Programme Outcomes, Programme Specific Outcomes and Student Learning Outcomes

S.T.HINDU COLLEGE, NAGERCOIL

S.T.Hindu College Nagercoil

Vision and Mission

Vision

"Material ,Moral and Cultural Advancement".

Mission

- To strive continuously for excellent educational service to the nation.
- To serve as a valuable resources for society and community
- To increase the human values and sustain the heritage of the country
- To stimulate the academic environment for the promotion of quality of teaching-learning and research

Department of Computer Science
B.Sc Computer Science

I. Programme Outcomes

Programme Outcomes
PO 1: Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
PO 2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
PO 3: Communicate effectively in a variety of professional contexts.
PO 4: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
PO 5: Apply computer science theory and software development fundamentals to produce computing-based solutions.

II. Programme Specific Outcomes

Programme	Programme Specific Outcomes
BSc Computer Science	A graduate with a B.Sc. in Computer Science will have the ability to PSO1. Demonstrate mastery of Computer Science in the following core knowledge areas • Programming Languages • Data Structures • Databases, Software Engineering • Data Mining, Web Application Development PSO2. Apply problem-solving skills and the knowledge of computer science to solve real world problems. PSO3. Develop technical project reports and present them orally among the users

III-A. Learning Outcomes – BSc Computer Science

Course Code	Course Name	Learning Outcome
SMCS11	Programming in C	After completing this course, students will be able to obtain knowledge about the structure of the programming language C and to develop the program writing and logical thinking skill.

SMCSP1	Lab : Programming in C	After completing this course, students will be able to develop skills in implementing algorithms through the programming Language C and to explore the features of C by applying sample problems.
SACS11	Discrete Mathematics	After completing this course, students will be able to apply basic concepts for clear understanding of mathematical principles and to solve practical problems.
SACSP1	Computer Basics	After completing this course, students will be able to develop skills in MS Office.
SMCS21	Object Oriented Programming in C++	After completing this course, students will be able To gain the basic knowledge of object oriented programming concepts and to understand the detail idea of C++ streams, Inheritance, Overloading of operators, functions, constructors, File Handling and templates concepts of C++ programming.
SMCSP2	Programming in C++	After completing this course, students will be able to gain the basic knowledge of object oriented programming concepts and to understand the detail idea of C++ streams, Inheritance, Overloading of operators, functions, constructors, File Handling and templates concepts of C++ programming.
SACS21	Digital Design	After completing this course, students will be able to understand the concept of digital systems, to operate on various number systems and simplify Boolean functions and to distinguish logical and combinational circuits.
SACSP2	Linux	After completing this course, students will be able to understand and make effective use of Linux utilities and Shell scripting language to solve problems.
SMCS31	Java Program ming	After completing this course, students will be able to understand the basic programming constructs of Java Language and to explore the features of Java by applying to solve problems
SMCS32	Computer Architecture	After completing this course, students will be able to gain knowledge about the architecture of computer and to understand the concepts of CPU, ALU Design, I/O Instruction format and different processors.

SMCS33	Data Structure	After completing this course, students will be able to: • To understand the concepts of basic data structures such as stack, Queues and Linked list. • To have general understanding of the network structures through trees and graph. • To make the students to understand the basic algorithms for sorting.
SACS31	Web Technology	After completing this course, students will be able to impart knowledge about the web technologies and their applications and to understand the basics of web designing.
SSCS3A	PROGRAMMING WITH PHP & MYSQL	After completing this course, students will be able to: • To understand the concepts of open sources. •To learn and use open source database management system MySQL • To create dynamic web pages and websites. • To connect web pages with database.
SMCSP3	Java Programming	After completing this course, students will be able to develop skills in implementing algorithms through the programming Language JAVA and to explore the features of JAVA by applying sample problems
SACSP3	Web Design Using HTML	After completing this course, students will be able to understand the basic concepts of HTML and help the student to equip with the programming skills in implementing and developing web based applications
SMCS41	Visual Basic	After completing this course, students will be able to learn Visual Basic Programming which introduces event-driven Windows programming, data types, operators, objects and properties, menus, procedures, control structures, and database file processing
SMCS42	Information Security	After completing this course, students will be able to understand Information security which focuses on the overview of information security, the tools and techniques used to secure information and the procedures and practices that must be followed by organizations ti ensure information security.

SMCS43	Relational Database Management System	After completing this course, students will be able to: • To learn the fundamental data models and conceptualize and depict a database system using ER diagram • To make a study of SQL and relational database design using Oracle
SMCSP4	Visual Basic Lab	After completing this course, students will be able to understand the basic concepts of HTML .It help the student to equip with the programming skills in implementing and developing web based applications.
SACS41	ECommerce	After Completion of the subject student should able to • Understand the basic concepts and technologies used in the field of management information systems • Have the knowledge of the different types of management information systems; • Understand the processes of developing and implementing information systems; • Be aware of the ethical, social, and security issues of information systems
SACSP4	PYTHON Lab	After completing this course, students will be able to learn to program in Python and understand programming paradigms brought in by Python Expressions.
SSCS4A	Android Programming	After completing this course, students will be able to learn the fundamentals of Android Programming using the Android SDK.
SMCS51	Software Engineering and Testing	After completing this course, students will be able to: • To understand the concepts of analysis, design and implementation of a software product. • To have general understanding about object-oriented software engineering. • To make students to get experience and be ready for the large scale projects in IT Industry.

SMCS52	Data Communication and Computer Network	After completing this course, students will be able • To understand the concepts of data communication. • To get through understanding of different topologies. • To study the function of different layers. • To get familiarized with different protocols and network components.
SMCS53	Dot NET Technologies	After completing this course, students will be able • To highlight the features of ASP.NET and apply it to develop various applications. • To understand the concepts of .Net framework as a whole and the technologies that constitutes the frame work. • To make the students to get experience and be ready for the large scale projects in IT industry.
SMCSP5	Dot Net Lab	After completing this course, students will be able to learn to program in Dot Net and to develop web pages using ASP.NET
SMCSP6	Data Structure	After completing this course, students will be able to develop skills in implementing data structure algorithms.
SECS5A	Mobile Computing	After completing this course, students will be able to: • To highlight the features of Mobile Communication. • To understand the concepts of Mobile Protocols • To learn about package and deploying Applications.
SECS5B	Multimedia Application	After completing this course, students will be able to: • To have general understanding about Multimedia. • To make the students understand the elements of multimedia • To learn multimedia and internet

SECS5C	Cloud Computing	After completing this course, students will be able to: • Understand core concepts of cloud computing • Learn the fundamental concepts about data centers to understand the tradeoffs in power, efficiency and cost. • Understand use of cloud storage in storage systems.
SMCS61	Operating System	After completing this course, students will be able to: • Acquire the fundamental knowledge of the operating system architecture and components and to know the various operations performed by the operating system. • Understand the basic working process of an operating system. • Understand the importance of process and scheduling. • Understand the issues in synchronization and memory management.
SMCS62	Computer Graphics and Visualization	After completing this course, students will be able to develop skills and knowledge about computer graphics and Visualization and to understand 2D, 3D transformations.
SMCS63	Data Warehousing and Data Mining	After completing this course, students will be able • to understand and implement classical models and algorithms in data warehousing and data mining • to analyze the data, identify the problems, and choose the relevant models and algorithms to apply. • to assess the strengths and weaknesses of various methods and algorithms and to analyze their behavior.
SMCSP7	Computer Graphics and Multimedia Lab	After completing this course, students will be able • To acquire skills in programming computer graphics • To acquire skills in multimedia concepts.
SMCSP8	Oracle Lab	After completing this course, students will be able 1. To acquire skills in SQL statements with various constructs 2. To acquire skills in PL/SQL Programming.

SMCSP9	Android Programming	After completing this course, students will be able 1. To acquire skills in Android Studio 2. To acquire skills in mobile Programming
SECS6A	INTERNET OF THINGS	After completing this course, students will be able to: • Learn how the Internet of Things (IOT) has the potential to alleviate some of the world's most significant problems • Learn IOT technology and architecture.
SECS6B	BIG DATA ANALYTICS	After completing this course, students will be able to: • Learn about Big Data. • Explore novel statistical, algorithmic, and implementation challenges that emerge in processing, storing, and extracting knowledge from Big Data.
SECS6C	NEURAL NETWORKS	After completing this course, students will be able to know: • Basic neuron models: McCulloch-Pitts model and the generalized one, distance or similarity based neuron model, radial basis function model, etc. • Basic neural network models: multilayer perceptron, distance or similarity based neural networks, associative memory and self-organizing feature map, radial basis function based multilayer perceptron, neural network decision trees, etc. • Basic learning algorithms: the delta learning rule, the back propagation algorithm, self-organization learning • Applications: pattern recognition, function approximation, information visualization, etc.

B.Com

Programme Outcome:

On completion of three years of Bachelor of Commerce (B.COM), the students will develop a strong foundation in the fundamentals of commerce and finance. The program enables the students to develop the skills of applying concepts and techniques of commerce in a business environment. The program provides the students with the knowledge of different specializations relevant to Commerce and Trade sector and leads to comprehensive understanding of the business processes and its dynamics.

Programme Specific Outcome:

The three year course helps students to achieve proficiency in different areas of business, economics, accounting, commerce, finance, auditing and marketing. The program helps the students to acquire analytical skills, communication skills, decision making and problem solving skills that are relevant in day to day business operations. The program helps to transform students into qualified and employable professionals in different areas of Global Business and Economy. Students will be able to do higher education and advance research in the field of commerce and finance

I B. COM (I SEMESTER) – UNDER CBCS
PART III – MAJOR CORE -1 FINANCIAL ACCOUNTING I

Outcome

1. Acquire conceptual knowledge of financial accounting.
 2. Impart skills for recording various kinds of business transactions.

PART III – MAJOR CORE -2 BUSINESS ORGANISATION

Outcome

1. Understand business and its role in society.
2. Enable the student to undertake business activities.

PART-III - ALLIED – I BUSINESS ECONOMICS

Outcome

1. Identify the role of supply and demand in a market economy
2. Enhance knowledge on recent economic trends.

I B. COM (II SEMESTER) – UNDER CBCS
PART III – MAJOR CORE-3 FINANCIAL ACCOUNTING II

Outcome

1. Enhance critical and analytical approach to different types of accounting.
2. Provide real life opportunities to manage business accounts.

PART III – MAJOR CORE - 4 PRINCIPLES OF MANAGEMENT

Outcome

1. Familiarize the students with concepts and principles of management.
 2. Impart knowledge on the functions of management among the students.

PART – III- ALLIED -II MARKETING

Outcome

1. Understand the basic marketing concepts.
 2. Create skills to develop marketing strategies based on product, price, place and promotion objectives.

B. COM (III SEMESTER) – UNDER CBCS
PART III – MAJOR CORE - 5
ADVANCED FINANCIAL ACCOUNTING I

Outcome

 1. Know the system of Accounting followed in Branches and Departments of business organization.
2. Know the pattern of recording transactions in Hire Purchase and Installment Purchase systems.
3. Understand the accounting treatment to be followed at the time of Insolvency of an individual and while taking a lease of a property

MAJOR CORE -6 BUSINESS STATISTICS

Outcome

1. Provide the basic knowledge of statistical techniques as are applicable to business.
2. Enable the students to apply statistical techniques for quantification of data in business

MAJOR CORE -7 BANKING

Outcome
1. Create an idea of modern banking
2. Familiarize the students with the banking activities

MAJOR CORE -8 HUMAN RESOURCE MANAGEMENT

Outcome
1. Know about the importance of human resource.
2. Know the techniques of performance appraisal of employees.
3. Know the methods to redress the grievances of employees.

ALLIED III COMPANY ORGANISATION

Outcome
1. Provide a fundamental exposure to students on the basic concepts of a company.
2. Eenable the students to learn about the functioning of a company.

PART IV – NON- MAJOR ELECTIVE -1 (ANY ONE) (ONE COURSE) - 1
INTRODUCTION TO ACCOUNTANCY
Outcome
1. Enable the students to prepare and provide accounting information to the interested parties.
2. Enhance their knowledge of the fundamental and technical concepts of accounting.

PART IV-NON- MAJOR ELECTIVE -I (ANY ONE) (ONE COURSE) - 2
CONSUMER AWARENESS

Outcome
1. Create awareness regarding the intellectual property rights and consumer protection.
2. Explain the students about a better quality of living as consumers.

PART III – SKILL BASED I - CORE BUSINESS COMMUNICATION

Outcome
1. To equip the students effectively to acquire skills in reading, writing, comprehension and communication
2. To make them use electronic media for business communication

B. COM (IV SEMESTER) – UNDER CBCS PART III –
MAJOR CORE -9 ADVANCED FINANCIAL ACCOUNTING II

Outcome
1. Understand the nature and system of accounting followed in Partnership firm.
 2. Know the procedures to be followed at the time of Admission, Retirement and Death of a partner in a partnership business.
3. Know the procedures to be followed at the time of dissolution of partnership business.

MAJOR CORE -10 BUSINESS MATHEMATICS

Outcome
1. Provide basic knowledge of mathematical techniques as are applicable to business.
2. Provide logical idea to find out practical solutions for the managerial problems.

MAJOR CORE -11 CAPITAL MARKET

Outcome
1. Understand the meaning and importance of Financial and Capital markets
2. Create an interest among students towards stock market investment

MAJOR CORE-12 IMPORT & EXPORT PROCEDURES
Outcome
1. Identify the procedures regarding import and export business
2. Motivate the students to involve in business activities

ALLIED -IV COMPUTER APPLICATIONS IN BUSINESS

Outcome
1. Know the applications of E- commerce.
2. Know online Trading
3. Understand E-Payment methods

PART IV- NON – MAJOR ELECTIVE -II (ANY ONE) (ONE COURSE) - 1
FINANCIAL ACCOUNTING

Outcome
1. Explain the concept and role of Accounting and financial reporting in the modern marketing economy.
2. Explain the regulatory frame work for the operation of fundamental accounting

PART IV - NON – MAJOR ELECTIVE -II (ANY ONE) (ONE COURSE) - 2
HUMAN RIGHTS

Outcome

1. Understand the basic concepts of human rights
2. Understanding of the relationship between individual, group, and national rights

PART III - SKILL BASED II - CORE ENTREPRENEURSHIP DEVELOPMENT

Outcome
1. Develop and strengthen the entrepreneurial quality among the students
2. Know the sources of help and support available for starting a small-scale Industry.

B. COM (V SEMESTER) – UNDER CBCS
PART III – MAJOR CORE -13 CORPORATE ACCOUNTING I

Outcome
1. Know the issue, allotment and forfeiture of shares of companies.
2. Prepare final accounts according to Companies Act, 2013.
3. Know how to value the goodwill and shares

MAJOR CORE - 14 COST ACCOUNTING

Outcome
1. Acquire the basic knowledge of cost in business concerns.
2. Understand the techniques of cost control

MAJOR CORE -15 BUSINESS LAW

Outcome
1. Understand the definition of business law
2. Know the scope and boundaries of business law

B. COM (V SEMESTER) – UNDER CBCS PART III – MAJOR CORE -16 RESEARCH METHODOLOGY

Outcome
1. Understand the basic concepts of research and its methodologies.
2. Organize and conduct research in a more appropriate manner

PART III – MAJOR ELECTIVE -1 (ANY ONE) (ONE COURSE) – 1 INCOME TAX LAW & PRACTICE I

Outcome
1. Understand the basic concepts of income tax
2. Know the provisions regarding computation of first three heads of income i.e., salary, house property and business income

PART III –MAJOR ELECTIVE - I (ANY ONE) (ONE COURSE) – 2 APPLICATION OF TALLY IN ACCOUNTING

Outcome

1. Impart practical knowledge regarding the concepts of Financial Accounting.
2. Get placement for students in different offices as well as Companies

PART III – MAJOR ELECTIVE - I (ANY ONE) (ONE COURSE) – 3 LOGISTIC MANAGEMENT

Outcome
1. Understand the role of logistic management in growth of business
2. Understand the functional areas in logistics

PART III – MINI PROJECT

Outcome
1. Enable the students to apply their conceptual knowledge in a practical situation
2. Learn the act of conducting a study and presenting its findings in the form of a rational report

B. COM (VI SEMESTER) – UNDER CBCS PART III – CORE -17 CORPORATE ACCOUNTING II

Outcome
1. Know the preparation of liquidator's final statement of accounts.
2. Prepare the final accounts of banking company in a schedule form 3. To train the students to prepare final accounts under double account system

PART III –- CORE -18 MANAGEMENT ACCOUNTING

Outcome
1. Familiarize the students with the basic management accounting concepts and their applications in managerial decision- making

MAJOR CORE -19 INDUSTRIAL LAW

Outcome
1. Acquaint knowledge on industrial relations framework in our country
2. Know various rights and benefits available to the workmen under the legislations

CORE - 20 AUDITING

Outcome
1. Know the importance of audit in commercial and non-commercial organizations.
2. Understand the procedures to be followed while auditing the business organizations.

PART III – MAJOR ELECTIVE – II (ANY ONE) (ONE COURSE) -1 INCOME TAX LAW & PRACTICE II

Outcome
1. Know the procedure for assessment and types of assessment.
2. Understand the computation of tax liability of individual

PART III – MAJOR ELECTIVE -II (ANY ONE) (ONE COURSE) - 2 RETAIL MANAGEMENT

Outcome
1. Explore the functionalities in the retail management
2. Understand the retail management concepts

MAJOR ELECTIVE -II (ANY ONE) (ONE COURSE) - 3 VALUES & ETHICS FOR BUSINESS

Outcome
1. Understand values in business
2. Inculcate the ethical practices in business among the student

PART III - MAJOR PROJECT

Outcome
1. Impart knowledge and develop understanding of research methodology and its applications
2. Know the methods of data collection and its interpretation to develop analytical skills in generalization of things and concept.

Department of Chemistry

I. Program Outcomes

Program Outcomes
PO 1: Specialized Knowledge and understanding of various basic concepts of chemistry.
PO 2: Advanced understanding of the core principles and their application in various fields like pharmacology, food, agriculture and environment.
PO 3: Knowledge on the synthesis of specific important compounds and their application in industries and research.
PO 4: Analyze various environmental problems and apply the basic principles of chemistry to come out with environmentally benign solutions.
PO 5: Qualified to compete in various competitive examinations at state and national level.

II. Programme Specific Outcomes

Programme	Programme Specific Outcomes
BSc Chemistry	A BSc Chemistry Under Graduate will be Qualified to PSO1: display dexterity in the core principles and their application in jobs available in industries, research labs. PSO2: Applying the Practical knowledge gathered in the Laboratory to solve research problems, environmental problems and replace harmful chemicals used day to day. PSO3: Attempt confidently the various competitive examinations because of their enhanced skill in critical thinking, analytical reasoning and problem solving ability. PSO4: Evolve the knowledge of chemistry to develop safe replacement for hazardous compounds and explore entrepreneurial job opportunities.

III. Learning Outcomes –BSc Chemistry

Course Name	Learning Outcomes
Organic Chemistry –II	The course upon completion imparts a thorough knowledge on various organic compounds with emphasis on special compounds such as organometallic, organosulphur and allicyclic compounds their chemical, physical properties with special reference to tautomerism and the applications of these compounds.
Inorganic Qualitative Analysis	Successful completion of the course ensures the thorough insights in to the practical applications of qualitative analysis in food analysis, pharmacology, geology,

	hydrology etc.
Inorganic Quantitative Analysis	After the course completion, the student is well informed in the concept of concentration, moles, normality and molarity. They are trained to perform the analysis without error and apply the skills gained in their jobs as lab assistants in research labs, wet lab analyst in various industries or in their higher educational pursuits.
Allied chemistry –I	This course catered to students of other science subjects on successful completion would have instilled a basic knowledge of atomic structure, electronic configuration, bonding, hybridisation, principles of organic reactions, introduction to photochemistry and the laws associated with it, polymers its types, important polymeric compounds and their applications, lubricants and few day to day usage chemical preparations and their applications. This paves in the understanding of simple chemistry in their subjects and inspires them to take interdisciplinary topics related to chemistry as their research topic.
Inorganic Quantitative analysis	Successful completion of this course would have trained the students in the systematic procedures of salt analysis and would have introduced the students to lab activity with logical and analytical thinking, which has a direct impact on their reasoning capacity.
Skill Based Course – Agro chemistry	The course upon successful completion would have imparted in-depth knowledge on soil testing and characterization, the various pesticides and fertilizers used for the cultivation of crops, the source of these compounds, their synthesis, properties and harmful effects of the pesticides and fertilizers on the environment.
Food Chemistry	Completion of the course would have made the students aware of the harmful chemicals in the form of food additives like preservatives, colorants, flavoring agents, stabilizers, emulsifiers added to enhance the aesthetic palatability of food. The course also imparts knowledge on the characterization of various nutrients present in the food, the labs established in various parts of India to test the quality of food, the laws and amendments to prevent adulteration.
Water Management	Successful completion of the course guarantee the extensive knowledge on Hydrology, the water quality parameters, estimation of the water quality parameters, the limits of water quality parameters for potable water

	on league with WHO and ICMR standards, the need for rain water harvesting.
Physical chemistry –II	Course based on the core chemistry which on completion would have provided knowledge on the basic concepts of thermodynamics, chemical equilibrium, electrochemistry, theory of solutions and the laws associated with it and electrochemistry. The knowledge proves to be useful in building the problem solving capacity of students in their competitive exams and also helps in the understanding of in-depth concepts of chemistry.
Inorganic Preparations and Determination of Physical constants	A practical course meant to improve the lab skills of the students by training them to prepare double salts and inorganic complexes by maintaining the accurate reaction conditions to prepare an excellent quality compound with maximum yield. Training facilitates the students to understand the importance of reaction conditions and strengthens their lab skills.
Allied Chemistry –II	The course meant for the students majoring in other science subjects on completion would recount a basic knowledge on atoms, their structure, nuclear reactions, organic chemistry with special emphasis on carbohydrates, proteins and nucleic acids, applied topics such as fuels, fertilizers, cement and glass and communicable diseases and the drugs used to cure them. Students get to understand the role of chemistry in various aspects of day to day life and will encourage them to pursue research in interdisciplinary topics.
Inorganic Qualitative Analysis	Practical course on successful completion would disseminate the knowledge about simple salts and their composition; the analysis trains them for their future higher studies and research or their job as research assistants.
Chemistry in Medicine	Course based on applied chemistry, on completion warrant a 5complete knowledge on first aids with special stress on first aids to be practiced in the unfortunate event of lab accidents, some familiar drugs used for common diseases, their synthesis, their chemical structure, importance, chemical structure and functions of minerals and vitamins, blood and urine profile analysis.
Industrial Chemistry	The completion of the course provides a deep insight of the system of units and their conversion factors, fuels, furnaces and utilities used in the industries, consequences

	of corrosion and their prevention, industrial process in the silicate industry and simple reactions in organic compounds manufacturing unit which ensures an awareness of the chemical processes happening in industries and enable the students to focus in exploring job opportunities in industrial sector.
Dairy Chemistry	The course upon completion promulgate a detailed understanding of the composition of milk, principles of chemistry manipulated and utilized in the milk industry, chemistry behind the processing of milk for its valuable milk products and the chemicals used to clean the units for the hygienic processing of milk. The course enthralls the student's curiosity and stress on the awareness of the research prospects in dairy chemistry and also the job opportunities in the field.
Applied Chemistry	Successful completion of the course warrants acquiring knowledge on the various compounds, chemical reactions used in the manufacturing of diverse chemicals used in various chemical industries such soaps, detergents, fertilizer, fibers, plastics, rubber and pharmacology. The course is an eye opener in the entrepreneurial job opportunities and research prospects in these industrial fields.
Organic Chemistry – III	Course based on core chemistry, which on completion would have prepared the students to apply the basic concepts of optical isomerism, geometrical isomerism, aromaticity, aromatic substitution reactions, heterocyclic compounds, dyes and few special polynuclear hydrocarbons to solve problems in competitive exams and also would pave the base for their future higher education and research prospects.
Physical Chemistry – III	A course based on the core branch of chemistry, after successful completion would have implanted the knowledge on theories and principles such as thermodynamics, electrochemistry, surface chemistry, group theory and basic spectroscopic concepts. The problem solving capacity and analytical thinking of the students would have been developed
Polymer Chemistry	On completion of this applied chemistry concept specialized on polymers students would procured knowledge on the types of polymers, characteristics of polymers, polymerization techniques, processing

	techniques after polymerization, synthesis, properties and application of commercial polymers, inorganic polymers, silicone polymers and the latest advancement of polymers in biomedical field. This course dispenses exhaustive knowledge in the field of polymers and inspires the students to explore this field in their research endeavors.
Bioinorganic Chemistry	This course a branch of coordination inorganic chemistry venture to bestow a comprehensive knowledge of the metal ions with respect to their biological functions and also toxicity, in coordination with protein moieties which functions as electron carriers, oxygen carriers and catalyst in various biochemical pathways. The course also explores the idea of manipulating coordination compounds as life saving drugs in cancer treatment, treatment of arthritics and also as contrasting agent in MRI and gives a special address to superamolecular chemistry thereby opening areas unknown so that students can explore in their research prospects as well as in the higher education.
Analytical Chemistry	Successful completion of the course gives an in-depth knowledge on the diverse analytical techniques, the principles on which it is based on, application of the analytical techniques in water and fuel analysis, advantages of latest advanced techniques over the primitive methods of analysis and a emphasis is made on error analysis and data analysis. The Knowledge acquired assists the students in the successful completion of projects and also in their research pursuits.
Pharmaceutical Chemistry	A course on applied chemistry based in pharmacology which implants the knowledge on the important terminologies, classifications, assays, mechanism of drug action, chemical pathways of drugs, common drugs and their functions, drugs in Indigenous medicinal plants and communicable and non communicable diseases and the specific drugs to treat them. Provides scope for future research prospects, job ventures, and entrepreneurial ideas.
Inorganic Chemistry – III	A course based on the core branch of chemistry, instills knowledge on the basic theories of coordination chemistry, nomenclature of coordination compounds, structures, isomerism exhibited by coordination compounds, their special properties and the theories and

	mechanisms of reactions, organometallic chemistry, organometallic compounds and their catalytic properties in industrial manufacturing of key compounds. Improves the ability to perform in competitive exams and helps to understand the complicated theories of coordination in the higher education.
Organic Chemistry – IV	Core chemistry course which implants knowledge on carbohydrates, phenols, aromatic aldehydes, ketones and acids, their preparation and properties, rearrangement reactions, terpenoids and alkaloids their classification, structure and structural elucidation and some simple basic concepts in organic spectroscopy. The course empowers the students to develop their ability to perform in competitive exams and gives better understanding of difficult concepts in higher education and research endeavors.
Physical Chemistry – IV	Course based on core branch of chemistry which ensures a thorough knowledge in various spectroscopic principles, chemical kinetics, ionic equilibria, phase equilibria and an introduction to nano chemistry. This course paves the base for straight forward understanding of concepts in higher education.
Green Chemistry	This course is based on the latest chapter of chemistry which familiarizes the students to the introduction to green chemistry i.e., environmentally benign green solvents, green catalyst and green synthesis, green reactions involving the basic principles of green chemistry like choice of starting materials, biomimitic multifunctional reagents, green chemistry in sustainable developments and its importance in day to day life. The course opens up new arena for the future research ideas in students.
Nano Chemistry	Completion of the course would have introduced a basic concept of nano chemistry, special properties of nano particles, types of nano materials and their structures, synthesis, application, introduction to nano composites and fibers and their characterization and application. The course inspires the students to explore this branch of chemistry in their higher educational pursuits and research endeavors.

			M A English	
Sl.No	**Sem**	**Sub Code**	**Title**	**Objective**
1	I	PEHM11	Modern Literature I	
2	I	PEHM12	Modern Literature II	To acquaint the students knowledge on Geoffrey Chaucer - The Prologue to the Canterbury Tales, Sir Thomas Wyatt - I Find No Peace, Lord Francis Bacon - Of Truth, Christopher Marlowe - Dr. Faustus, Thomas Kyd - The Spanish Tragedy, Ben Jonson - The Alchemist Thomas Dekker - The Shoe Maker"s Holiday .
3	I	PEHM13	Romantic Period	To acquaint the students knowledge on William Collins - Ode to Evening, William Wordsworth - Resolution and Independence, Charles Lamb - Christ"s Hospital, Jane Austen - Emma, Sir Walter Scott – Kenilworth.
4	I	PEHM14	Indian Writing in English	To acquaint the students about Rabindranath Tagore - Gitanjali (1,2,3,12 and 24), Rabindranath Tagore – Nationalism, Mahesh Dattani - Final Solutions, R.K. Narayan - Painter of Signs, ChetanBhagat - One Night @ the Call Centre.
5	I	PEHE11	Literature and Gender	To acquaint the students aboutSylvia Plath - Daddy The Arrival of the Bee Box Edge, Ama Ata Aidoo – The Dilemma of a Ghost, Toni Morrison - The Beloved, Virginia Woolf - A Room of One"s Own (Chapter IV), Anita Brookner – Hotel Du Lac.
6	II	PEHM21	Victorian Age and the Age of Hardy	To acquaint the students aboutAlfred Lord Tennyson - Lotus Eaters, Thomas Carlyle - Heroes and Hero Worship, John Galsworthy - The Silver Box, Charles Dickens - David Copperfield.
7	II	PEHM22	American Literature	To acquaint the students aboutWalt Whitman - When Lilacs Last in the Dooryard Bloome, Ralph Waldo Emerson - The American Scholar, Edgar Allan Poe - The Fall of the House of Usher, Arthur Miller - Death of a Salesman, John Steinbeck - Grapes of Wrath.
8	II	PEHM23	Literary Theory and Criticism -I	To acquaint the students aboutLionel Trilling"s "The Sense of the Past",

				Terry Eagleton - Capitalism, modernism and postmodernism, Julia Kristeva - The ethics of linguistics 207, Elaine Showalter: Feminist Criticism in the Wilderness.
9	II	PEHM24	Indian Writing in English Translation	To acquaint the students aboutKumaranAsan - Uprightness, Psalm, K.A. Gunasekaran - Touch, P. Sivakami - Land: Woman‟s Breath and Speech, U.R. Ananthamurthy– Bharathipura,Cho. Dharuman– Wetness.
10	II	PEHE21	Communicative English	To acquaint the students aboutSuccessful Communication,Group Discussion - Definition and Characteristics of group discussion, E-Skills,Speech, Critical Skill.
11	III	PEHM31	Literary Theory and Criticism - II	To acquaint the students aboutMark Schorer - from Technique as Discovery, Jonathan Culler - "Structuralism and Literature", Stephen Greenblatt - "Resonance and Wonder", Edward Said - "Introduction" in Orientalism, Simone de Beauvoir - "Woman as the Other" from The Second Sex.
12	III	PEHM32	World Literature in English Translation	To acquaint the students aboutVirgil - TheAenied, St. Augustine - The Confessions , Sophocles - Oedipus Rex Bertolt Brecht - Mother Courage and Her Three Children, Anton Chekov - The Lady with the dog .
13	III	PEHM33	Shakespeare	To acquaint the students aboutMidsummer Night's Dream, Hamlet , Measure for Measure, Antony and Cleopatra, Quartos and Folios.
14	III	PEHM34	Research Methodology	To acquaint the students aboutResearch and Writing Plagiarism and Academic Integrity , The Mechanics of Writing , The Format of the Research Paper, Documentation: Preparing the list of Works Cited , Documentation: Citing Sources in the text.
15	III	PEHE31	Commonwealth Literature	To acquaint the students aboutDerek Walcott - "Ruins of a Great House", George Ryga - Indian, BapsiSidhwa - Ice Candy Man, Margaret Laurence –

				Diviners, Arundhati Roy - Walking with Comrades.
16	IV	PPHM41	Literature and Ecology	To acquaint the students aboutOld English, Middle English, Modern English, Global English, Grimm's Law, Verner's Law, Latin, French, Greek, Scandinavian, Modern Linguistics: A Historical Survey, Phonetics: Classification of English Vowels and Consonants.
17	IV	PPHM42	Diasporic Women's Writing	To acquaint the students aboutEcology, Literature and Language, S.T. Coleridge - To Nature, Terry Tempest William - Refugee: An UnnaturAmitavGhosh - The Hungry Tide al History of Family and Place ,William Shakespeare - As You Like It.
18	IV	PPHM43	Postcolonial Writing	To acquaint the students aboutGabriel Okara - "Once Upon a Time", A.K Ramanujan - " Is There an Indian Way of Thinking?", GirishKarnard - Tughlaq, J. M Coetze - Disgrace, Patrick White - The Tree of Man.
19	IV	PPHM44	English Language Teaching	To acquaint the students aboutListening Skills, Speaking Skills, Reading Skills, Writing Skills, Testing .

M A History				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PHYM11	History of Tamil Nadu upto 1565 AD	To acquaint the students about Yhe ancient Tamil Kings who ruled over this land with the unique culture and language.
2	I	PHYM12	History of India upto 712AD	To create awareness and understanding of the rich Indian culture and heritage.
3	I	PHYM13	History of Europe from 476 to 1453AD	To appraise the Historical significance of pre-modern Non Western culture.
4	I	PHYM14	History of world civilization upto 1453AD	To acquaint the students about the contribution made by the World civilizations to the total heritage of mankind.

5	I	PHYE11	Principles and Methods of Archaeology	The study enable the students to know the Human activity through the recovery and analysis of material culture.
6	I	PHYE12	Indian Public Administration since 1947	To Promote well informed and intelligent citizens, to have the ability to participate in the affairs of the Nation effectively.
7	II	PHYM21	History of Tamil Nadu from 1565 to 1987AD	To enable the students to grow as a responsible citizen in a democratic society
8	II	PHYM22	History of India from 712 to 1765 AD	To imbibe in the minds of the students a deep and intense feeling of Nationalism and Love for the Country.
9	II	PHYM23	History of Europe from 1453 to 1789AD	To understand the Legacy of the Middle Ages in Europe and to appreciate the beginnings of Modern Europe.
10	II	PHYM24	History of England upto 1688 A.D	It enable the students to know about the true nature of the past history of England and how it overcame its obstacles that impede its progress.
11	II	PHYE21	History of Russia from 1689 to 1964AD	To enable the students to know about the importance of Russia to the World.
12	II	PHYE22	History of the Arabs from 570 to 1258AD	It enables the students to familiarise with the various aspects of Islam and the history of the rise and establishment of IslamicCivilization.
13	III	PHYM31	History of India 1765 AD -1947 AD	The entire panorama of events right from the ascendency of British power in India and its eventful collapse due to Indian freedom movement is studied.
14	III	PHYM32	History of England (1688-1958 AD)	The Study enables to know the true nature of the past History of England and how it overcame its obstacles that impeded its progress.
15	III	PHYM33	History of Europe 1789 A.D -1945 AD	The study enables to know the dangers of war on humanity, how people suffer under dictatorships and how the individuals and nations of Europe made a tremendous sacrifice to achieve their goals.

16	III	PHYM34	Historiography- Theory and Methods	The study enables to acquaint knowledge in the scientific study of history and the methodology in a logical way.
17	III	PHYE31	History of USA (1776 - 1865 AD)	The study enables to acquaint knowledge about the political , diplomatic and cultural aspects of U.S.A and its importance to the world.
18	IV	PHYE33	Panchayat Raj	The Study enables to know that Panchayat Raj , a decentralised form of government acts as the foundation of India's Political System where each Village is responsible for its own affairs.
19	IV	PHYM41	History of India since 1947A.D	The study enables to know why world peace is important for the development of any country and how diverse and complex was India's socio-economic and political development.
20	IV	PHYM42	History of USA 1865-1945 AD	The study enables to acquaint the basic concepts of political life in U.S.A , the great experiments in federal democracy and the world wide significance of U.S.A.
21	IV	PHYM43	History of China 1839-1964 AD	The study enables to understand the isolated life of China till the beginning of 20thcentury and how China dominated those nations which were trying to dominate it till yesterday.
22	IV	PHYM44	History of Political Thought.	The study enables to know about the principle concepts of political thinkers who formulated their concepts for the benefit and betterment of the people.

M A Economics				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PESM11	Advanced Micro Economics Theory - I	The students are learning about Theory of consumer demand, Theory of Production, Market Structure and pricing, Duopoly and Oligopoly, Theories of Firm.
2	I	PESM12	Macro Economics Theory and Analysis – I	The students are learning about Concepts of Macroeconomic, National income and circular flow of Income, Consumption function, Investment function and Macroeconomic Issues.
3	I	PESM13	Statistical Methods for	The students are learning about

				Economics I	Correlation, Regression, Time Series Analysis, Index Numbers and Vital Statistics .
4	I	PESM14	Monetary Economics		The students are learning about Concepts of Money, Demand for Money, Money Supply Concepts, Financial System and Monetary Policy.
5	I	PESE11	International Economics		The students are learning about Theories of International Trade, Economic Growth and International Trade, Balance of Payments and Foreign Exchange, Economic Integration and Co-operation and World Trade Organisation .
6	I	PESE12	History of Economic Thought		The students are learning about Pre-Classical Period and Classical School, The Neo Classical School, Socialism and Marxian Thought, The Keynesian Revolution and Monetarism, Modern Developments .
7	II	PESM21	Advanced Micro Economics Theory - II		The students are learning about Alternative Theories of Firm, Distribution, Welfare Economics, General Equilibrium Analysis, Theories of Risk and Uncertainty .
8	II	PESM22	Macro Economic Theory and Analysis – II		The students are learning about Neo-Classical and Keynesian System, Income Theory of Prices, Post Keynesian Developments in Macro Economics, Theory of Income and Employment, Macroeconomic Policies.
9	II	PESM23	Statistical Methods for Economics – II		The students are learning about Probability Theory and Distributions , Sampling Theory, Estimator, Testing of Hypothesis, Sampling Distributions .
10	II	PESM24	Environmental Economics		The students are learning about Environmental Economics, Efficiency and Market Failure, Harvesting renewable and non-renewable resources, Pollution and depletion of quality and quantity of environmental resources, Environment and Economic Policy .
11	II	PESE21	Indian Economy		The students are learning about Economic Development and its Determinants, Planning in Inda, Agriculture, Industrial Growth in India, Infrastructure and Economic Development .

12	II	PESE22	Computer Applications in Economics	The students are learning about MS Office and SPSS, Data Entry, Data Definition, Data Transformation and Analysis, Out put Display .
13	III	PESM31	Mathematical Methods for Economics	At the end of the course the student will be able to use the mathematical tools to anlayse the economic problems
14	III	PESM32	Development Economics	At the end of the course the student will be a development economist
15	III	PESM33	Financial Economics	At the end of the course a student will be a financial analyst
16	III	PESM34	Research Methodology	At the end of the course the student will be able to undertake independent micro or macro issues that warrant research and help in policy making.
17	III	PESE31	Micro Finance	At the end of the course the student will be able to join an MFI or start one.
18	III	PESE32	Industrial Economics	At the end of the course a student will be a opinion leader and consultant in industrial economics
19	IV	PESM41	Labour Economics	The student will be sensitized to the needs of labour and take a proactive stand to frame policies in the field of labour market.
20	IV	PESM42	Human Resource Management	At the end of the course the student will be familiar with the HR principles and practice.
21	IV	PESM43	Public Economics and Public Finance	At the end of the course the student should be able to frame public policies for governance.
22	IV	PESM44	Health Economics	At the end of the course a student should become public policy analyst in health care system.

M.Sc. Botony				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PBOM11	Algology and Bryology	The students are learning about Classification of algae, Role of algae in soil fertility, Classification of Bryophytes, General characters of major orders, Origin of Bryophytes, Ecological adaptations and economic importance of Bryophytes.
2	I	PBOM12	Mycology, Lichenology and	The students are learning about Classification of fungi, Mode of

			Molecular Pathology.	nutrition, Classification of lichens, plant diseases, Diseases of Cereal crops .
3	I	PBOM13	Microbiology and Immunology.	The students are learning about Bacteriology, Mycoplasma and Virology, Food and Industrial Microbiology, Environment and Agricultural Microbiology,Immunology.
4	I	PBOM14	Phytochemistry.	The students are learning about Scope of Phytochemistry, Secondary metabolites, Flavonoids, Glycosides, Volatile oils .
5	II	PBOM21	Pteridophytes, Gymnosperms and Paleobotany	The students are learning about origin of Pteridophytes. Classification of Pteridophytes, Range of morphology, Stelar evolution in Pteridophytes, features of Gymnosperms, Concepts of Palaeobotany .
6	II	PBOM22	Genetics, Cell & Molecular Biology	The students are learning about Structure and functions of nucleus, Sex determination in plants, DNA-types (A, B, C & Z),Damage and DNA repair mechanism, RNA-synthesis-types, One gene one enzyme hypothesis.
7	II	PBOM23	Anatomy. Embryology and Morphogenesis	The students are learning about Meristem, Classification of meristems, Xylem, Phloem and their elements, Wood anatomy, Microsporogenesis,fertilization,Endosperm,Apomixis and Polyembryony, Plant Morphogenesis .
8	II	PBOM24	Entrepreneurship Botany	The students are learning about Gardening, Olericulture and Floriculture, Organic Farming, Mushroom Cultivation and Entrepreneurship .
9	III	PBOM31	Taxonomy of Angiosperms and Economic Botany	To learn about identification and classification of plants • To learn about preparation of herbarium and molecular Plant Systematics • To understand the economic importance of plants in day to day life
10	III	PBOM32	Biochemistry and Biophysics	To gain advanced knowledge about plant biomolecules • To understand different metabolic pathways occurring in a cell • To provide an advanced integral knowledge and understanding

				of topics in Biochemistry and Biophysics
11	III	PBOM33	Computer Applications and Bioinformatics	To learn the basic applications of computer and internet • To gain a working knowledge on computer and search strategies • to understand the scope and application of bioinformatics
12	III	PBOM34	Research Methodology, Bioinstrumentation and Biological Techniques	To understand the basic aspects in research • To learn mathematical and statistical technique for research • To acquire basic knowledge about various instruments and techniques in biological research
13	III	PBOL31	Taxonomy of Angiosperms and Economic Botany, Research Methodology, Bioinstrumentation and Biological Techniques	Identification of plant species included in the syllabus. Preparation of dichotomous key. Identification of Binomial using flora (J.S. Gamble). Dissection and technical description of plants from any locally available plants
14	IV	PBOM41	Plant Physiology	To develop understanding in the mechanisms of functioning of plant cells. • To acquire basic knowledge in physiological processes • To acquire knowledge on impact of environmental factors on physiological process
15	IV	PBOM42	Plant Ecology and Conservation Biology	To gain advanced knowledge about plants and their environment. To acquire knowledge about environmental issues. To understand and implement effective measures in biodiversity conservation programmes
16	IV	PBOM43	Applied Biotechnology	To train the students in advanced level of biotechnological principles and techniques. To understand the process, development of tissue culture through micropropagation and impact of transgenic plants. To develop the skill in pollution abatement through Biofuel production
17	IV	PBOE41	Medicinal Botany and Dietetics	To promote good health by teaching the students about diet and nutrition. • To educate the science of nutrition in preventing development of disease. • To educate on the nutritional standards and specifications for the healthy

				person and patient to ensure and prevent mortality due to malnourishment.

M.Sc. Mathematics				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PMAM11	Algebra – I	The students are learning aboutCounting Principle, Automorphisms, Permutation groups,Sylow's theorems and Finite abelian groups .
2	I	PMAM12	Analysis – I	The students are learning aboutMetric spaces, Convergence sequences,Subsequences,Cauchy sequence,Root test and Ratio test, Continuity, Differentiation .
3	I	PMAM13	Analytic Number Theory	The students are learning aboutThe fundamental Theorem of Arithmetic, Arithmetic functions, Multiplicative functions and Dirichlet Multiplication, Averages of Arithmetical functions, Chebyshev's functions .
4	I	PMAM14	Ordinary Differential Equations	The students are learning aboutSecond Order linear equations, Power series solutions, Legendre polynomials,Bessel functions, Linear systems .
5	I	PMAM15	Numerical Analysis	The students are learning aboutInterpolation, Numerical differentiation, Numerical Integration, Numerical solutions of ordinary differential equations, Predictor corrector Method .
6	I	PMAM21	Algebra II	The students are learning aboutRing Homomorphisms, Euclidean rings, Polynomial rings, Certain radicals of a ring, Quasi regular.
7	II	PMAM22	Analysis II	The students are learning aboutDefinition and Properties of Integral, Integration of vector valued functions, Uniform Convergence and Integration, The Stone Weierstrass Theorem, The algebraic completeness of the complex field.
8	II	PMAM23	Classical Mechanics	The students are learning aboutMechanics of particle, D'Alembert's Principle and Lagrange's equation, Hamilton's Principle,

				Reduction to the equivalent one-body problem, The differential equation for the orbit and integrable power law potentials.
9	II	PMAM24	Differential Geometry	The students are learning aboutThe theory of space curves, Contact between curves and surfaces, Definition of a surface, Families of curves, Geodesic curvature , The Second Fundamental form.
10	II	PMAM25	Graph Theory	The students are learning aboutTrees, Euler tour, Matching, Independent sets, Vertex Colouring.
11	II	PMAE23	Partial Differential Equations	The students are learning aboutMethods of Solution,Pfaffian Differential Forms and Equations, Partial Differential equations, Cauchy's Method of Characteristics, Second order equations in Physics, Characteristics of Equations in three variables.
12	III	PMAM31	Measure and Integration	Gain the knowledge of measure spaces and measure interruption . Understanding the concept of lesbeaguemeasure ,lesbeague integration and signed measure . To provide the understanding of general measure spaces
13	III	PMAM32	Topology – I	To distinguish space by means of Simple Topological invariants • Gain the knowledge of constructing spaces by giving and to prove that in certain case, that the result is homeomorphic to standard spaces.
14	III	PMAM33	Advanced Algebra - I	The aim of the paper is to introduce some of the most fundamental algebraic structures like inner product space, Determinants, etc.
15	III	PMAM34	Operations Research	To modify rual life into Standard Mathematical Models . To learn different optimization techniques. To know classification of different structured problems.
16	III	PMAM35	Research Methodology	To understand the Basic aspects in research. To learn Mathematical and Statistical technique for research. To acquire basic knowledge about various instruments and techniques in Mathematical research

17	III	PMAE32	Calculus of Variations and Integral Equations	The objective of this paper is to place at the disposal of the student, the basis of an intelligent working knowledge of a number of facts and techniques which are useful in varied fields of application.
18	IV	PMAM41	Functional Analysis	To gain knowledge about Banach Spaces, Hilbert Spaces and Banach Algebra. To use algebraic structure in Analysis.
19	IV	PMAM42	Complex Analysis	To gain advanced knowledge about Complex functions and Analytic functions as mappings. To understand the concept of Analyticity Conformality, Linear Transformation and Complex Integration.
20	IV	PMAM43	Advanced Algebra – II	Gain knowledge in fields in the theory of numbers,the theory of equations and Galois theory .
21	IV	PMAM44	Topology - II	Gain knowledge in separation axioms in Topological Spaces. Understanding the concepts of Normal and Regular Spaces.

M.Sc. Physics				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PPHM11	Classical Mechanics	The students are learning about Fundamental Principles and Lagrangian Formulation, Motion Under a Central force, Rigid Body Dynamics, Hamilton's Formulation,Mechanics of Small Oscillations .
2	I	PPHM12	Mathematical Physics – I	The students are learning about Vector analysis, Matrices, Special functions, Fourier's Integral Transforms, Laplace Integral Transforms .
3	I	PPHM13	Integrated Electronics	The students are learning about Devices, Applications and Integrated Circuits, Digital Electronics, OP AMP and Applications, Timer, VCO, PLL, and Applications, Electronic Measurement and Control .
4	I	PPHM14	Nonlinear Dynamics	The students are learning about Nonlinearity, linear and nonlinear oscillators, Equilibrium points, bifurcations and chaos, Chaos in nonlinear electronic circuits, Fractals,

				Solitons .
5	I	PPHM21	Mathematical Physics – II	The students are learning aboutComplex analysis, Group theory, Special functions, Partial Differential Equations, Tensor analysis .
6	I	PPHM22	Condensed Matter Physics	The students are learning aboutCrystallography and crystal binding, Lattice vibrations, Free electron theory, Energy bands and Semiconductor crystals, Dia, Para, Ferro and Anti ferro magnetism, Dielectrics, Ferroelectrics and Super conductivity .
7	II	PPHM23	Microprocessor 8085 and Microcontroller 8051	The students are learning aboutIntroduction to 8085 Microprocessor, Programming 8085 , Interfacing and peripheral devices, Micro Controller 8051,Micro Processor based system design and applications .
8	II	PPHM24	Numerical Methods and Programming in C++	The students are learning aboutRoots of equations and eigen-value problems, Interpolation, Numerical differentiation and integration, Solution to ordinary and partial differential equations, C++ Programming applications .
12	III	PPHM31	Quantum Mechanics I	This course imparts knowledge about wave functions and Schrodinger equations and matrix mechanics, Heisenberg uncertainity principle and different operators and certain solvable systems and various pictures involved in quantum mechanics. Basics of quantum mechanics are essential. Methods of solving some microscopic problems using quantum mechanical ideas are studied.
13	III	PPHM32	Electromagnetic Theory	The scope of this course is to impart the knowledge of Maxwell's equation, propagation of electromagnetic waves through various media including waveguides.
14	III	PPHM33	Statistical Mechanics	The basic concepts involved in statistical mechanics, classical and quantum statistics, applications of quantum statistics, phase transition in certain physical problems is expected to study. The theory of statistics and quantum ideas are prerequisites. Postulates of quantum mechanics,

Sl.No	Sem	Sub Code	Title	Objective
				Maxwell-Boltzmann distribution law, theory and applications of quantum statistics are studied.
15	III	PPHM34	Research Methodology	Literature collection, activities involved in the research problem, method of writing the thesis, knowledge about Origin and Latex are expected to learn. Different methods of analysis and computer knowledge are prerequisites. The outcome of the course is how to collect literatures, write the research article and thesis.
16	IV	PPHM41	Quantum Mechanics II	The course provides knowledge on the theory of angular momentum, various approximation methods, and theory of scattering and relativistic quantum theory. The various aspects studied in the course quantum mechanics I is essential. This course is capable of solving many problems that cannot be exactly solved.
17	IV	PPHM42	Spectroscopy	This course gives detailed knowledge about various types of spectroscopy. The structure of different chemical compounds can be determined by studying these types.
18	IV	PPHM43	Nuclear and Particle Physics	This course imparts knowledge about the elementary particles, nuclear structure, nuclear reactions with the help of various nuclear models.

M.Sc Chemistry				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PCHM11	Organic Chemistry – I	The students are learning about Aromaticity, Novel ring system, Reaction mechanism, Stereochemistry, Rearrangement reactions and Reagents in organic synthesis.
2	I	PCHM12	Inorganic Chemistry – I	The students are learning about Chemical bonding, Redox potential and non aqueous solvents, Solid state chemistry, Lanthanides, Actinides and Nuclear chemistry.

3	I	PCHM13	Physical Chemistry – I	The students are learning about Thermodynamics, Phase rule, Thermodynamics of irreversible processes, Quantum chemistry, Statistical thermodynamics and Molecular spectroscopy.
4	I	PCHE11	Advanced Topics in Chemistry - I	The students are learning about Green chemistry, Nano chemistry, Applied electro chemistry, Analytical chemistry and Industrial chemistry.
5	II	PCHM21	Organic Chemistry – II	The students are learning about UV, Infra, Red spectroscopy, ORD and CD, Aromatic nucleophilic substitution reaction, carbon-carbon multiple bonds and carbon-oxygen double bond, Reactive intermediates and rearrangements, Alkaloids and Antibiotics, Vitamins and Terpenoids.
6	II	PCHM22	Inorganic Chemistry – II	The students are learning about Bonding in coordination compounds, stability and reactions of coordination compounds, Electronic and Infrared Spectroscopy, Magnetic properties of metal complexes, Inorganic polymers and Metal clusters.
7	II	PCHM23	Physical Chemistry – II	The students are learning about Quantum mechanics, Electrochemistry, Photochemistry and Radiation chemistry.
8	II	PCHE21	Advanced Topics in Chemistry - II	The students are learning about Forensic and Computer application in chemistry, Applications of nanomaterials, Industrial polymer, Medicinal chemistry, Bio-Oraganic chemistry.
9	III	PCHM31	Organic Chemistry – III	To understand the Aliphatic Nucleophilic substitutions, concept of NMR, Mass spectroscopy, Photochemistry, Pericyclic, Heterocyclic reactions.

10	III	PCHM32	Inorganic Chemistry – III	To introduce organometallic compounds and to study their catalytic applications in homogeneous and heterogeneous systems. To study the applications of NMR and EPR techniques in inorganic systems. To understand the basic principles and applications of thermo and spectro analytical techniques. To introduce inorganic photochemistry and to study applications in various systems.
11	III	PCHM33	Physical Chemistry – III	Learning the concepts of Group Theory. To understand the Principles and applications of various spectroscopy.
12	III	PCHM34	Scientific – Research Methodology	How to learn the survey for literature, chemical abstract, choosing a research problem and scientific writing, characterization and data analysis, computer searches and literature. How to apply for the various finding agencies.
13	IV	PCHM41	Organic Chemistry – IV	To study the intermediate reactions, conformational, synthetic analysis, important Reagents in organic synthesis and the Steroid compounds.
14	IV	PCHM42	Inorganic Chemistry – IV	To study the applications of Mossbauer, photoelectron and nuclear quadrupole resonance spectroscopic techniques in inorganic systems. To study the applications of ORD and CD to determine absolute configuration of chelate complexes. To introduce bioinorganic chemistry and to study role of metalloporphyrins and metalloenzymes in various biological processes. To give an insight into material science.
15	IV	PCHM43	Physical Chemistry – IV	To understand the Principles and applications of Vibrational and

				Raman spectroscopy. To obtain Knowledge Fast reaction study. To learn the Theories and applications of Kinetics.To Know the Principles of Surface Chemistry and Catalysis.

M.Com				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PKCM11	Management Accounting	The objective of the course is familarising the management accounting practices used by management for effective administration.
2	I	PKCM12	Advanced Business Statistics	The objective of the course is to acquaint students with important statistical techniques for managerial decision making.The emphasis will be on their applications to business and economic situations.
3	I	PKCM13	Management concepts and Organisationalbehaviour	The objective of this course is to help students understand the conceptual frame work of management and organizational behavior.
4	I	PKCM14	Office Automation	The objective of the course is to make the students to learn modern methods of office automation through computer.
5	I	PKCM15	Modern Marketing Management	The course intends to impart students with modern marketing management practices.
6	II	PKCM21	Financial management	The objective of the course is to make the students acquainted with modern principles of financial management.
7	II	PKCM22	Quantitative Techniques for Decision Making	The objective of the course is to acquaint the students with the use of quantitative models in decision making.
8	II	PKCM23	Legal Frame work of Business	To create the knowledge of Legal perspective and its practices to improve the business.
9	II	PKCM24	Business Environment	The objective of the course is to make the students to understand the changing

				environment around the business.
10	II	PKCM25	Retail Management	The students are learning about Formats and functions of Retailing, Retail Merchandising, Retail location strategy, Retail Market Segmentation, Retail Store Operation.
11	II	PKCE21	Entrepreneurship Development	The students are learning about Types, characters and functions of Entrepreneurs, Entrepreneurial Motivation, Micro, small, medium Enterprises, Finance and accounting, Concept of Women Entrepreneurs.
12	III	PKCM31	Advanced Corporate Accounting	To educate students on recent developments in corporate accounting. To teach the students on various requirements of corporate reporting. To develop skill in preparation of accounts of companies. To help the students to understand the techniques of restructuring and liquidating corporate entities. To make the students to qualify to get employment in corporate companies.
13	III	PKCM32	Taxation and Tax Planning	To educate the students on tax implications on business. To feed latest developments in corporate taxations. To make the students to know about various tax planning methods to minimize tax liability. To educate tax planning and assessment procedures for individuals, firms and companies.
14	III	PKCM33	E-Commerce	To buildup basic knowledge on electronic business. To educate students on online marketing. To make e commerce and internet marketing familiar with students. To make the students to devise marketing strategies for concerns engaged in ecommerce. To understand the current status of e-business.
15	III	PKCM34	Human Resources Management	Imparting knowledge on the importance of human resource management in business. Assisting the

				learner to apply the principles of human resource management gained through this course in solving the major personnel issues. Helping to improve self-confidence of the students. Developing Human Resource Management skill. Educating modern practices of human resources management.
16	III	PKCM35	Research Methodology	It aims to develop an understanding on the basic framework of research process. It makes to understand various research design and techniques. To identify various sources of information for literate review and data collection. Organize and conduct research in more appropriate manner.
17	III	PKCE31	Modern Banking	Introducing the modern banking system and practices to the learners. Develop an in depth knowledge on the modern banking system. Imparting functional knowledge in the areas of banking process and procedures. Developing an understanding on the traditional and modern functions of banks.
18	IV	PKCM41	Advanced Cost Accounting	Educating the students on the differences between cost accounting, management accounting and financial accounting. Making the students to understand the assumptions underlying material, labour, overheads. Educating students on reconciliation of cost and financial accounts. Teaching different types of costing system in operation.
19	IV	PKCM42	Indirect Taxation	To provide a basic knowledge about GST. To expose the students with the latest development in GST. To train the students to calculate GST. To assist in indirect tax planning. To develop an understanding on customs law.
20	IV	PKCM43	Financial Markets	The Course aims at providing the students on basic knowledge about the financial markets. Developing an

				analytical framework needed to understand financial markets and institutions . Introduce the real-world issues and problems in financial markets to students. Educating the pricing conventions in the financial market. Educating the students on the role of intermediaries and its regulating bodies.

M.Sc Computer Science				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PCSM11	Design and Analysis of Algorithms	The students are learning about the introduction to design and analysis of algorithms, Divide And Conquer, The Greedy Method, Basic Traversal And Search Techniques, Branch and Bound.
2	I	PCSM12	Advanced Java Programming	The students are learning about Classes and Objects, J2EE Multi-Tier Architecture, JDBC Objects, Java Servlets, Enterprise Java Bean.
3	I	PCSM13	Mathematical Foundation for Computer Science	The students are learning about Mathematical Logic, Set Theory, Matrices, Graph Theory, Trees and Fundamental Circuits.
4	I	PCSM14	Object Oriented Systems Development	The students are learning about Overview of Object Oriented Systems Development, Object Oriented Methodology, Object Oriented Analysis, OOD process and design axioms, Software Quality Assurance.
5	I	PCSM15	Distributed Computing	The students are learning about Fundamentals, Message Passing, Remote Procedure Calls, Synchronization, and Distributed File System.
6	II	PCSM21	Web Application Development	The students are learning about ASP.NET Introduction, NET language, Types, Objects and Namespaces, ASP.NET Applications, Web Form fundamentals, Web control classes, Validation and Rich Controls, State management, ASP.NET Intrinsic Objects, Data Access with ADO.NET, ADO.NET data access, Comparing the template control.

7	II	PCSM22	Open Source Technology	The students are learning about Introduction to UNIX, Linux GNU, Working with files, Why PHP & MySQL – What is PHP? – What is MySQL?, Passing information between Pages, PHP/MySQL Functions.
8	II	PCSM23	Advanced Data Base Management System	The students are learning about Introduction to Relational Model, Database Design and the E-R Model, Relational Database Design, Indexing and Hashing, Concurrency Control, Database System Architecture.
9	II	PCSM24	Security in Computing	The students are learning about Cryptography, Program Security, and Security in Databases, Security in Networks, Legal and Ethical Issues in Computer Security, Computer Crime.
10	II	PCSE21	Data Mining	The students are learning about Introduction of data mining, Data Mining Techniques, Classification, Clustering, Association Rules, Web Mining.
11	II	PCSE22	Multimedia Systems	The students are learning about Uses of Multimedia Information, Digital Audio Representation and processing , Video Technology, Digital Video and Image Compression, Operating System Support for Continuous Media Applications, Middleware System Services Architecture , Multimedia Services over the Public Networks, High Definition Television and desktop computing.
12	II	PCSE23	Cloud Computing	The students are learning about Cloud computing Architecture, Virtualization in Cloud, Virtualization System specific Attacks, Service Oriented Architecture, Migrating Applications to the Cloud computing, Standards in Cloud Computing, Microservices.
13	III	PCSM31	Digital Image Processing	- To understand the broad base of theoretical concepts of image - To implement the concepts with the state of art of image processing using MATLAB
14	III	PCSM32	Soft Computing	- To explore the benefits computing methodologies like neural networks, fuzzy logic and genetic algorithms. - To enable the students to develop hybrid systems for the industrial problems.

15	III	PCSM33	Software Testing	- To enable a clear understanding about software tester - To apply software testing knowledge and engineering concepts to detect errors in the software - To practice software oriented testing projects - To prepare software testing techniques and tools for industry standards.
16	III	PCSM34	Research Methodology	- To enable the students to know about the information needs of the research domain - To introduce the concept of scientific research and the methods of conducting scientific enquiry
17	III	PCSE31	Principles of Compiler Design	- To discover principles and techniques that can be used to construct various phases of compiler. - To explore knowledge about parsers, optimization technique
18	III	PCSE32	Big Data Analytics	- To understand the fundamental concepts of big data analytics - To explore the knowledge about big data computing and data mining, Data integration and extraction - To develop state-of-the-art Big Data platform in research, education and industrial applications
19	III	PCSE33	Mobile Computing	- To understand fundamental concepts of mobile computing - To impart knowledge about PALM OS & Symbian OS - To provide a computer, system perspective on the converging areas of wireless networking.
20	IV	PCSP41	Major Project	The objective of the project is to enable the students to work in a project of latest topic / research area / industrial applications. Each student shall have a guide from the Department. During this semester the students are expected to do literature survey, formulate the problem and form a methodology of arriving at the solution of the problem. Also during this semester, the students are expected to complete the project and submit a full-fledged report comprising of the complete system developed along with implementation and test results.

**M.Sc Electronics**
Sl.No	Sem	Sub Code	Title	Objective
1	I	PELM11	Solid State Electronic Devices	The students are learning about crystal properties and growth of semiconductors, energy bands and charge carriers, metal oxide semiconductor fet, opto electronic devices, high frequency and high power devices.
2	I	PELM12	Applied Mathematics	The students are learning about matrix, partial differentiation, multiple integrals, Laplace transforms, Fourier series.
3	I	PELM13	Signals and Systems	The students are learning about dynamic representation of systems, Fourier analysis, Fourier analysis of discrete time signals, Laplace transformand random signals.
4	I	PELM14	Network Theory	The students are learning aboutsource transformation, network theorems, Fourier analysis, two-port networks and filters, network synthesis
5	II	PELM21	Digital Signal Processing	The students are learning about review of signals and systems, finite impulse response (fir) filters, discrete Fourier transform, finite word length effects in digital filters, applications of digital signal processing.
6	II	PELM22	Embedded Systems	The students are learning aboutoverview of embedded system, embedded hardware & software development environment, embedded communication system, real time & database applications, java applications & future trends in embedded systems.
7	II	PELM23	Advanced Microprocessors	The students are learning about cisc principles, Pentium processors, risc principles, risc processor and special purpose processors.
8	II	PELM24	Communication Theory	The students are learning about introduction, radio transmitters, radio receivers, side band communication and telephone systems.
9	III	PELM31	Electromagnetic Theory	The students are learning aboutreview of vector analysis, magnetic field, Maxwell's equations and travelling waves, guided waves, transmission lines.

10	III	PELM32	Nano Electronics	The students are learning aboutintroduction to nanotechnology, fundamentals of nanoelectronics, silicon mosfets& quantum transport DEVICES, carbon nanotubes, molecular electronics.
11	III	PELM33	Digital Design Using VHDL	The students are learning aboutintroduction & basic languages, behavioral modeling, data flow and structural modeling, subprograms and packages, simulation and hardware modeling
12	III	PELM34	Research Methodology for Electronics	The students are learning aboutan Introduction to research, Sampling Design, Methods of Data Collection and Analysis, Techniques of Hypotheses, Analysis of Variance and Covariance ANOVA.
13	IV	PELM41	Advanced Medical Electronics	The students are learning aboutBiomedical instruments, Biomedical measurements, Biomedical measurements, X ray imaging and measurements, Bio-telemetry.
14	IV	PELM42	Micro Electro Mechanical Systems	The students are learning aboutintroduction, sensors and actuators, micro machining, polymer and optical mems.
15	IV	PELM43	Advanced Microcontrollers	The students are learning aboutlow pin count controllers, timers, national semiconductor, power saving modes, microchip.

MSc Nano Science and Nanotechnology

Sl.No	Sem	Sub Code	Title	Objective
1	I	PNNM11	Mathematical Physics	This course enable the students to understand the various mathematical methods used in Physics. The paper need a basic knowledge in mathematics and the learners are expected to come out with the ability to apply mathematics to solve problems in physics.
2	I	PNNM12	Quantum Mechanics	This course imparts knowledge about wave functions and Schrodinger equations and matrix mechanics, Heisenberg uncertainty principle and different operators involved in quantum mechanics. Basics of quantum mechanics are essential. Methods of solving some microscopic problems using quantum mechanical ideas are studied.
3	I	PNNM13	Solid State Physics	Objective of this paper is to introduce crystals and to provide an understanding about different types of materials. The paper needs a basic knowledge of semiconductors and super conductors and the learners are expected to get some ideas on Materials Research.
4	I	PNNM14	Electronics- Theory	This course provides an understanding of Boolean algebra and digital circuits. The paper need a basic knowledge in solid state electronics and the learners are expected to gain knowledge to design electronic circuits.
5	II	PNNM21	Fundamentals of Nanoscience	This course provides an understanding of nanoscience and nanotechnology. The papers need a basic knowledge in nano sized materials and the learners are expected to gain knowledge about nanoscience.
6	II	PNNM22	Synthesis of Nanomaterials	This course facilitates an understanding of various synthesis methods to fabricate nanomaterials. This paper gives knowledge in the preparation of nanomaterials. The learners are expected to come out with the ability to use the synthesis methods to prepare nanomaterials.

7	II	PNNM23	Properties of Nanomaterials	This course facilitates an understanding of various properties of nanomaterials such as electrical, magnetic, optical, mechanical and thermal properties. The learners are expected to come out with the ability to use this property for their research work.
8	II	PNNM24	Numerical Methods	This course facilitates an understanding of various approximation methods. The paper needs knowledge in mathematics and the learners are expected to come out with the ability to use approximation methods to find solution to problems which do not have exact solutions.
9	III	PNNM31	Characterization of Nanomaterials	This course enables the students to understand the various characterization methods such as diffraction, structural, mechanical and optical techniques. The paper needs a basic knowledge in different characterizations and the learners are expected to come out with the ability to choose proper characterization for their research work.
10	III	PNNM32	Nanoelectronics	This course facilitates an understanding of challenges in nano electronics and to gain knowledge about molecular electronics, single electron devices, nano computers and spintronics. The paper needs a basic knowledge about nano devices and the learners are expected to gain knowledge about nanoelectronics.
11	III	PNNM33	Basics of Nanobiotechnology	This course enables the students to understand the various applications of nanobiotechnology. The paper needs a basic knowledge in nanobiotechnology, nanotherapeutics etc. The learners are expected to come out with the ability to choose proper biological applications.
12	III	PNNM34	Research Methodology	This course enables the students to understand the fundamentals of research and they gathered knowledge about execution and reporting of research. The paper needs a basic knowledge in research ethics and the learners are expected to come out with the ability to choose proper ideas about research.

			M.Phil Commerce		
Sl.No	Sem	Sub Code	Title	Objective	
13	IV	PNNM41	Magnetic Nanomaterials and Devices	This course facilitates an understanding of magnetic effects of nanomaterials and devices. This paper contains fundamentals of magnetism, Lorentz microscopy, magnetic force microscopy and basic concepts of Kerr effect and Faraday effect. The learners are expected to come out with the ability to gather knowledge about magnetic nanomaterials.	
14	IV	PNNM42	Nanosensors	Objective of the course is to provide knowledge about the basics of micro and nano sensors. The students also studies about the various types of biosensors and surface Plasmon resonance. The learners are expected to come out with the ability to choose proper ideas about nanosensor devices.	
15	IV	PNNM43	Nanomedicine and Drug Delivery	This course facilitates an understanding of bio – pharmaceuticals and drug delivery. It also deals with the drug delivery to brain pharmaceutical nanocarriers in the treatment and imaging of inflection. The learners are expected to come out with the ability to choose proper ideas about medical applications.	
16	IV	PNNM44	Ethical Aspects of Nanotechnology	This course enables the students to understand the various ethical considerations in nanotechnology. It also facilitates the safety of nanoparticles and their applications of purification. The learners are expected to come out with the ability to choose proper ideas about the aspect of nanotechnology.	
17	IV	PNNE41	Carbon Nanostructures and Applications	This course enables the students to understand the structural symmetry of carbon nanotubes. The learners are expected to gain knowledge about various properties of carbon nanotubes, radial breathing mode and induced Dmode.	

1	I	PCOC11	Research and Teaching Methodology	➢ To enable the students acquire knowledge on Research methods. ➢ To enable the students develop understanding of Research design. ➢ To enable the students apply their knowledge in carrying out research. ➢ To enable the students develop skills to undertake research in select areas.	
2	I	PCOC12	Contemporary Functional Management	➢ To enable the students acquire overall knowledge on functional management. ➢ To enable the students develop understanding of the components of functional management. ➢ To enable the students apply the acquired knowledge in solving the business issues. ➢ To enable the students develop skills in areas of functional management.	
3	I	PCOO11	Professional Competencies	➢ To enable the students acquire overall knowledge on Professional Competencies. ➢ To enable the students develop understanding on Professional Competencies. ➢ To enable the students apply the acquired knowledge Professional Competencies ➢ To enable the students develop skills of Professional Competencies. ➢ To enable the students to compete in the professional competitive examination	

			M.Phil Economics	
Sl.No	Sem	Sub Code	Title	Objective
1	I	PESC11	Research and Teaching Methodology	The main objective of this paper is to train the students to use the techniques of statistical analysis, which are commonly applied to understand and analyze economic problems. The emphasis of this paper is on understanding economic concepts with the help of statistics. The paper also deals with simple statistical and econometrics tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences about various statistical hypotheses. This course also includes methodology of teaching.
2	I	PESC12	Recent Development in Economic Theory	To make the students understand the application of economic theory and models in actual practice
3	I	PESO11	Indian Economy Issues and Development	This course will provide the students with a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy. It also helps to the students contribute to the formulation of its policies in order to achieve this.

M.Phil History				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PHYC11	Research and Teaching Methodology	The Syllabus covers the basic concept of Ancient, Medieval and Modern Historiography. The Syllabus is very useful to learn the different trends in Historical writings and Components of Research Methodology.
2	I	PHYC12	Study of archival sources	This Course aims to understand the History of Archives, Types of Archives, Functions of Archives and Uses of Archives. This Course also highlighted the functions of National Archives of India, Tamil Nadu State Archives and Record Keeping Methods etc.
3	I	PHYO11	Archaeology and epigraphy: principles and methods	The syllabus covers the basic concept of Excavation principles and conservation techniques of Archaeology and Epigraphy. The study will create a deep knowledge of dating and recording of antiquities and Inscriptions of Cholas, Pandiyas, Pallavas and Vijayanagar.

M.Phil Computer Science				
Sl.No	**Sem**	**Sub Code**	**Title**	**Objective**
1	I	PCSC11	Research and Teaching Methodology	To understand the importance of Research Methodology .To ensure the reliability and validity of experiments. To perform exploratory data analysis. To apply the statistical testing to prove the hypothesis. To provide the inference using quantitative data analysis. To make use of computer aids to analyze the data, prepare reports and presentations. Able to evaluate methodology of teaching.
2	I	PCSC12	Recent Research Topics in Computing	To apply AI techniques primarily for machine learning, vision, and robotics. To understand the fundamentals of Internet of Things. To study about virtualization and cloud resource management. To model and visualize the social network. To introduce visual perception and core skills for visual analysis. Learn developmental and artificial immune systems. To get

				exposed to the domain of bioinformatics. To know about various applications of natural language processing. Understand behavioural systems especially in the context of Robotics.
3	I	PCS013	Data Mining and Warehousing	This course will introduce the concepts, techniques, design and applications of data warehousing and data mining. Learning Outcome and End use. Appreciate the strengths and limitations of various data mining and data warehousing models. Describe and utilize a range of techniques for designing data warehousing and data mining systems for real-world applications.

M.Phil Zoology				
Sl.No	**Sem**	**Sub Code**	**Title**	**Objective**
1	I	PZOC11	Research and Teaching Methodology	To provide in-depth Knowledge on methods involved in preparation of working solutions, quantitative and also on the working principles of equipments involved in research and teaching pattern.
2	I	PZOC12	Animal Bio-Diversity	To provide knowledge on animal diversity, its significance in natural environmental and conservation strategies.
3	I	PZOO	Applied Zoology	To provide knowledge on vermiculture techniques, harmful insects related to agriculture, infectious and communicable diseases, live stocks diseases and farming also on the significance and economic importance of sericulture and apiculture.

M.Phil Botany				
Sl.No	**Sem**	**Sub Code**	**Title**	**Objective**
1	I	PBOC11	Research and Teaching Methodology	To understand the principles and operation of basic and advanced instruments required for doctoral research. To analyse the scientific

				findings and data by applying certain statistical methods and software. To learn the methods of teaching and carrying out scientific research, documentation and communication.
2	I	PBOC12	Advances in Plant Science	To comprehend the important aspects of biodiversity and conservation methods. To make the scholar abreast in advanced areas of plant science and the recent developments. To equip the scholar to learn the theoretical and application concepts on economic and medicinal importance of plants.
3	I	PBOO	Marine Botany	Students will be introduced to marine and estuarine environments. Students will become familiar with the major micro- and macro- algal groups and marine vascular plants. Students will appreciate the roles played by algae, seagrasses and aquatic vascular plants in aquatic ecosystems. Students will become aware of how natural events and human activities affect coastal habitats.

M.Phil Physics				
Sl.No	Sem	Sub Code	Title	Objective
1	I	PPHO11	Research and Teaching Methodology	To introduce the knowledge on research. This paper provides a broad knowledge on methods of research, problem solving and analytical techniques.
2	I	PPHC12	Advanced Physics	To impart knowledge on various materials of technological importance. To make the students learn the basics of quantum mechanical calculations, nanomaterials, thin films, environmental physics and biophysics.
3	I	PPHO	Non Linear Dynamics	To understand the basic concepts of nonlinear dynamics. This course provides knowledge about the effects of nonlinearity on dynamical systems.

Sl.No	Sem	Sub Code	Title	Objective
			M.Phil Mathematics	
1	I	PMAC11	Research and Teaching Methodology	The objective of the paper is to introduce algebraic structure through the modules and different types of modules and it's algebraic application.
2	I	PMAC12	Advanced Analysis	The objective of the paper is to understand borel measure in real and complex. Field. Prerequisite for this course is a good knowledge in calculus, real and complex analysis, topology and measure theory concepts. Motivation is to prepare scholars with Lp spaces for the study of analysis.
3	I	PMAO11	Banach Algebra and Spectrial Theory	To introduce the students to the topics of Banach algebra and Hilbert spaces. Knowledge expected is to be aware of the background concepts in algebra. The students are expected to know about functionals. This will motivate the students to learn about various operators and their characteristics.