human resources, leadership and communications, administrative services, and workplace
			CO3 : Discuss emerging elements impacting administrative management practices.
III	Skill Based	Customer Relationship Management	CO1 : Understand the basic concepts of Customer relationship management.
			CO2 : To understand marketing aspects of Customer relationship management.
			CO3 : Learn basics of analytical Customer relationship management.

	Non Major Elective	Management Concepts	clearunderstanding of managerial functions like planning, and have same basic knowledge on international aspect of managemen
			CO2 : To understand the planning process in the organization
			CO3 : To understand the concept of organization
IV	Core-I	Materials Management	over the logistics and supply chain operations.
			CO2 : Integrate the organization wide materials requirement to develop an overall plan (MRP).
			CO3 : Identify, study, compare, and evaluate alternatives, select and relate with a good supplier.
		Management Accounting II	CO1 : Acquire conceptual knowledge of basics of accounting
			CO2 : Identify events that need to be recorded in the accounting records
			CO3 : Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP
IV	Core-I	Business Environment	CO1 : Familiarize with the nature of business environment and its components
			framework of business environment and generate interest in international business
			and role of ethical behavior in the business world today.
		Operations Research	CO1 : Be able to understand the application of OR and frame a LP Problem with solution – graphical and through solver add in excel
			CO2 : Be able to build and solve Transportation and Assignment problems using appropriate method.
			queuing to improve decision making and develop critical thinking and objective analysis of decision problems.

IV	Allied	Organizational Behavior	CO1 : Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization.
			with management of individual behavior in the organization.
			CO3 : Analyze the complexities associated with management of the group behavior in the organization.
	Skill Based subject	Total Quality Management	CO1 : Understanding the basic concepts of TQM
			CO2 : Develop a thinking towards Quality systems and Thinking.
			CO3 : Implement and use Deming Philosophy, Juran Philosophy, Crosby Philosophy
IV	Non Major Elective	Training and Development	development from a tactical to a strategic function .
			CO2 : To provide an insight into what motivates adults to learn and the most appropriate methodologies to impart training
			CO3 : To understand the concept of training audit & training evaluation
V	Core	Marketing Management	knowledge in the functional area of marketing management
			CO2 : Students will demonstrate effective understanding of relevant functional areas of marketing management and its application.
			identification and resolution of problems pertaining to marketing management.
		Business Law	CO1 : Explain the concepts in business laws with respect to foreign trade
			business environment
			CO3 : Analyse the principle of international business and strategies adopted by firms to expand globally

V	Core	Cost Accounting	CO1 : Acquire conceptual knowledge of basics of accounting
			CO2 : Identify events that need to be recorded in the accounting records
			difference between cash book and pass book balances
		Computer Application in Business	information
			CO2 : Develop, interpret, and express ideas through written communication
			CO3 : Analyze, evaluate, and synthesize information
V	Elective	Human Resource Management	CO1 : To develop the understanding of the concept of human resource management and to understand its relevance in organizations.
			CO2 : To develop necessary skill set for application of various HR issues
			resources.
V	Skill Based Subject	E- Business	CO1 : Understand the basic concepts and technologies used in the field of management information systems.
			CO2 : Have the knowledge of the different types of management information systems
			CO3 : Understand the processes of developing and implementing information systems;
VI	Core	Industrial Relations and Labour Laws	CO1 : The students should able to illustrate the role of trade union in the industrial setup.
			CO2 : Students should able to outline the important causes & impact of industrial disputes.
			CO3 : Students should able to elaborate Industrial Dispute settlement procedures.

VI	Core	Entrepreneurial Development	plans those are suitable for funding by considering all dimensions of business.
			CO2 :Understand entrepreneurial process by way of studying different case studies and find exceptions to the process model of entrepreneurship.
			CO3 : Run a small enterprise with small capital for a short period and experience the science and art of doing business.
VI	Core	Group Project	CO1 : Understand project characteristics and various stages of a project
			CO2 : Understand the conceptual clarity about project organization and feasibility analyses
			CO3 : Analyze the learning and understand techniques for Project planning, scheduling and Execution Control.
VI	Elective	Financial Management	CO1 : Explain the concept of fundamental financial concepts, especially time value of money.
			CO2 : Apply capital budgeting projects using traditional methods.
			respective advantages and disadvantages in different circumstances
VI	Skill Based Subject	Creativity and Innovation Management	CO1 : Consider cognitive aspects of creativity and how personality and individual differences might contribute
			CO2 :Explore ways in which individuals can enhance their own creative potential
			leadership, diversity and structure can both help and hinder

DR.R.K.Shanmugham College of Arts and Science
Department of Physics
B.Sc.Physics
Programme Outcome

S.NO	O Numb	PO statements

1	PO1	Nuclear Physics deals with study of the structure of matter at the atomic level. A few other applications of the subject are nuclear medicine, ion implantation in material engineering, magnetic resonance imaging, and radiocarbon dating in geology and archaeology.
2	PO2	working of various Electronic circuits. The students will u understand how to u se the basic test and measuring instruments to test the circuits. continuous and discrete time signals and systems. Understand and resolve the signals in frequency domain using Fourier series and Fourier transforms.
3	PO3	The course gives an introduction to solid state physics, and wil enable the student to employ classical and quantum mechanical theories needed to understand the physical properties of solids. Emphasis is put on building models able to explain several different phenomena in the solid state.
4	PO4	the structure and dynamics of atoms and simple molecules. the interaction between atoms, molecules and electromagnetic fields. collision processes involving atoms, charged particles and molecules. the structure of the periodic system, many-electron and relativistic effects.
5	PO5	The student will get an introduction to the discipline of optics and its role in the modern society. The student shall master the geometrical approximation, including Guass thin lens formula, Fermat's and Huygen's principles, and the paraxial matrix formalism for refractive and reflective surfaces.

Programme Specific Out come (PSOs)

S.NO	O Numb	PO Statement
1	PO1	After completing the course, you will: know what radioactivity is and how it arises. know about radioactivity in nature and why it is there. know about fundamental concepts e.g. half-life, radioactive series and isotope generators.
2	PO2	Characteristics and applications of operational amplifiers (op-amps). Design and analysis of op-amp amplifiers, comparators, voltage and current regulators, summers, integrators, and differentiators. Frequency response of op-amp circuits. Applications of the op-amp in power supplies and control systems.

3	PO3	Explain the measurement of crystal size distribution. Discuss the impact of additives, solvents and impurities on crystal growth and purity. Explain the design of batch and industrial crystallizers. Scale up from the laboratory to the Pilot Plant and beyond/Impact of mixing.
4	PO4	describe the structure of atoms in terms of protons, neutrons and electrons. understand what is meant by a chemical element and how they are arranged in the periodic table. explain what is meant by atomic number and relative atomic mass of a chemical element.
5	PO5	Recognize and classify the structures of Optical fiber and types.1.Discuss the channel impairments like losses and dispersion.2.Analyze various coupling losses. 3.Classify the Optical sources and detectors and to discuss their principle.

Course Outcome(Cos)

Semester	Course	Title of the course	Course Outcome
I	CORE	PROPERTIES OF MATTER AND ACCOUSTICS	CO1 :Study the elastic behaviour and working of torsional pendulum
			CO2:Study of bending behaviour beams and analyse the expression for young's modulus
			CO3:Understand the surface tension and viscosity of fluid
			CO4: Analyse waves and oscillations
			CO5:Study the basic properties and production of ultrasonics by different methods
III	CORE	ELECTRICITY AND MAGNETIS	CO1:Study the electric field using coloumbs inverse square law in electrostatics of current
			CO2:Analyse the chemcial and heating effect of current
			CO3:Analyse the relations between b, h and m

		M	CO4:Understand the faradays laws of electromagnetic induction by rayleigh's method
			CO5:Analyse he value of maxwell equation- boundary condition
V	CORE	Optics	CO1:Understand the natural behaviour of aberration in lens
			CO2:Study the theory and experiment of interference using air wedge, newtons rings and michelson interferometer
			CO3:Study the theory and experimental past of diffraction by fresnels and fraunhoffer methods
			CO4:Study the theeories for production of polarization of light
		ATOMIC PHYSICS AND SPECTROSCOPY	CO1:Understand the properties of positive rays, experimental proof by frank and hertz method
			CO2:Analyse the relationship between various types of couplings
			CO3:Understand the properties of x-ray s verification
		BASIC ELECTRONICS	CO1:Understand he basics of diode and working of rectifier circuits and characteristics
			CO2:Analyse the characteristics of transistor and transistor biasing circuits
			CO3:Perform the procedures for the working of single stage and multistage amplifier
			CO4:Analyse the relationship between amplifier and oscillators
			CO5:Understand the applications of op-amps i inverting and non inverting modes.
			CO1:explain importance of materials in materials science and engineering field.

	ELECTIVE-I	MATERIAL SCIENCE	CO2:relate between material and engineering.
			CO3:classify materials according to their types.
			CO4:describe basic definition and conception of materials and physical properties of materials.
			CO5:follow new developments in materials application field.
	SBS	ASTRO PHYSICS	CO1:ability to distinguish scientific from non-scientific explanations of phenomena in the universe. the use of the basic vocabulary of astronomy and astrophysics. understanding of astronomical
I	ALLIED	CHEMISTRY	CO1:Students will acquire core competency in the subject Chemistry, and in allied subject areas. (i). Systematic and coherent understanding of the fundamental concepts in Physical chemistry,
III	ALLIED	MATHEMATICS	CO1:Students will solve nonlinear equations using analytic methods.
			CO2:Outcome 2: Students will use mathematics concepts in real world situations.
			CO3Outcome 3: Students will simplify and perform operations with nonlinear expressions.
II	CORE	THERMAL PHYSICS AND STATISTICAL METHOD	CO1:Understand the nature of calorimetry by specific heat of solids and law of thermodynamics and entropy
			CO2:Analyses of zeroth law of thermodynamics and entropy
			CO3:Understanding the low temperature physics
			CO4:Analyses thermal conducitivity and black body radiation
			CO5:Understanding the statistical methods
			CO1:Study of the interaction of forces between solids in mechanical systems.

IV	CORE	MECHANICS	CO2:Centre of mass and inertia tensor of mechanical systems.
			CO3:Application of the vector theorems of mechanics and interpretation of their results.
			CO4:Newton's laws of motion and conservation principles.
	CORE	NUCLEAR PHYSICS AND RADIOACTIVITY	CO1:To impart knowledge about basic nuclear physics properties and nuclear models for understanding of related reaction dynamics.
			CO2:explain the ground state properties of the nucleus for study of the nuclear structure behavior.
			CO3:explain the deuteron behavior at ground and excited states.
	CORE	QUANTUM MECHANICS,RELATIVITY AND MATHEMATICAL PHYSICS	CO1:solve the Schrödinger equation for standard systems with both analytical and numerical methodsand atoms in different systems based on quantum mechanics
			CO2:interpret the results. explain the physical states of elementary particles
			CO3:Understand the negative result of michelson morley experiment , galilean and lorentz transformation
			CO4;conservative and central-conservative forces mathematically understand the conservative theorems of energy, linear momentum and angular Momentum.
	CORE	SOLID STATE PHYSICS	CO1:Understand the basic concepts of force between atoms and bonding between molecules
			CO2Analyse the relationship between conductors and insulators and super conductivity
			CO3:Understand the properties of matter and classifcations - polarization
			CO4:Understand the properties of semi conducotrs
			CO5:Analyse the relationship between semiconducotor devices and understand the applications of semiconductor devices

VI	ELECTIVE-I	APPLIED ELECTRONICS	CO1:Understand the fundamentals of codes and number system
			CO2:Understand the binary arithmetic , logics and boolean functions
			CO3:Understand the functions and working of flipflop circuits register s and counters
			CO4:Perform the procedures into applications
			CO5:Understand the applicattions into memory circuits
	ELECTIVE-II	LASER AND FIBRE OPTICS	CO1Understand the basic principle of laser and characterisitcs
			CO1:Undertand the theory of types of lasers
			CO2:Perform the procedures into applications oriented one
			CO3:Understand the basic concepts of optical fibres
			CO4:Understand the applicataions part of optical fibre into communiations systems
	SBS	INSTRUMENTATION TECHNIQUES	CO1:Employ appropriate instruments to measure given sets of parameters.
			CO2:Practice the construction of testing and measuring set up for electronic systems.
			CO3:To have a deep understanding about instrumentation concepts which can be applied to Control systems.
I	PRACTI	PHYSICS PRACTICA	CO1:Study the elastic behaviour of materials
II			CO2:Analyse the relationship between various types of experiments

	CAL	PRACTICAL	CO3:Perform the procedure as per standard values
III			CO4:Understan the applications

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Programme Specific Out come (PSOs)

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4	PO4	describe the structure of atoms in terms of protons, neutrons and electrons. understand what is meant by a chemical element and how they are arranged in the periodic table. explain what is meant by atomic number and relative atomic mass of a chemical element.
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Course Outcome

Semester	Course	Title of the course	Course Outcome
	CORE	MATHEMATICAL PHYSICS	CO1:Employ appropriate instruments to measure given sets of parameters.
			CO2:Practice the construction of testing and measuring set up for electronic systems.
			CO3:To have a deep understanding about instrumentation concepts which can be applied to Control systems.
	CORE	CLASSICAL MECHANICS AND STASTICAL	CO1:Students learn about Lagrangian and Hamiltonian formulation of Classical Mechanics.
			CO2:state the conservation principles involving momentum, angular momentum and energy and understand that they follow from the fundamental equations of motion

I		STATISTICAL MECHANICS	CO3:Have a deep understanding of Newton's laws,
	CORE	QUANTUM MECHANICS-I	CO1:solve the Schrödinger equation for standard systems with both analytical and numerical methods
			CO2:interpret the results. explain the physical states of elementary particles
			CO3:atoms in different systems based on quantum mechanics
	ELECTIVE-I	ELECTRONIC DEVICE AND APPLICATIONS	CO1:Ability to analyze PN junctions in semiconductor devices under various conditions.
			CO2:Ability to design and analyze simple rectifiers and voltage regulators using diodes.
			CO3:Ability to describe the behavior of special purpose diodes.
			CO4:Ability to design and analyze simple BJT and MOSFET circuits.
II	CORE	ELECTROMAGNETIC THEORY	CO1:Understand the basic mathematical concepts related to electromagnetic vector fields. .
			CO2:Apply the principles of electrostatics to the solutions of problems relating to electric field and electric potential,
			CO3:boundary conditions and electric energy density.
	CORE	SPECTROSCOPY	CO1:interpret UV-Visible spectroscopy,
			CO2:Explain basic principles of UV-Visible spectroscopy,
			CO3:Explain relevant terms of UV-Visible spectroscopy,
			CO4:Explain working principle, taking spectra and outline of UV spectroscopy device,

			CO5:Will be able to interpret IR spectroscopy, 2.1.
	ELECTIVE-II	ELECTRONIC INSTRUMENTATION	CO1:learn units, dimensions, standards and errors and basics of different types of measuring instruments to measure different electrical quantities.
			CO2:apply their knowledge to measure electrical quantities using standard analog anddigital measuring instruments.
III	CORE	SOLID STATE PHYSICS	CO1:Understand the basic concepts of force between atoms and bonding between molecules
			CO2Analyse the relationship between conductors and insulators and super conductivity
			CO3:Understand the properties of matter and classifcations - polarization
			CO4:Understand the properties of semi conducotrs
			CO5:Analyse the relationship between semiconducotor devices and understand the applications of semiconductor devices
	CORE	NUCLEAR AND PARTICLE PHYSICS	CO1:The course covers tools (accelerators, detectors), particles and nuclei and their substructure, Fermi gas model, shell model, collective model
			CO2:symmetries and conservation laws, interactions (electromagnetic, weak, strong), electroweak theory of the Standard Model and QCD, nuclear models (quark model, liquid drop model,
	ELECTIVE-III	MICRO PROCESSOR	CO1:recall and apply a basic concept of digital fundamentals to Microprocessor based personal computer system.
			CO2:identify a detailed s/w & h/w structure of the Microprocessor.
			CO3:illustrate how the different peripherals (8255, 8253 etc.) are interfaced with Microprocessor.
	ELECTIVE-IV	NANO SCIENCE	CO1:The student will develop a fundamental knowledge of nanomaterials
			CO2:The student will demonstrate an understanding of approaches to engineering nanomaterials and nanostructures.

			CO3:The student will demonstrate an understanding of the challenges on safe nanotechnology
IV	CORE	MATERIAL SCIENCE AND LASER PHYSICS	CO1:explain importance of materials in materials science and engineering field.
			CO2:relate between material and engineering.
			CO3:classify materials according to their types.
	CORE	PROJECT WITH VIVA VOCE	CO1:Understand the basic ideas about the project
			CO2:Understand the working procedure of the project
			CO3:Perform the procedure as the labarotary standards
			CO4:Understand the calues obtained and its applications

DR.R.K.Shanmugham College of Arts and Science

BA TAMIL

Programme Outcome

S.NO	PO.NO	Programme Outcome Statements
1	PO1	தாய்மொழியின் சிறப்புகளை அறிதல்
2	PO2	படைப்பாற்றலை வளர்த்தல்
3	PO3	அடிப்படைத் திறன்களை அறிதல்
4	PO4	சிந்தனை வளத்தை மேம்படுத்தல்
5	PO5	மொழிப்பற்றை வளர்த்தல்

Programme Specific outcome

S.NO	PO.NO	POS.Statements
1	POS1	பண்பாடு, கலாச்சாரம், நாகரிகம் அறிதல்
2	POS2	பண்டைய தமிழ்ச் சமூகங்களை அறிதல்
3	POS3	சங்ககால வரலாற்றை அறிதல்

4	POS4	இக்கால இலக்கியங்களை அறிதல்
5	POS5	பிற துறை அறிவை மேம்படுத்தல்

Course Outcome

Semster	Course	TitleThe Cours	Outcome Statements
1	Core-1	இக்கால இலக்கியம்-1	• புதுக்கவிதை, புதினம், உரைநடை, சிறுகதை ஆகியவற்றை மேலும் மேம்படுத்தி வளர்ப்பதையும், இக்கால இலக்கியங்களின் சிறப்பை அறிந்து போற்ற வேண்டும் என்பதனையும் நோக்கமாகக் கொண்டுள்ளது. • ஏடுகளிலும் ஓலைகளிலும் தவழ்ந்த இலக்கியம் புதிய மறுமலர்ச்சி அடைந்து கவிதை நடையிலிருந்து உரைநடை, நாடகம், புதினம், சிறுகதை என இக்கால இலக்கியமாக மலர்ந்தது. • படைப்பாற்றலில் சிறந்து விளங்குவதற்கும், இக்கால இலக்கியங்கள் துணை புரிகின்றன. கலைஆர்வத்தை தூண்டுவதோடு கலைஞர்களையும் உருவாக்குகிறது
	Core-2	நன்னூல் - எழுத்ததிகாரம்	• மொழியில் நற்புலமை அடையவும், இலக்கியத்தில் நல்ல பயிற்சியடையவும், மொழி மரபு பிறழாமல் பிழையின்றி எழுதவும் இலக்கணப் புலமை மிகவும் அவசியமான ஒன்றாகும். • பழமையும் முழுமையும் கொண்ட தொல்காப்பியத்தை பின்பற்றி எழுந்த நூல்களுள் குறிபிடத்தகுந்த இடத்தைப் பெற்றிருப்பது நன்னூல். • கி. பி. முதல் நூற்றாண்டு முதல் கி. பி. 11 ஆம் நூற்றாண்டு வரையிலான 1200 ஆண்டுகால மொழி வளர்ச்சியை அறிவதற்கு நன்னூல் பெரிதும் பயன்படுகிறது. • இடைக்காலத்தில் மொழியில் எற்பட்ட மாற்றங்களை அறிய நன்னூல் உதவுகின்றது. எழுத்துகளின் இலக்கணத்தைக் கூறுகின்ற பல இயல்களைக் கொண்டுள்ளதால் இது எழுத்ததிகாரம் எனப் பெயர் பெற்றது.

	Allied -1	தமிழக வரலாறும் பண்பாடும்-1	• தமிழக வரலாறு தமிழர்கள் ஈராயிரம் ஆண்டுகளாக வாழ்ந்து வந்த தமிழின பண்பாட்டுக் கூறுகள், ஆட்சி முறைகள், பழக்கவழக்கங்கள், வாழ்க்கை முறைகள் போன்றவற்றை உணர்த்துகிறது. • தமிழக வரலாற்றையும் மக்களின் பண்பாட்டையும் கற்பித்தலே இதன் நோக்கம் ஆகும். • தமிழக வரலாற்றுக்கான அடிப்படை ஆதாரங்கள், தமிழகத்தின் இயற்கை அமைப்புகள், வரலாற்றுக் காலத்துக்கு முந்திய தமிழகம், சிந்துவெளி, அகழ்வாராய்ச்சி, பண்டைத்தமிழரின் அயல்நாட்டுத் தொடர்புகள் என அனைத்தையும் தமிழக வரலாறு காட்டுகிறது.
II	Core-3	இக்கால இலக்கியம்-2	• இலக்கியப் பற்றினை ஏற்படுத்துவதோடு கருத்துணர் ஆற்றல், சுவையுணர் ஆற்றல், கற்பனை ஆற்றல், ஓசைநயம், ஒலிநயம் அறிதல், சொற்சுவை பொருட்சுவை அறிதல் போன்றவற்றையும் மேம்படுத்துகிறது. •கற்பனைத் திறனை வளப்படுத்திக் கொள்ளவும், படைப்புத் திறனை மேம்படுத்துவதற்கும் துணை நிற்கின்றன. • மக்கள் பண்பாட்டினை பழக்கவழக்கங்களை நன்கறியச் செய்கின்றன. சமூக பாரம்பரியங்களை அறிந்து கொள்ளவும் சமுதாய நிகழ்வுகளை அறிந்திடவும் உதவுகின்றன.
	Core-4	நன்னூல்-சொல்லதிகாரம்	•எழுத்துக்களால் அமைவது சொல். அச்சொல் பற்றிய இலக்கணங்களை விரிவாகக் கூறுவதால் சொல்லதிகாரம் எனப்பட்டது. சொற்களைப் பற்றிய பல இயல்களின் தொகுதியே சொல்லதிகாரம். •பெயரியல், வினையியல், பொதுவியல், இடையியல், உரியியல் என ஐந்து இயல்களையும் உடையது. •மொழி மரபை பாதுகாக்கவும், செய்யுள் மரபு அறிந்து இயற்றவும் புதிய மரபினை அமைக்கவும் இலக்கணமே துணைசெய்கின்றது.

	Allied -2	தமிழகவ ரலாறும்ப ண்பாடும் -2	•வரலாற்றையும் மக்களுடைய வரலாற்றையும் அறிந்து கொள்வதற்கு பாடமாக வைக்கப் பட்டுள்ளது. • தமிழர் பண்பாட்டு வரலாறு மிகப்பழமையுடையது. நீண்ட நெடிய வரலாற்றுப் பெருமையுடையது. நாம் வாழும் நாட்டையும் நாட்டு மக்களின் •பண்பினையும் கலாச்சாரம் மற்றும் பண்பாட்டுச் சிறப்புகளையும், வளத்தையும் நாகரிகத்தையும் அறிந்து போற்றி புகழ் சேர்ப்போம்.
	Core-5	இலக்கிய ம் 3 சமயப்பா டல்களும், சிற்றிலக் கியங்களு ம்	• தமிழ் இலக்கிய வரலாற்றிலும் அரசியல் வரலாற்றிலும் இருண்ட காலம் என்று அழைக்கப்படுகின்ற (கி. பி. 250-500) காலப்பகுதியின் பின்னர் தமிழக அரசியல், சமூக, இலக்கிய வாழ்வில் புதிய மறுமலர்ச்சியை ஏற்படுத்தியவை சமய இலக்கியங்களே ஆகும். • சமயப்பாடல்கள் தமிழ் இலக்கிய வரலாற்றில் முக்கியத்துவம் பெற்று விளங்கியதை இதன்மூலம் அறியமுடிகிறது. பக்தி இலக்கிய காலத்தில் தமிழக அரசியல், சமூகம், இலக்கியம் ஆகியவற்றில் ஏற்பட்ட மாற்றங்களை அறிந்து கொள்ள உதவுகிறது. • மக்களை அறநெறிப்படுத்தி அச்சமூகத்தை மேம்படுத்துவதற்குப் பக்தி நெறியை பாடல்கள் வாயிலாக உருவாக்கியமையே இதன் பயனாக அமைகிறது.
	Core-6	இலக்க ணம்-3 யாப்பரு ங்கலக்கா ரிகை	• யாப்பருங்கலம் எனும் நூலுக்குத் துணை (சார்பு) நூலாக எழுதப்பட்டதே யாப்பருங்கலக் காரிகை ஆகும். யாப்புப் பற்றிய விதிகளை கட்டளைக் கலித்துறையால் எடுத்துரைப்பதால் இந்நூல் பாவகையால் இப்பெயர் பெற்றுள்ளது. • உறுப்பியல், செய்யுளியல், ஒழிபியல் என்னும் மூன்று இயல்களையும் 44 காரிகைகளையும் கொண்டுள்ளது. • யாப்பிலக்கணத்தின் சிறப்புக் கூறுகளை விவரித்து தெளிவுற பயிற்றுதலையே நோக்கமாகக் கொண்டுள்ளது. யாப்பிலக்கணத்தை முழுமையாகக் கற்று செய்யுள்கள் பல இயற்றுதல் யாப்பிலக்கணத்தின் பயனாகும்.

III	Allied -3	தமிழ் இலக்கிய வரலாறு - I	•தமிழரின் தொன்மை, வரலாறு, பண்பாடு மற்றும் கலை இலக்கியம் ஆகியவற்றை அறிந்து பெருமிதம் கொள்ள வைக்கிறது இலக்கிய வரலாறு. •தமிழ் இலக்கிய வரலாற்று பெருமிதத்தையும், பண்பாட்டு வளத்தின் சிறப்பையும் அறிந்து கொள்வதற்காகவே தமிழ் இலக்கிய வரலாறு பயிற்றுவிக்கப்படுகிறது. •வாழ்க்கைக்குத் தேவையான உயிர்ப்பும் உணர்வும் தமிழ்மொழியில் உள்ளது. தன் இனத்திற்கு இலக்கியத்தின் வாழ்க்கைப் பாதையை காட்டுவதையே தமிழ் இலக்கிய வரலாறு நோக்கமாகக் கொண்டுள்ளது.
	skill-1	பயன்பாட்டுத் தமிழ்	•மனித மொழியானது இயற்கையான மொழியாகும். பல்லாயிரம் ஆண்டுகளாக வளர்ச்சி பெற்று வரும் ஒரு கலையாக உள்ளது. மக்களைச் சென்றடையும் செய்தி ஊடகங்களில் மொழியின் பயன்பாடு குறித்து விளக்குவதை பயன்பாட்டுத் தமிழ் கூறுகிறது. •மொழி எவ்வாறு பயன்படுகிறது என்பதனை கற்பித்தலே பயன்பாட்டுத் தமிழின் நோக்கமாக அமைகிறது. •பயன்பாட்டுத் தமிழ் கற்போர் பகுதி நேர வேலைக்கும் தயாராக முடிகின்றது. பல்துறை வேலை வாய்ப்புகளை ஏற்படுத்திக் கொடுப்பத்தையே இதன் பயனாகக் கொள்கிறது.
	Core-7	இலக்கியம்-4 காப்பியங்கள்	•பழந்தமிழ் நாட்டில் ஆன்மீகக் கொள்கைகள் வலிமையும், செழுமையும் தெளிவும் பெற்று விளங்கின. அவற்றைப் பற்றிய சிந்தனைகளை செறிவுடனும், தெளிவுடனும் சமுதாய மேம்பாட்டை வலியுறுத்தவும் காப்பியங்கள் இயற்றப்பட்டன. •காப்பியங்கள் சமத்துவ நல்லுறவைக் காட்டுகின்றன. • சமயம் அரசியலோடு தொடர்பு கொள்ளவில்லை என்பதனையும், சமயம் அறத்தோடும் உயர்ந்த பண்புகளோடும் தொடர்பு கொண்டவை என்றும் வெளிப்படுத்துகிறது.

IV	Core-8	இலக்கணம்-4 தண்டியலங்காரம்	•தமிழ்மொழியின் இலக்கணத்தை விளக்கும் வகையில் அமைந்த அணியிலக்கணத்தைக் கூறும் நூல் தண்டியலங்காரம். • தனக்கென பலவகைச் சிறப்புக்களை உடையது. ஐந்தாகப் பகுக்கப்பட்ட தமிழ் இலக்கணத்துள் கற்றோரால் மிகவும் போற்றப்படத்தக்க வகையில் விளங்குவது தண்டியலங்காரம். •கல்வியை எவ்வாறு கற்க வேண்டும் என்பதனையும் இலக்கணப் பாடம் விளங்குகிறது. தாய்மொழியாம் தமிழ்மொழியின் சிறப்பியல்புகளை அறிந்து பயனடையவும், மொழியறிவினை மேம்படுத்திக் கொள்ளவும் பயன்படுகின்றது.
	Allied -4	தமிழ் இலக்கிய வரலாறு - 2	• இலக்கியத்தைப் புரிதல்-புரியவைத்தல் ஆகிய நோக்கத்தை இலக்காகக் கொண்டு, சங்கம் தொடங்கி இன்றைய இணையம் வரை அறிந்து கொள்ள உதவுகிறது. •காலத்திற்கேற்ப புதுப்பொலிவுடன் புதுப்புதுக் கருத்துக்களைப் புதிய துறைகளை உள்ளடக்கி தமிழ் இலக்கியத்தின் வரலாறுகளை வரிசைப்படுத்தி முழுமையாகத் தருவது தான் இலக்கிய வரலாற்றின் சிறப்பாகும். •மக்கள் வாழ்க்கையில் இருந்து தோன்றுவது தான் இலக்கியம் அத்தகைய இலக்கியங்களை பற்றி தமிழ் இலக்கிய வரலாறு விளக்குகின்றது.
	skill-2	படைப்பிலக்கியமும் மொழி பெயர்ப்பும்	•படைப்பிலக்கியம், கவிதை, சிறுகதை, நாடகம் போன்றவற்றை எழுதுவதற்கு பயிற்சியளித்தலையே நோக்கமாகக் கொண்டுள்ளது. •கணினியின் பயன்பாடு புகுத்தப்பட்ட பிறகு அறிவியல் தொழில்நுட்பக் கருவிகளும், மொழிபெயர்ப்பு வளர்ச்சியில் வேகத்தையும் வீச்சையும் உருவாக்கி வருகின்றன. •சிறந்த பயிற்சியினைத் தந்து படைப்புகளை உருவாக்கும் திறனை மேம்படுத்தி, மொழிபெயர்ப்புக் கலையை கற்றுத்தந்து கற்போரின் செயலாக்கத்திறனை ஊக்குவித்து அறிவுத்திறனைச் சிறக்கச் செய்து படிப்பதோடு படைப்பையும் உருவாக்கி பயன் பெறவேண்டும் என்று படைப்பிலக்கியம் அறிவுறுத்துகிறது.

	Core-9	சங்க இலக்கியம் (அகம்)	•உலக இலக்கியங்களில் தனிச்சிறப்பு வாய்ந்தது தமிழ் மொழியின் சங்க இலக்கியங்கள் ஆகும். சங்க இலக்கியங்களில் அமைந்த அகத்துறைப் பாக்கள் உலகப் பேரிலக்கியங்களோடு ஒப்பிடப்படுகிறது. •சங்க இலக்கியங்கள் காலத்தைக் கடந்து இன்றும் கருத்துக் கருவூலமாகவும், கற்பனைக் களஞ்சியமாகவும் திகழ்கின்றன. •சங்க இலக்கியம் தமிழர்தம் சொத்து. தமிழரின் ஒளி படைத்த வாழ்வை உலகுக்கு உணர்த்திக் கொண்டே இருக்கும் கருத்துப் பேழையாக இருப்பதனையே இதன் பயனாகக் கொள்ளலாம்.
	Core-10	இலக்கணம் – 5 (அகம்)	•தலைவன் தலைவியின் அகவாழ்க்கையைக் கதைப்போக்கில் நம்பியகப்பொருள் கூறுகிறது. தலைவன்-தலைவியின் இன்பத்தைப் பற்றி பேசுகின்ற இல்லற நெறியாகும். •பிறருக்கு எடுத்துக்கூற முடியாததால் தாமே உணர்ந்து மகிழத்தக்கதாய் அமைவது அகப்பொருள். உயிர்களின் வாழ்க்கைக்கு அகவாழ்க்கையே அடிப்படையாக உள்ளது. தமிழரின் அக வாழ்க்கைக்கு இலக்கணம் கூறுகின்றது. •தமிழர் தம் வாழ்க்கை முறையை வெளிப்படுத்துகிறது. இயற்கையோடு இணைந்த வாழ்க்கைத் திறனையும் இலக்கிய மரபையும் அறிந்து கொள்ளச் செய்வதே இதன்
	Core-11	தமிழ் மொழி வரலாறு	•காலந்தோறும் மொழியில் ஏற்படும் மாற்றத்தையும் வளர்ச்சியையும் மொழி வரலாறு என்கிறோம். வரலாற்றின் பல காலகட்டங்களில் தமிழ்மொழியில் நேரிட்ட மாற்றங்களையும் வளர்ச்சிகளையும் தெரிந்து கொள்ளும் வரலாறாகத் தமிழ் மொழி வரலாறு அமைந்துள்ளது. • பழங்காலம் முதல் இக்காலம் வரை தமிழ் ஒலி வடிவ, வரி வடிவ சொற்பொருள் மாற்றங்களை அறிவித்தலையே தமிழ் மொழி வரலாறு நோக்கமாகக் கொண்டுள்ளது. •உலகின் மூத்த மொழியாக விளங்குகின்ற தமிழ்மொழியின் பழமை, பெருமை, எழுத்து வரி வடிவங்கள், காலந்தோறும் ஏற்பட்ட மாற்றங்கள் ஆகியவற்றை அறியச்

	Core-12	இலக்கியத்திறனாய்வு	•இலக்கியத்தின் மீது அல்லது இலக்கியம் பற்றி எழுதுவது திறனாய்வு.இலக்கியத்தை மேலும் படிப்பதற்கும் விளங்கிக் கொள்வதற்கும் தூண்டுகோலாக அமைய வேண்டும். இதுவே திறனாய்வின் அடிப்படை நோக்கமாகும். •இலக்கியத் திறனாய்வியல் மூலமாக பல்வேறு இலக்கியங்களை குறித்து அறிந்து கொள்வதையும், திறனாய்வுக் குறித்த அறிவை மேம்படுத்துவதையும் நோக்கமாகக் கொண்டுள்ளது. •இலக்கியத்தைப் படிக்கும் வாசகன் படைப்பாளனாக மாறுவதற்கும் ஆய்வுநோக்கத்தோடு செயல்படுவதற்கு திறனாய்வு பயன்படுகிறது.
	Elective -1	நாட்டுப்புறவியல்	•வாழையடி வாழையாக வாழ்ந்து வளர்ந்து வருகின்ற நாட்டுப்புறவியல் மக்களின் வாழ்வைப் படம்பிடித்துக் காட்டும் இயல் நாட்டுப்புறவியல் ஆகும். நாட்டுப்புறப் பாடல்கள் எளியவை; இனியவை, எழுதப்படாதவை, நாவில் பிறந்து செவிகளில் உலவிக் காற்றில் மிதந்து கருத்தில் இனிப்பவை ஆகும். •நாட்டுப்புறவியல் குறித்த அறிவை மேம்படுத்துதலையும் நாட்டுப்புற மக்களின் நம்பிக்கைகளையும், கலைகளையும், இலக்கியங்களையும் அறிந்து கொள்ள வேண்டும் என்பதனையும் நோக்கமாகக் கொண்டுள்ளது. •மனித சமுதாயத்தில் காணப்படும் அனைத்து வழக்காறுகளையும் நாட்டுப் புறவியல் அறிஞர் ஆராய்வதால் நாட்டுப்புறவியல் அனைத்துத் துறைகளோடும்
	skil-3	கல்வெட்டியல்	• கல்வெட்டு எழுத்துகளை அறிந்து, அவற்றின் பொருளை விளக்கும் கலையே கல்வெட்டியல் எனப்படுகிறது. வரலாற்றை அறிய உதவும் சான்றுகளில் முதல்நிலைச் சான்றாகக் கல்வெட்டு அமைந்துள்ளது. •கல்வெட்டுக்கள் குறித்த அறிவை மேம்படுத்துவதையே நோக்கமாகக் கொண்டு உள்ளது. கல்வெட்டுக்கள் பல ஆயிரம் ஆண்டுகள் நிலைத்திருக்கக் கூடியவை. பழங்கால வரலாற்று நிகழ்வுகளுக்கான சான்றுகளாகத் திகழ்கின்றன. தென்னிந்திய பண்பாட்டினை கல்வெட்டியல் சான்றுகள் அடிப்படையில் ஆய்வு செய்யவும் அகழ்வாராய்ச்சி புரியவும் வித்திடுகிறது. • கல்வெட்டுக்களை ஆய்வு செய்வதன் மூலம் எழுத்துகளின் படிமுறை வளர்ச்சிகளை அறிந்து பயனடைய முடிகிறது. வழக்கொழிந்த மறக்கப்பட்டுவிட்ட மொழிகள்

VI	Core-13	சங்க இலக்கியம் (புறம்)	•சங்க இலக்கிய புறப்பாடல்களை எடுத்துரைப்பதாலும் பதிற்றுப்பத்தும் ஆகும். புறப்பாடல்கள் வீரம், கொடை, புகழ் முதலிய பண்புகளை எடுத்துக் காட்டி நாட்டு வாழ்வினை நலமுற எடுத்துக் கூறுகின்றன. பதிற்றுப்பத்து சேர அரசர்கள் பற்றிக் கூறுகிறது. சேரநாட்டு வரலாற்றை அறிய சான்றாக உள்ளது. •தமிழரின் சிறந்த சமுதாய வாழ்வு அரசியல் எழுச்சி, விருந்தோம்பல், உயர்ந்த ஒழுக்கம், உறுதியான கொள்கை, தன்னலமற்ற ஈதல், தலைநிமிர்ந்த வீரவாழ்வு, பரிசில் வாழ்க்கை, பகுத்துண்ணும் அறம் ஆகியவற்றை புறநானூறு எடுத்துரைக்கிறது. குறுநில மன்னர்களின் வரலாற்றை அறிவிக்கும் ஆவணமாகவும் திகழ்கிறது. •சங்க இலக்கியம் தமிழர்தம் சொத்து. தமிழரின் ஒளி படைத்த வாழ்வை உலகுக்கு உணர்த்திக் கொண்டே இருக்கும் கருத்துப் பேழையாக இருப்பதனையே இதன்
	Core-14	இலக்கணம் – 6 (புறம்)	•தமிழில் புற இலக்கணம் மட்டும் கூறும் ஒரே முழு நூல் புறப்பொருள் வெண்பாமாலை. புறப்பொருள் தமிழரின் புற வாழ்க்கைக்கு இலக்கணம் கூறுகின்றது. தொல்காப்பிய புறத்திணை இலக்கணத்தைப் பின்பற்றி புறப்பொருள் இலக்கணத்தை புறப்பொருள் வெண்பாமாலை கூறுகிறது. •புறப்பொருள் தனிமனிதனின் கல்வி, ஈகை, புகழ், வீரம் போன்றவற்றைப் பற்றி விளக்குகிறது. எளிய மக்களும் புரிந்து கொள்ளும் வகையில் எழுதப்பட்டிருப்பது இந்நூலின் சிறப்பாகும். • பழந்தமிழ் நாட்டு போர், வீரம், கொடை, மக்கள்வாழ்வு முதலான செய்திகளை அறிந்து பயனடைய உதவுகிறது. தமிழரின் பண்பாட்டை, வீரத்தை, வாழ்க்கை
	Core-15	திராவிட மொழிகளின் ஒப்பிலக்கணம்	• திராவிட மொழிகள் அனைத்தும் ஒரு மொழியிலிருந்து தோன்றியவை. எல்லாத் திராவிட மொழிகளுக்கும் மூலமாக இருந்த மொழியினை மூலத் திராவிட மொழி அல்லது தொல் திராவிட மொழி என்று மொழியியலார் கூறுகின்றனர். • திராவிட மொழிகளின் சிறப்பியல்புகளையும் திராவிட மொழிகளின் இலக்கணங்களையும் கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. • மூலத்திராவிட மொழிகளுடன் நெருங்கிய தொடர்பு கொண்ட மொழி. இன்று பேச்சுவழக்கில் உள்ள மொழிகளில் பழங்காலத்திலேயே பண்பட்ட மொழி தமிழ் என்று அறிந்து கொள்வதற்கு திராவிட மொழிகளின் ஒப்பிலக்கணம் துணை

	Elective -2	இதழியல்	• மக்களின் தகவல் தொடர்பு தேவைகளை சரிவர நிறைவேற்றுவதும் செய்திகளையும், கருத்துக்களையும் ஊடகங்கள் வாயிலாக மக்களுக்கு வழங்குவதும், செய்திகளைத் திரட்டுவதும், பரப்புவதுமே இதழியலின் பணியாகும். • இதழியல் குறித்து கற்பித்தலையும் இதழ்கள் பற்றிய அறிவை மேம்படுத்துதலையும் நோக்கமாகக் கொண்டுள்ளது. • இந்திய இதழ்களின் வளர்ச்சி அநீதிகளை வெளிக்கொணர்வது, தவறுகளை சுட்டிக்காட்டுவது, நல்ல மதிப்புமிக்க ஆலோசனைகளை வழங்குவது, ஆதரவற்ற மக்களுக்கு உதவுவது என தனது பங்களிப்பை வெளிப்படுத்துகிறது.இதழியல் வளர்ச்சி போற்றப்படக்கூடிய அளவில் பலமடங்கு வளர்ந்துள்ளது. இளைஞர்களுக்கு
	Elective -3	சுற்றுலா வியல்	• சுற்றுலா மனிதனுக்கு மகிழ்ச்சியையும் புத்துணர்ச்சியையும் அளிக்கிறது. சுற்றுலா ஒரு முக்கியமான தொழிற்துறையாகவே மாறியுள்ளது. தமிழகத்தில் சுற்றுலாத் தலங்கள் தமிழ் நாகரிகத்தையும், வரலாற்றையும், கலை பண்பாட்டையும் அறிவிக்கும் செய்தி தொடர்பு கருவியாகவும், சின்னமாகவும் விளங்குகின்றன. • சுற்றுலாவியல் குறித்து அறிந்துகொள்ளவும், இந்தியாவின் சுற்றுலா வளர்ச்சியை தெரிந்து பயனடைய வேண்டும் என்பதனையும் நோக்கமாகக் கொண்டுள்ளது. • உலகமெங்கும் வளர்ந்து வரும் சுற்றுலாத்துறைக்கும், சுற்றுலாச்செல்ல ஏற்ற வகையிலும், பாரம்பரியச் சின்னங்கள் உடைய நாடாக இந்தியா திகழ்கிறது. சுற்றுலாத் துறையை மேம்படுத்த திட்டமிடுதல் மிகவும் அவசியமாகிறது. சமூக-பொருளாதார விளைவுகளை வைத்து ஆலோசித்த வேண்டும். தேசியப் பொருளாதார
	skill-4	தகவல் தொடர்பியல்	அச்சு, தொலைபேசி, வானொலி, தொலைக்காட்சி, கணினி என பல நுட்பமுறைகள் தகவல் பரிமாற்றத்திற்கு பயன்படுகின்றன. • தகவல் தொழில் நுட்பங்கள், கடிதங்கள், அச்சுத்துறை, அறிவியல் கருவிகள் என்ற நிலையிலிருந்து கணினி, இணையம், மின்னஞ்சல் என்று அதிவேகமாக பரவிவருகின்றன. மக்கள் செய்தி ஊடகங்கள் உடனுக்குடன் தகவல்களை பரிமாறுகின்றன. • அரசியல், நாகரிக மாற்றங்கள் பண்பாட்டு செயல்கள் ஆகியவற்றை வெளிப்படுத்தவும்துணைநிற்கின்றன.

MA TAMIL		
Programme Outcome		
S.NO	PO.NO	Programme Outcome Statements

1	PO1	தாய்மொழியின் சிறப்புகளை அறிதல்
2	PO2	படைப்பாற்றலை வளர்த்தல்
3	PO3	அடிப்படைத் திறன்களை அறிதல்
4	PO4	சிந்தனை வளத்தை மேம்படுத்தல்
5	PO5	மொழிப்பற்றை வளர்த்தல்

Programme Specific outcome

S.NO	PO.NO	POS.Statements
1	POS1	பண்பாடு, கலாச்சாரம், நாகரிகம் அறிதல்
2	POS2	பண்டைய தமிழ்ச் சமூகங்களை அறிதல்
3	POS3	சங்ககால வரலாற்றை அறிதல்
4	POS4	இக்கால இலக்கியங்களை அறிதல்
5	POS5	பிற துறை அறிவை மேம்படுத்தல்

Course Outcome

Semster		Sub.Title	Course Outcome Statements
I	Core-1	இக்கால இலக்கியம்	X-ஐரோப்பியர் வருகைக்குப் பின்னர் அச்சு இயந்திரம்,புதிய கல்விமுறை, செய்தித்தொடர்பு, திரைப்படம் முதலான புதிய இலக்கியப்படைப்புகள் ஆகியவற்றின் தாக்கத்தால் தமிழ் இலக்கிய வரலாற்றில் பல மாற்றங்கள் ஏற்பட்டன. X-புதிய தொடர்பு அமைப்புகள் புதிய கலைச்சொல் ஆக்கம் ஆகியவை இக்கால இலக்கிய வரலாற்றில் குறிப்பிடத்தக்க சிறப்பு அம்சங்கள் ஆகும். இக்கால பேச்சுத்தமிழும் இலக்கியத் தமிழும் தனித்தனி மொழிகளாக வேறுபட்டுள்ளன. பிறமொழிச் சொற்கள் அதிகமாக கலந்துள்ள வகையிலும் இலக்கியங்கள் படைக்கப்பட்டன. X-கலைத்திறத்தை அறியவும் உதவுவதோடு புதிய சிந்தனைகளைத் தனதாக்கிக் கொள்ளவும் சிறுகதை இலக்கியம் உதவுகிறது. தமிழ்
	Core-2	அற இலக்கியம்	X-ஒழுகுகம, அனபு, விருநதோமபல, ஈகை போனற சமூகப பணபுகள மககளிடதது மேலோங்கின. நீதி நூல் இலக்கியம் தோன்றியது.” X-அறக்கருத்துக்களையும், நீதிக் கொள்கைகளையும், இம்மை-மறுமை வாழ்வியல் நெறிகளையும் சமயக் கோட்பாட்டுக் கூறுகளையும் கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. X-தனி மனித அறம், விருந்தோம்பல் பண்பு, சான்றோர் நட்பு, வறியோர்க்கு உதவுதல்

	Core-3	தொல்காப்பியம் - எழுத்ததிகாரம்	X-தொலகாபபியம முழுமையையும சிறபபாக கறபிததலையே நோகமாகக கொண்டுள்ளது. இலக்கண அறிவை பெற்றுக்கொள்ள தாய்மொழி மீதான பற்று மிகவும் அவசியமானதாகும். X-தொல்காப்பியம் தமிழ் நூல்களுள் முதன்மையானதாகக் கருதப்படும் இலக்கண நூலாகும். தொல்காப்பியம் அக்கால இலக்கண நூற்கொள்கைகளை அறிந்து கொள்ளப் பயன்படுகிறது. தமிழரின் பண்டைப் பெருமையை பாராட்டுவதற்கும், போற்றுவதற்கும் உதவுகிறது. X-நெடுங்காலமாக இலக்கியப் பயிற்சியும் முயற்சியும் தமிழகத்தில் நிலவியது
	Core-4	பொது மொழியியல்	X-அறிவியல் அடிப்படையில் மேற்கொள்ளப்படும் மொழியைப் பற்றிய கல்வி, ஆய்வு போன்றவை மொழி அறிவியல் என்றும் அறிவுத்துறை என்ற நிலையில் மொழியியல் என்றும் குறிப்பிடப்படுகின்றது. மொழியமைப்பை விளக்கும் பிரிவு மொழியியல் என்றும், மொழிகளைப் பற்றிய பல்வேறு நிலைகளையும் செய்திகளையும் எடுத்துக் கூறும் பிரிவு பொது மொழியியல் என்றும் குறிப்பிடுகின்றன. மொழியின் பண்புகளை அறிந்திடவும் மொழிகளின் பயன்பாடுகளைத் தெரிந்து பயனடையவும் மொழியியல் குறித்து கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. X-பொது மொழியியல் மொழிகளைப் பற்றி ஆராய்வதோடு மட்டுமன்றி மொழிகளின் பயன்பாடு பற்றியும் மொழி-சமுதாயம் போன்றவற்றிற்கான தொடர்பை வெளிக்
	Elective -1	ஒப்பிலக்கியம்	X-யாதும் ஊரே யாவரும் கேளிர் என்ற உலக நோக்கிற்கு வழிவகுப்பது ஒப்பிலக்கிய துறையாகும். தமிழ் இலக்கியத் துறையிலும் ஒப்பிலக்கியம் வளர்ந்து வரும் துறையாகவும் தனியொருத் துறையாகவும் சிறப்புடன் விளங்குகிறது. உலகப்பொதுமை நோக்கில் இலக்கியத்தைப் பார்ப்பது ஒப்பிலக்கியத்தின் சிறந்த பண்பாகும். X-ஒப்பிலக்கியத்தின் தோற்றம், ஒப்பிலக்கியப் போக்குகள், சிந்தனைகள், பயன்பாடுகள் ஆகியவற்றை கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. X-உலக மொழிகளில் தமிழ் தனியிடம் பெறுவதற்கும், தமிழின் பெருமைகளையும்

II	Core-5	காப்பியங்கள்	இன்பம், வீடு என்ற நாற்பொருளையும் கூறுவது பெருங்காப்பியம் எனப்படும். அறம், பொருள், இன்பம், வீடு எனும் நான்கில் ஒன்றோ பலவோ குறைந்து வருவது சிறுகாப்பியம் ஆகும். X-சோழர் காலத்தில் தான் பெரும்பாலானக் காப்பியங்கள் தோன்றின. முதற் காப்பிய காலம், பிற்காப்பிய காலம் எனவும் பகுத்துக் கூறுவர். அன்று முதல் இன்று வரை காப்பியங்கள் என்ற வகைமை தமிழில் வளர்ந்து வருகிறது. X-சமயம் அரசியலோடு தொடர்பு கொள்ளவில்லை என்பதனையும், சமயம் அறத்தோடும் உயர்ந்த பண்புகளோடும் தொடர்பு கொண்டவை என்றும் வெளிப்படுத்துகிறது. எளிய மக்களின் துயரங்களைப் படைத்துக் காட்டி, அனைவரும் பயனடைய வேண்டும் என்ற சமுதாய நோக்கம் கருதியே காப்பியங்கள்
	Core-6	பக்தி இலக்கியம்	X-சங்கத்தமிழ் மரபினை, தமிழருக்கே உரிய அகமரபை சமய இலக்கியங்கள் மீண்டும் உயிர்ப்பித்து தந்தன. மேலும் புதிய புதிய இலக்கிய வடிவங்களைத் தமிழுக்கு அறிமுகம் செய்தன. பக்தி இலக்கியங்கள் தமிழ் இலக்கிய வரலாற்றில் தனிச்சிறப்பு பெற்றுத் திகழ்ந்தன. இதன் பயனாக சைவமும் வைணவமும் தலைத்தோங்கின. X-தமிழகத்தின் பண்டைய இலக்கிய சமய வாழ்க்கை முறைகளை உயிரூட்டி மறுமலர்ச்சியை ஏற்படுத்தியது சமய இலக்கியங்கள். பல்லவர் காலத்தில் சைவ, வைணவ சமயங்கள் புத்துயிர் பெற்றன. X-தமிழகத்தில் ஆழ்வார்கள் வைணவ சமயத்தினையும் நாயன்மார்கள் சைவ சமயத்தினையும் வளர்ப்பதற்காக பல்வேறு
	Core-7	தொல்காப்பியம் – சொல்லதிகாரம்	X-தொல்காப்பியம் முழுமையையும் சிறப்பாக கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. இலக்கண அறிவை பெற்றுக்கொள்ள தாய்மொழி மீதான பற்று மிகவும் அவசியமானதாகும். X-சொல்லதிகாரம் கிளவியாக்கம், வேற்றுமையியல், வேற்றுமை மயங்கியல், விளி மரபு, பெயரியல், வினையியல், இடையியல், உரியியல், எச்சவியல் போன்றவற்றை விவரிக்கிறது. இவ்வதிகாரம் 462 நூற்பாக்களை உடையது. X-தொல்காப்பியம் தமிழ் நூல்களுள் முதன்மையானதாகக் கருதப்படும் இலக்கண நூலாகும். தொல்காப்பியம் அக்கால இலக்கண நூற்கொள்கைகளை அறிந்து கொள்ளப் பயன்படுகிறது. தமிழரின் பண்டைப் பெருமையை பாராட்டுவதற்கும்,

	Core-8	இலக்கியத் திறனாய்வும் கொள்கைகளும்	X-இலக்கியம் எவ்வளவு பழமையானதோ அவ்வளவு பழமையானது திறனாய்வு ஆகும். வாழ்க்கையைப் பற்றி ஆராய்ந்து அதன் சிறந்த பண்புகளைக் கூறுவது இலக்கியம் எனப்படும். அவ்விலக்கியத்தை ஆராய்வது திறனாய்வு எனப்படும். X-இலக்கியத் திறனாய்வின் கொள்கைகள் மற்றும் கோட்பாடுகளை விளக்குவதையே நோக்கமாகக் கொண்டுள்ளது. இலக்கியத் திறனாய்வு வகைகள் மற்றும் திறனாய்வு அணுகுமுறைகள் திறனாய்வின் பயன்கள் போன்றவற்றையும் விவரிக்கிறது. X-இலக்கியப் படைப்புகளை சீராய்வு செய்வதும், இலக்கியத்தின் தரம் மற்றும் மதிப்பை உயர்த்துவதுமே திறனாய்வின் பயன்களாகும். சமூக வரலாற்றை அறிந்திடவும் பிறந்த கலைப்படைப்புகளைத் தேர்ந்த்தெடுக்கவும், இலக்கியத்தின்
	Elective -2	தமிழ் மொழி வரலாறு	X-காலந்தோறும் மொழியில் ஏற்படும் மாற்றத்தையும் வளர்ச்சியையும் மொழி வரலாறு என்கிறோம். வரலாற்றின் பல காலகட்டங்களில் தமிழ்மொழியில் நேரிட்ட மாற்றங்களையும் வளர்ச்சிகளையும் தெரிந்து கொள்ளும் வரலாறாகத் தமிழ் மொழி வரலாறு அமைந்துள்ளது. X-பழங்காலம் முதல் இக்காலம் வரை தமிழ் ஒலி வடிவ, வரி வடிவ சொற்பொருள் மாற்றங்களை அறிவித்தலையே தமிழ் மொழி வரலாறு நோக்கமாகக் கொண்டுள்ளது. X-மொழியின் தோற்றம் ஆய்வுக்கு அப்பாற்பட்டது. திராவிட மொழிக் குடும்பங்களைக் குறித்தும், திருந்திய, திருந்தா மொழிக் குடும்பங்கள், மக்கள் பேசும் மொழிகள்
III	Core-9	சிற்றிலக்கியம்	X-அறம், பொருள், இன்பம், வீடு எனும் நான்கு உறுதிப்பொருட்களுள் ஏதேனும் ஒன்றைத் தருவதாக அமைவது சிற்றிலக்கியம். பாடப்படும் கடவுள் (அ) மன்னன் (அ) வள்ளல் ஆகியோரின் ஒரு சிறு கூறு மட்டுமே விளக்கப்பட்டிருக்கும். X-சிற்றிலக்கியங்கள் அளவில் சிறியனவாக இருந்தாலும் நூற்பொருளிலும் உணர்த்தும் திறனிலும் பேரிலக்கியங்களுக்கு இணையாகக் கருதப்படுகின்றன. சிற்றிலக்கியங்களின் மூலமாக சமூகத்தின் செயல்பாடுகளை போக்குகளை அறிந்து தமிழ்மொழிக்கு புதிய வடிவம் கொடுத்து இலக்கிய வரலாற்றில் தனியிடம் பிடித்திருப்பதையே பயனாகக் கருதலாம். X-சிற்றிலக்கியங்கள் தமிழ்மொழிக்கு ஆற்றியத் தொண்டினை அறிந்து கொள்ளவும், இலக்கியங்கள் வாழ்க்கையோடு தொடர்புடையவை மட்டுமல்ல அகம் சார்ந்தும்

	Core-10	ஆராய்ச்சி நெறிமுறைகள்	“எந்த ஒன்றிலும் அமைந்து இருக்கும் மேலோட்டமான பொருளைத் தாண்டி, ஆழத்தில் அடிப்படையாக அமைந்துள்ள பொதுவான உண்மைகளை அறிவியல் நெறிமுறைப்படி தேடி அடையும் முயற்சிதான் ஆய்வு” எனப் பொதுவாக வரையறுப்பர். X-ஆராய்ச்சி நெறிமுறைகளை கற்பித்தலையும் ஆய்வு நோக்கில் சிறந்த ஆராய்ச்சியாளர்களாக ஒவ்வொருவரையும் உருவாக்குதலையும் நோக்கமாகக் கொண்டுள்ளது. ஆய்வின் நோக்கம் மனிதர்களின் அறிவுத்தேடல் என்ற பெரிய போராட்டத்தில் தன்னாலான பங்களிப்பை செலுத்தி தான் வாழும் சமூகத்திற்கு நன்மை செய்வதாகும், X-ஆராய்ச்சி நெறிமுறைகளால் நமக்கு கிடைக்கிற பயன்கள் பலவாகும். நமது உழைப்பு வீணாகாமல் காப்பாற்றப்படுகிறது. நெறிமுறைகளை பின்பற்றி ஆய்வு செய்யும் போது குறைந்த காலத்தில் நிறைந்த பயனைப் பெறமுடிகிறது. குறிப்பிட்ட காலத்திற்குள் குறிப்பிட்ட ஆய்வினைக் குறிப்பிட்ட நேரத்திற்குள் முடிக்க இந்த ஆராய்ச்சி நெறிமுறைகள் அடிப்படையாகத் தேவைப்படுகின்றன.
	Core-11	தொல்காப்பியம் – பொருளதிகாரம்	X-மொழிக்கு மட்டுமின்றி வாழ்க்கைக்கும் இலக்கணம் சொல்கிறது. எழுத்ததிகாரம், சொல்லதிகாரம் ஆகிய இரு பகுதிகளில் மொழிக்கு இலக்கணம் சொல்லப்பட்டுள்ளது. பொருளதிகாரம் என்ற பகுதியில் வாழ்க்கைக்கு (இலக்கியத்திற்கு) இலக்கணம் சொல்லப்பட்டுள்ளது. X- பொருளதிகாரம், அகத்திணையியல், புறத்திணையியல், களவியல், கற்பியல், பொருளியல், மெய்ப்பாட்டியல், உவமையியல், செய்யுளியல், மரபியல் ஆகியவற்றை விளக்குகிறது. இவ்வதிகாரம் 445 நூற்பாக்களை உடையது. X-தொல்காப்பியப் பொருளதிகாரம் வாழ்கையின் பொருளை, இலக்கியத்தின் பொருளை உணர்த்துகிறது. இது தமிழர்களின் இலக்கியத்திற்கும் பண்பாட்டிற்கும்
	Core-12	உரையியல்	X-உரையாசிரியர்கள் சொற்பொருள் விளக்கம் தருதல், கொள்கை விளக்கம் செய்தல், வைப்பு முறைக்குக் காரணம் காட்டுதல், இலக்கணக் குறிப்புத் தருதல், எடுத்துக்காட்டு தருதல், சிறப்பு விளக்கம் தருதல், ஆய்வுக்கான இடைவெளியை நிரப்புதல், வரலாறு கூறுதல், திறனாய்வு செய்தல் ஆகிய பணிகளை திறம்படசெய்து தம் உரைகளை சிறக்க செய்தனர். இலக்கண உரைகள், இலக்கிய உரைகள், சாத்திர உரைகளை மணிப்பிரவாள உரைகள் என உரைகளை வகைப்படுத்தி எழுதினர். X-உரையாசிரியர்களின் பணி தமிழ்மொழிக்கு மிகபெருங் கொடையாகும். தமிழில் தோன்றியுள்ள உரைகளுக்கு நீண்ட வரலாறுண்டு. தொல்காப்பியம் சங்க இலக்கியம் ஆகியவ்ற்றிற்கு இடைக்காலத்தில் எழுந்த உரைகளால் அம்மூலநூல்கள் காப்பாற்றப்பட்டன வெளிக்கொணரப்பட்டு எல்லோராலும் படிக்க வைக்கப்பட்டன.

	Elective -3	ஒப்பீட்டு நோக்கில் உலகச் செம்மொழிகள்	X-உலக செம்மொழிகளின் வரலாற்றையும் சிறப்புக்களையும், செம்மொழியாம் தமிழின் பெருமைகளையும் கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. உலக மொழிகளுள் தனி எழுத்து வடிவம் பெற்ற செம்மை மொழிகளாக 300 மொழிகள் உள்ளன என அறியப்படுகிறது. X-தமிழ் மொழி உலகச் செம்மொழிகளுள் ஒன்றாக விளங்குவதால் UGC தமிழைச் செம்மொழியாக ஏற்கும். மொழிப்பாடம் உள்ள அனைத்துப் பல்கலைக் கழகங்களிலும் தமிழுக்கென தனித்துறை ஏற்படும். தமிழ் ஆண்டு கொண்டாடப்படும். X-உலகில் பல நாடுகளில் வாழும் தமிழர்கள் தாங்கள் வாழும் நாட்டிலேயே பல்கலைக்கழக அளவில் தமிழைக் கற்க முடியும். திராவிட நாகரிகத்தின்
IV	Core-13	சங்க இலக்கியம்	சங்க இலக்கியத்தைப் பாட்டும் தொகையும் எனக்குறிப்பிடுபவர். ஈராயிரம் ஆண்டுகளுக்கு முன்னர் தமிழர் வாழ்ந்த வாழ்க்கையினை இவ்விலக்கியங்கள் விளக்கி நிற்கின்றன. சங்க இலக்கியங்கள் காலத்தைக் கடந்து இன்றும் கருத்துக் கருவூலமாகவும், கற்பனைக் களஞ்சியமாகவும் திகழ்கின்றன. X-தலைவன் தலைவியரின் அன்பு வாழ்க்கையின் இனிய காட்சிகளை அகப்பாடல்கள் எடுத்தியம்புகின்றன. அன்பு வாழ்கையின் அழியாத காட்சிகள் அனைத்தையும் எழிலோவியமாகக் காட்டுகின்றன. பண்டைத் தமிழரின் வாழ்வியல் நெறிகளையும் பண்பாட்டினையும் எடுத்துக்காட்டுகின்றன. X- இத்தகைய காரணங்களால் சங்க இலக்கியங்கள் காலத்தைக் கடந்து இன்றும் கருத்து கருவூலமாகவும், கற்பனைக் களஞ்சியமாகவும் திகழ்கின்றன. இவை உணர்த்தும் தமிழர்களின் விழுமியங்கள் வரலாற்றில் பொறிக்கப்பட வேண்டியவை ஆகும்.சங்க இலக்கியம் தமிழர்தம் சொத்து. தமிழரின் ஒளி படைத்த வாழ்வை உலகுக்கு உணர்த்திக் கொண்டே இருக்கும் கருத்துப் பேழையாக இருப்பதனையே

	Core-14	அகராதியியல்	X-ஒரு மொழியிலுள்ள சொற்கள் அனைத்தையும் அகர முதலிய எழுத்து வரிசையில் அமையும்படி ஒருசேரத்தொகுத்து அவற்றின் பொருள்களை அம்மொழியிலேயே விளக்கும் நூல் அகராதி எனப்படும். அகராதி என்னும் சொல்லின் ஆதி என்னும் சொல் வடமொழி என்பதால் பாவாணர் அகரமுதலி என்று அழைத்தார்.சொல்லின் பொருளைத் தவிர, அதன் தோற்றம், ஆட்சி, அது வந்துள்ள நூல், இடம் முதலியவற்றையும் பெரிய அகராதிகளில் காணலாம். X-அகராதிக் கலையை அறிந்து கொள்வதற்காகவும், நிகண்டுகள் முதல் இக்கால அகராதி ஆய்வுக் கொள்கை வரை ஆய்வு நோக்கில் கற்பித்தலையே நோக்கமாகக் கொண்டுள்ளது. X-ஆங்கிலத்திலுள்ள NEW ENGLISH DICTIONARY-யின் முறைகளைத் தழுவி, ஒரு தமிழ்ப் பேரகராதி இயற்றுதல் தமிழ் அறிஞர்களின் தலையாயக் கடமையாகும்.
	Core-15	தொல்காப்பியம் – பொருளதிகாரம்	X-இன்று நமக்குக் கிடைக்கின்ற மிகப் பழமையான நூல் தொல்காப்பியம் ஆகும். இது இலக்கணமாக இருந்தாலும் இலக்கியமாகவும் கருதப்படக் கூடிய பெருமையை உடையது.எனவேதான் இதன் பழமையும் நூற்பொருளும் விளங்குமாறு இதற்குத் தொல்காப்பியம் எனப் பெயரிடப்பட்டுள்ளது. X-மொழிக்கு மட்டுமின்றி வாழ்க்கைக்கும் இலக்கணம் சொல்கிறது. எழுத்ததிகாரம், சொல்லதிகாரம் ஆகிய இரு பகுதிகளில் மொழிக்கு இலக்கணம் சொல்லப்பட்டுள்ளது. பொருளதிகாரம் என்ற பகுதியில் வாழ்க்கைக்கு (இலக்கியத்திற்கு) இலக்கணம் சொல்லப்பட்டுள்ளது. X-நெடுங்காலமாக இலக்கியப் பயிற்சியும் முயற்சியும் தமிழகத்தில் நிலவியது என்பதற்கு தொல்காப்பியம் சான்றாக உள்ளது. இலக்கண மரபிற்குச் சான்றாகத்
	core-16	ஆய்வேடு	X-மாணவர்களின் ஆராய்ச்சி நிலையை வளர்ச்சி படுத்தும். X-திறனாய்வாளன் மாணவன் மனதிற்குள்திறமை ஏற்படும் X-முனைவர்பட்ட ஆய்வாளர் படிப்பிற்கு மாணவர்கள் மனநிலை எளிதாக செல்லும் ஆய்வு மனப்போக்கு இயல்பாக ஏற்படும்

	Elective -4	தமிழர் மானிடவியல்	[illegible] ஆகும். தமிழர் மானிடவியலை முதலில் ஆராய்ந்தவர்கள் ஐரோப்பியர்கள் ஆவர். இவ்வாய்வுகள் பெரும்பாலும் ஆங்கிலத்திலும் ஐரோப்பிய மொழிகளிலும் காணப்பட்டன. X-பின்னர் தமிழர்களும் மானிடவியல் அணுகுமுறைகளையும் இத்துறையின் கோட்பாடுகளையும் தமிழ்ச் சூழல் கள ஆய்வுகளுக்கு பயன்படுத்தினர். முதலில் தமிழியல், நாட்டாரியல் துறைகளிலும் பின்னர் சாதி, சாதியம், சமூகக் களங்களிலும் மானிடவியலை கொண்டு சென்றனர். X-பண்பாடு பற்றிய எண்ணக் கருவும், மனித இயல்பு பண்பாடே எனும் கருத்தும், சமுதாய ரீதியில் குறியீட்டு முறையில் பயிலவும் பயிற்றுவிக்கவும், அக்குறியீடுகளின் அடிப்படையில் உலகத்தையும், எங்களையும் மாற்றிக் கொள்வதற்கும் ஏதுவாக முழுமையான தகுதியை வளர்த்துக் கொண்டுள்ளது என்னும் கருத்தே

s are applied in the organisations.