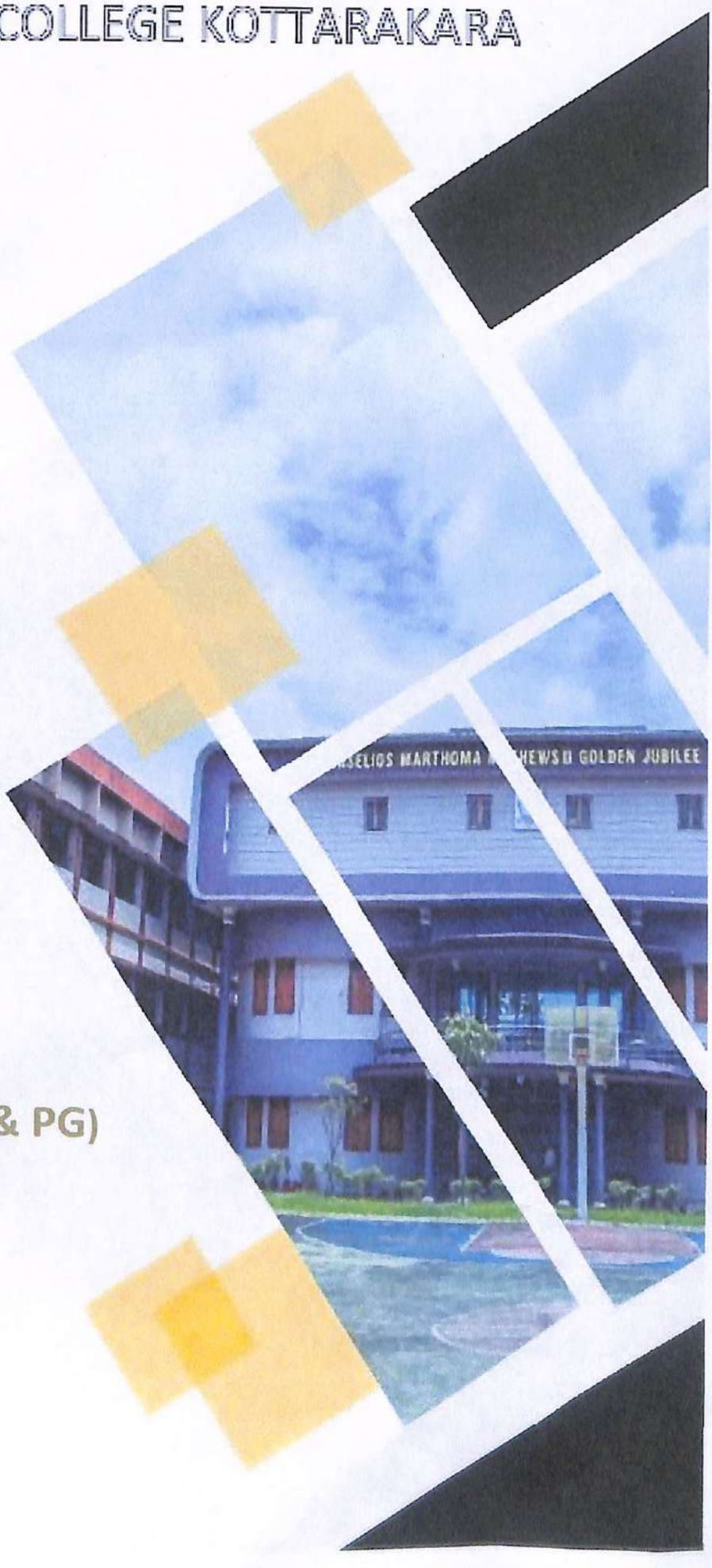
ST. GREGORIOS COLLEGE KOTTARAKARA



COURSE OUTCOMES (UG & PG)

UNDER-GRADUATE PROGRAMMES

Name of the Programme: BSc. CHEMISTRY

Course Code	Course Title		Course Outcomes
SEMESTER 1			
CH 1141	Inorganic Chemistry I	CO1	Helps to learn the structure of atom, periodicity and non-aqueoussolvents.
		CO2	It enables them to appreciate the inner structure and chemicalproperties of elements
SEMESTER 2			
CH 1221	Inorganic Chemistry II	CO1	On completion of the course, the student will be able to understand, how science or in special chemistry works. They willget a basic understanding to do self-directed experimentation work and research in chemistry under the guidance and supervision of a mentor.
		CO2	Analytical chemistry helps the student to understand about the experimental parts of the theory and the safety measures whichcould follow when doing experiments using chemicals.
SEMESTER 3			
CH 1341	Inorganic Chemistry II	CO1	The student gets fundamental to detailed knowledge in chemicalbonding,
		CO2	The student gets fundamental to detailed knowledge in compounds of non-transition elements. and nano materials.
		CO3	Students get a thorough knowledge in nuclear chemistry
SEMESTER 4			
CH 1441	Organic Chemistry Paper I	CO1	It imparts the behavior of aliphatic and aromatic compounds andintroduces the concept of reaction mechanism
		CO2	It makes the student to understand the mechanism of reactions oforganic compounds, steriochemical aspects, photochemical reactions and aromaticity.
SEMESTER 5			
CH 1541	Physical Chemistry I	CO1	Students will gain exposure and practice in the areas of physical chemistry which include gas and liquid properties, thermodynamics and group theory.
CH 1542	Inorganic Chemistry III	CO2	Students will gain exposure and practice in the areas og inorganic chemistry which include, Co-ordination chemistry, transition and inner transition elements. chemistry and how their elements are isolated from their ores
CH 1542	Inorganic Chemistry III	CO3	The students would be able to realise the role of organometallicsin organic synthesis.
		CO4	instrumental method of analysis and general principle of isolationof elements help the students to understand about the experimental techniques used in
	Organic	CO1	The student will get interesting idea about the preparation and properties, mechanism of reactions of many organic conversions and of organic compounds.

CH1543	chemistry II	CO2	They will also get sufficient knowledge to interpret spectrum of organic compounds and novel areas of organic chemistry-the supramolecular and green chemistry
			SEMESTER 6
CH1641	Physical Chemistry II	CO1	Student will able to derive essential mathematical relationshipsin thermodynamics, quantum mechanics and spectroscopy
		CO2	Students will evaluate physical and chemical systems by nonspectroscopic techniques
CH1642	Organic Chemistry paper III	CO1	The students will get an interesting idea about the preparation andproperties, mechanism of reactions of many organic conversions and of organic compounds
CH1643	Physical Chemistry paper III	CO1	Student will get an idea about the basics of electrochemistry andits importance to modern industry and technology
		CO2	the course introduce various types of reactions and differentfactors that determine the rate of chemical changes.
		CO1	The course also includes the study of phase diagrams of one, twoand three component systems and elementary ideas of photochemistry.
CH1661.3	Polymer Chemistry	CO2	Student will get idea of recent developments in plastic and rubbertechnology.
		CO1	Student will get elementary idea of synthesis, chemistry, property and application of elastomers and varoius polymer processing in the polymer industry in India.

Name of the Programme: BSc. BOTANY

Course Code	Course Title		Course Outcomes
			SEMESTER 1
BO 1141	Angiosperm Anatomy, Reproductive Botany And Pali Nology	CO1	To develop skills for identification of microscopic structures.
		CO2	To distinguish various tissue systems and internal structure.
		CO3	To acquire basic knowledge about embryo development and pollen grains.
			SEMESTER 2
BO 1221	Methodology And Perspectives In Plant Sciences	CO1	To familiarize the students with the fundamental characteristics ofscience and significance of scientific studies.
		CO2	To apply scientific methods independently and familiarizeinstruments in biological labs.
		CO3	To interpret scientific data using basic statistical methods.
			SEMESTER 3
BO 1341	Microbiology, Phycology, Mycology, Lichenology And Plant Pathology	CO1	To familiarise characteristic features of microbes and theirsignificance.
		CO2	To creates awareness about importance of microbes inenvironment..
		CO3	To generates idea about types of algae, fungi, lichen and theireconomic as well as evolutionary significance.
			SEMESTER 4
BO 1441	Bryology, Pte Ridology, Gymnosperms And Palaeo Botany	CO1	To familiarise the students characteristic features and evolutionary significance of Bryophytes, Pteridophytes andGymnosperms.
		CO2	To generate awareness about lifecycle of Bryophytes,Pteridophytes and Gymnosperms.
		CO3	To impart knowledge about fossil formation and its significance.
			SEMESTER 5

BO 1541	Angiosperm morphology, systematic botany,	CO1	To introduce importance of morphological characters inclassification and plant identification.
	Botany, ethno botany and	CO2	To develop skill for herbarium preparation
		CO3	To acquire knowledge about economic,ethnobotanical significanceand pharmacognosy of plants.
BO 1542	Environmental Studies And Phytogeography	CO1	To create awareness about ecosystem and Natural resources.
		CO2	To generate knowledge knowledge about importance ofBiodiversity conservation.
		CO3	To understand the need to mitigate pollution and Strategies fordisaster management.
BO 1543	Cell Biology, Genetics And Evolutionary Biology	CO1	To create awareness about cellular organelles.
		CO2	To develop skills to identify cell stages and workout problems inclassical genetics.
		CO3	To introduce different theories of evolution.
SEMESTER 6			
BO1641	Plant Physiology And Biochemistry	CO1	To understand physiology of absorption, photosynthesis andrespiration.
		CO2	To study physiological responses in growth, movements andflowering of plants
		CO3	To generates awareness about biomolecules.
BO 1642	Molecular Biology, General Informatics & Bioinformatics	CO1	To generate awareness of genetic material and gene expression.
		CO2	To get an overview of information technology.
		CO3	To develop skill for using internet, biological databases andmolecular visualization tools.
BO 1643	Horticulture, Plant Breeding & Research Methodology	CO1	To get an awareness in principles and methods of gardening.
		CO2	To understand plant breeding techniques and develop skill forhybridization
		CO3	To get knowledge about research methodology and preparation ofprojects.

Name of the Programme: BCOM

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
CO 1141	Environmental Studies	CO1	To enable the students to acquire basic ideas about environmentand emerging issues about environmental problems.
		CO2	To give awareness about the need and importance ofenvironmental protection.
CO 1121	Methodology and Perspectives of Business Education	CO1	To create a basic awareness about the business environment andthe role of business in economic development.
		CO2	To provide a holistic, comprehensive and integrated perspective tobusiness education.
		CO3	To give a fundamental understanding about ethical practices inbusiness.
CO 1142	Management Concept and Thoughts	CO1	To equipe learners with knowledge of management concepts and their application in contemporary organisations
		CO2	To familiarise the students with the concepts of operationsmanagement
CO 1131	Managerial Economics	CO1	To provide the students an in depth knowledge in the context ofmanagerial decision making
		CO2	To familiarise the students with the economic principlesunderlying various business decisions
		CO3	To familiarise the students with the economic theories underlyingvarious business decisions
SEMESTER 2			
CO 1231	Informatics and Cyber Laws	CO1	To review the basic concepts and fundamental knowledge in the field of informatics and to create an awareness about the nature ofthe emerging digital knowledge society and the impact of informatics on business decisions.

		CO2	To create an awareness about the cyber world and cyberregulations.
CO 1242	Business Regulatory Framework	CO1	To provide a brief idea about the framework of Indian businessLaws.
		CO2	To enable the students to apply the provisions of business laws inbusiness activities.
CO 1241	Financial Accounting	CO1	To familiarize the students with different methods of depreciation.
		CO2	To equip the students to prepare the accounts of specialized business enterprises
CO 1231	Business Mathematics	CO1	To familiarise the student with the basic mathematical tools
		CO2	To impart skills in applying mathematical tools in business practice
SEMESTER 3			
CO 1341	Entrepreneurship Development	CO1	To familiarize the students with the latest programmes of Government in promoting small and medium industries.
		CO2	To impart knowledge regarding starting of new ventures.
CO 1342	Advanced Financial Accounting	CO1	To create awareness of accounts related to dissolution of partnership firms.
CO 1343	Company Administration	CO2	To familiarise students with various aspects of Indian Companies ACT 2013
CO 1331	E-Bussiness	CO1	To provide students a clear cut idea about E commerce and E Business and their types and models
		CO2	To acquaint students with some innovative E Business Systems
		CO3	To Impart Knowledge on the basics of starting online Business
CO 1361.1	Financial Management	CO1	To familiarise students with conceptual frame work of financial management
		CO2	To enable the students to understand the practical application of financial management
CO 1361.2	Principles of Cooperation	CO1	To give knowledge about the development of cooperative movement in India and abroad
		CO2	To inculcate the principles of cooperation among the students
SEMESTER 4			
CO 1441	Indian Financial Market	CO1	To provide a clear-cut idea about the functioning of Indian Financial Market in general and Capital market operations inparticular.
		CO2	To provide a clear-cut idea about the functioning of Indian Financial Market in general and Capital market operations inparticular.
CO 1442	Banking and Insurance	CO1	To provide a basic idea about the theory and practice of banking
		CO2	To familiarise the students with the changing scenario of IndianBanking and insurance
		CO3	To provide a basic understanding of insurance Business
CO 1461.1	Project Finance	CO1	To familiarize the students with type of project appraisal, risk analysis project financing posting and valuing
			To provide an overview of global project appraisal issues
CO 1461.2	Cooperative Management and administration	COI	To familiarize the students with principals and practice of cooperative management and administration
		CO2	To enable the student to identify the issues in the process of management and administration of cooperatives
SEMESTER 5			
CO 1541	Fundamentals Of Income Tax	CO1	To impart the basic understanding of the concepts and practices ofIncome Tax Law in India
		CO2	To familiarize the students about the fundamental concepts ofIncome Tax
		CO3	To enable the students to acquire the skills required to computeGross Total Income
CO 1542	Cost Accounting	CO1	To familiarise the student with cost concepts and fundementals ofcost accounting
		CO2	To acquaint the students with the measures of cost control
		CO3	To make the students learn cost accounting as a separate systemof accounting
CO 1543	Marketing Management	CO1	To impart the knowledge of various concepts of modern marketing management
		CO2	To provide an understanding of the contemporary marketing process in the emerging business Scenario

CO 1561.1	Financial services in India	CO1	To provide a general awareness about the Financial services in
		CO2	To familiarise the student with the structure and functioning of financial services in Indian Financial System-Developments-Classification
CO 1561.2	Cooperative legal System	CO1	To give an insight into the prevailing Cooperative legal System
		CO2	To enable the student to understand legal framework of cooperation
SEMESTER 6			
CO 1641	Auditing	CO1	To familiarise students with the principles and procedure ofauditing
		CO2	To understand the duties and responsibilities of auditors
		CO3	To familiarise the students with the audit of various types ofcompanies
CO 1642	Applied Costing	CO1	To acquaint the students with different methods and techniques ofcosting
		CO2	To understand students abount various types of costs in anorganisation
		CO3	To develop the skill required for the application of methods andtechniques in managerial decision making
CO 1643	Management Accounting	CO1	To enable the students to have thorough knowledge on themanagement accounting techniques in decision making
		CO2	:To develop professional competence and skill in applyingaccounting information for decision making.
		CO3	To equip the students to interpret financial statements withspecific tools of management accounting
CO 1661.1	Taxation law and accounts	CO1	**To enable the students to understand the provisions of income tax for computing total income and tax liability of various persons**
		CO2	**To Familiarize students with the procedure of income Tax assessment**
CO 1661.2	Cooperative Accounting	CO1	:To familiarize students with the special features of accounting and audit in coporatives
		CO2	To enable the students to understand the procedures of cooperative audit

Name of the Programme: Bcom Computer Application

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
CO 1121	Methodology and Perpectives ofBusiness Education	CO1	To provide the students an in depth knowledge of higher learningin business education
		CO2	To understand business and its role in society
		CO3	To understand entrepreneurship and its heuristics
CO 1141	Environmental Studies	CO1	To enable students to aquire basic ideas about environment.
		CO2	To impart knowledge about emerging issues about Industry andenvironmental problems
		CO3	To provide knowledge about emerging Social issues andenvironmental problems
CO 1142	Management Concept and Thoughts	CO1	To equipe learners with knowledge of management concepts and their application in contemporary organisations
		CO2	To familiarise the students with the concepts of operationsmanagement

CO 1131	Managerial Economics	CO1	To provide the students an in depth knowledge in the context ofmanagerial decision making
		CO2	To familiarise the students with the economic principlesunderlying various business decisions
		CO3	To familiarise the students with the economic theories underlyingvarious business decisions
SEMESTER 2			
CO 1221	Informatics and Cyber Laws	CO1	To review the basic concepts and fundamental knowledge in thefield of informatics.
		CO2	To create awareness about the nature of the emerging digitalknowledge society
		CO3	To understand the impact of informatics on business decisions.
CO 1241	Financial Accounting	CO1	To familiarize the students with different methods of depreciation.
		CO2	To equip the students to prepare the accounts of specialized business enterprises
CO 1242	Business Regulatory framework	CO1	To provide brief idea about framework of Indian business laws
		CO2	To understand the provisions of Law of contract and Special Contracts
CO 1231	Business Mathematics	CO1	To familiarise the student with the basic mathematical tools
		CO2	To impart skills in applying mathematical tools in business practice
SEMESTER 3			
CO 1341	Entrepreneurship Development	CO1	To understand the conceptual framework of entrepreneur
		CO2	To familiarise the students with the latest programs of the government authorities in promoting small and medium industries
		CO3	To equip the students to have a practical insight for becoming anentrepreuneur
CO 1343	Company Administration	CO1	To familiarise students with various aspects of Indian CompaniesACT 2013
		CO2	To acquaint the students about Management and Administrationof Companies
		CO3	To comprehend the students about Compliance requirements of acompany
CO 1342	Advanced Financial Accounting	CO1	To create an awareness about various accounts of partnershipbranch joint venture etc
		CO2	To create awareness of accounts related to dissolution ofpartnership firms.
		CO3	To enable students to prepare accounts of consignments
CO 1331	E Business	CO1	To provide students a clear cut idea about E commerce and E Business and their types and models
		CO2	To acquaint students with some innovative E Business Systems
		CO3	To Impart Knowledge on the basics of starting online Business
CO 1361.5	Computer Application for Publications	CO1	To give functional knowledge in the field of free software.
		CO2	To develop practical skills in document preparation, publishingand business presentation
		CO3	To update skills in electronic data processing and computerapplication in business operations
SEMESTER 4			
CO 1441	Indian Financial Market	CO1	To Provide a clear cut idea about Indian financial market in general and capital market operations in particular
CO 1442	Banking and Insurance	CO1	To provide a basic idea about the theory and practice of banking
		CO2	To familiarise the students with the changing scenario of IndianBanking and insurance
		CO3	To provide a basic understanding of insurance Business

CO 1443	Corporate Accounting	CO1	To understand the students about the accounting standards andIFRS
		CO2	To create an awareness about various provisions of CompaniesAct 2013
		CO3	To enable the students to prepare and interpret Financialstatements of Joint stock companies
CO 1431	Business Statistics	CO1	To enable the students to gain understanding of statisticaltechniques as are applicable to Business.
		CO2	To enable the students to apply statistical techniques in business
CO 1461.5	Software for Data Management	CO1	To familiarise students with the basics of software fordatamanagement
		CO2	To develop theoretical and technical expertise in applyingsoftware for data management
		CO3	To develop practical skills in spreadsheet application
SEMESTER 5			
CO 1541	Fundamentals of Income Tax	CO1	To impart the basic understanding of the concepts and practices ofIncome Tax Law in India
		CO2	To familiarize the students about the fundamental concepts ofIncome Tax
		CO3	To enable the students to acquire the skills required to computet
CO 1542	Cost Accounting	CO1	To familiarise the student with cost concepts and fundementals ofcost accounting
		CO2	To acquaint the students with the measures of cost control
		CO3	To make the students learn cost accounting as a separate systemof accounting
CO 1543	Marketing Management	CO1	To provide an understanding of the contemporary marketing process in the emerging business scenario
		CO2	To study various aspect of application of modern marketing technique for obtaining a competitive advantage in business organisations
CO 1551.2	Principles of Management	CO1	To familiarise the students with various management principlesand equip them to apply in various business situations
		CO2	To develop the students the art of decision making
		CO3	To understand various control techniques and methods
CO 1551.1	Fundamentals of financial accounting	CO1	To enable students to acquire knowledge in the basic principles and practices of financial accounting
		CO2	To equip the students to maintain various type of ledgers and to prepare final accounts
CO 1561.5	Web designing and production for business	CO2	To develop the students the art of decision making
		CO3	To understand various control techniques and methods
		CO3	To acquaint students with mark up languages like html and xml
SEMESTER 6			
CO 1641	Auditing	CO1	To familiarise students with the principles and procedure ofauditing
		CO2	To understand the duties and responsibilities of auditors
		CO3	To familiarise the students with the audit of various types ofcompanies
CO 1642	Applied Costing	CO1	To acquaint the students with different methods and techniques ofcosting
		CO2	To understand students abount various types of costs in anorganization
		CO3	To develop the skill required for the application of methods andtechniques in managerial decision making

CO 1643	Management Accounting	CO1	To enable the students to have thorough knowledge on themanagement accounting techniques in decision making
		CO2	To develop professional competence and skill in applying accounting information for decision making.
		CO3	To equip the students to interpret financial statements withspecific tools of management accounting
CO 1661.1	Taxation law and accounts	CO1	To enable the students to understand the provisions of income tax for computing total income and tax liability of various persons
		CO2	To familiarise the students with the procedure of income tax assessment
		CO3	To provide student the basic knowledge of GST
CO 1661.5	Computerised Accounting	CO1	To familiarise the students with the various modes of mechanisedaccounting
		CO2	To understand the students about the accounting software Tally
		CO3	To provide a practical knowledge in the preparation of finalaccounts using Tally

Name of the Programme: BSc. ZOOLOGY

Course Code	Course Title		Course Outcomes
SEMESTER 1			
ZO 1141	Animal Diversity I	CO1	To learn the basics of systematic and understand the hierarchy of different categories.
		CO2	To learn the diagnostic characters of different phyla through brief studies of examples.
SEMESTER 2			
ZO 1241	Animal Diversity II	CO1	To learn the general characteristics and classification of differentclasses of vertebrates.
		CO2	To understand the vertebrate evolutionary tree.
		CO3	To understand general aspects of applied interest.
SEMESTER 3			
ZO 1341	Experimental Zoology, Instrumentation Biostatistics and Bioinformatics	CO1	To learn the fundamental characteristics of science as a human enterprise
		CO2	To understand how science works
		CO3	To study to apply scientific methods independently
SEMESTER 4			
ZO 1441	Ecology, Habitat destruction and disaster management	CO1	Students get basic knowledge on ecosystem, food chain, food web and energy flow.
		CO2	Students acquire general awareness on pollution and their impacts.
		CO3	Imparts basic knowledge on ecosystems and their functioning.
		CO4	Students learn about various types of anthropogenic pressures on ecosystem, related degradation and management measures.
		CO5	Students get awareness of toxicants, their impacts on human health and environment and remedial measures.
		CO6	Create awareness about disasters, prevention and mitigation measures.
SEMESTER 5			
ZO 1542	Genetics and Biotechnology	CO1	To learn the mechanism of crossing over and inheritance patternsin man.
		CO2	To understand the principles and techniques involved in DNA technology and get an overview of modern techniques like PCR, Hybridoma technology, gene therapy and human cloning
		CO1	Students acquire sufficient knowledge on the fundamental structure, function and biochemistry of the cell.

ZO 1541	Cell and Molecular Biology	CO2	They understand the principles of molecular biology and gene manipulation.
		CO3	• Students understand the fundamental differences between prokaryotic and eukaryotic cells
		CO4	Students learn the structure, replication and modification of the genetic material of eukaryotes.
		CO5	Students understands the mechanism of gene expression and gene regulation.
		CO6	Gets an awareness of bacterial recombination.
		CO7	Students acquire scientific knowledge on cancer and ageing.
ZO 1543	Immunology and Micro biology	CO1	Students understand the scope and importance of clinical immunology
		CO2	Students understand the principles and mechanisms of immunology
		CO3	Learn the malfunctioning and disorders of the immune system
		CO4	Students acquire knowledge on immunodeficiency diseases.
		CO5	Students acquire knowledge on immunodeficiency diseases.
		CO6	Transplantation and mechanism of Graft retention and rejection are learned.
		CO7	Students get a brief history of microbiology.
		CO8	Students develop a broad understanding of the positive as well as negative aspects of microbes.
		CO9	Economic importance (applied aspects) of microbes in industry can be studied.
ZO 1551	Public Health and Hygiene	CO1	To learn the principles of nutrition and dietetics
		CO2	To understand the ill effects of modern lifestyle
		CO3	To study the advantages of being hygienic
SEMESTER 6			
ZO 1641	Physiology and Biochemistry	CO1	Students develop a clear understanding of the correlation and coordination between the structure and function of different organs and organ systems of the body. •. •. •
		CO2	Proper study on the physiology help students understand the physiology of different organ systems of the body
		CO3	Students learn the correlation between diseases and the abnormal structure or improper functions of organs.
		CO3	Students understand the possible causes of abnormal physiology and the resultant diseases.
		CO4	Students understand the structure and functions of bio-molecules and their role in metabolism
		CO5	This course opens new areas of research to students.
ZO 1642	Developmental Biology and Experimental Embryology	CO1	To study the various stages involved in the developing embryo
		CO2	To study the initial developmental procedures involved inAmphioxus, Frog and chick
		CO3	To procure information on state- of- the art experimentalprocedures in embryology.
		CO1	To learn the principles, applications and management ofenvironmental science.

ZO 1643	Ecology, Ethology, Evolution and Zoogeography	CO2	To study the inherent morphological and physiological bases ofbehavioral pattern exhibited by vertebrates.
		CO3	To get an exhaustive knowledge of organic evolution with specialreference to man.
ZO 1651.1	Vermiculture and Apiculture	CO1	To learn the basic procedure and methodology of vermiculture
		CO2	To learn the scope and methodology of apiculture

Name of the Programme: BA POLITICAL SCIENCE

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
PS 1141	PERSPECTIVES OF SOCIAL AND POLITICAL SCIENCES	CO1	Understand the nature and relevance of social and political sciences
		CO2	Basic knowledge in the application of scientific method in social sciences and its limitations
		CO3	Enable the students in placing political science in the wider domains of social sciences and their interrelations
		CO4	Familiarize students with emerging terrains of political science and its critical evaluation
SEMESTER 2			
PS 1241	INTRODUCTION TO POLITICAL THEORY	CO1	Understand the nature and relevance of Political theory
		CO2	Basic knowledge about various approaches to the study of Political theory
		CO3	Enable the students in the application of various theories and concepts of Political Theory
		CO4	Critically evaluate the different perspectives of key concepts of political theory
SEMESTER 3			
PS 1321	CYBER POLITICS	CO1	Understand and describe the basic concepts and ideas related cyber politics
		CO2	familiarize the features of various social media platforms and the emergence of internet based public sphere
		CO3	capability to explain the dynamics and processes associated with cyber politics both nationally and globally
		CO4	Acquired knowledge in the field of cyber politics by engaging the critical issues affecting the rights and freedoms of the citizens in the country
PS 1341	INDIAN CONSTITUTION	CO1	Understand the major features and the essence of Indian constitution
		CO2	create awareness about one's own rights and duties as well as a sense of respect and protection of others rights
		CO3	Familiarize the students about the composition and functions of various Institutions of Union and federal Governments.
		CO4	Critically evaluate Indian judicial system and recent developments
SEMESTER 4			
PS 1441	DYNAMICS OF INDIAN POLITICS	CO1	Understand the peculiar features of Indian federal system and nature of Centre-state relations
		CO2	Critically examine the tendency of regionalism and secessionism in India
		CO3	Understand and evaluate emerging trends in Indian Democracy
		CO4	Critically analyse the major factors which pose threat to Indian Democracy and political System
PS 1442	INTRODUCTION TO COMPARATIVE POLITICS	CO1	To understand the basic concepts and changing nature of comparative politics
		CO2	To understand and compare the basic features of constitutional development in major countries
		CO3	– To familiarise the students about the Federal and Unitary systems of major Political systems and evaluate the changing dimensions

		CO4	To acquire ability to compare and analyse the political structures in different political systems in a comparative perspective.
			SEMESTER 5
PS 1541	PUBLIC ADMINIS TRATION	CO1	Converse with meaning and nature of Public Administration and familiar with different approaches in public administration
		CO2	Understand critically various principles of organisations and the role of Chief Executive and independent Regulatory Commissions
		CO3	Comprehend the significance of Bureaucracy in Public Administration and familiarize the recruitment process and training
		CO4	Understand the features of Financial Administration in India, focusing on the budgetary process and the role of the CAG
		CO5	Understand the emerging trends in Public Administration in India
PS 1542	ANCIENT AND MEDIEVAL POLITICAL THOUGHT	CO1	Acquire understanding on the ancient Greek ideas on state,and society
		CO2	Understand and analyses the Roman Political ideas and compare it with Greek idea
		CO3	Understand ancient Indian wisdom and compare it with other idea
		CO4	Analyse and evaluate the Medieval political ideas critically
PS 1543	INTERNATIO NAL RELATIONS	CO1	To understand the nature and the Scope of International Relation
		CO2	To impart basic knowledge about basic concepts and theories of International Relations.
		CO3	To enable the students to evaluate foreign policy decisions and its implications on Diplomatic relations
		CO4	To critically evaluate the various issues of global politics.
PS 1544	RESEARC H METHOD OLOGY	CO1	To introduce the nature and modalities of research in Social Sciences in general and Political Science in particular.
		CO2	To understand the major steps involved in arriving at a research topic and developing it further
		CO3	To expose students to the practicalities of research in Political Science, particularly in regard to data collection.
		CO4	To facilitate students critically analyse the collected data and create a scientific report of their own
PS 1545	HUMAN RIGHTS IN INDIA	CO1	Impart basic understanding about the concept of Human Rights, its evolution and importance in our society
		CO2	To Understand the role and functions of international human rights mechanisms in the changing international order
		CO3	To have a need based understanding of the instituional arrangements in India at various levels to protect Human Rights
		CO4	To develop a critical understanding of the issues faced by socially excluded groups like Dalits, Women, Children, Differently Abled, Transgender at the national level
			SEMESTER 6
PS 1641	MODERN POLITICAL THOUGHT	CO1	To introduce the idea of state and government through the conceptual cues of the social contract theories of the 17th century in Europe
		CO2	To provide adequate understanding of the utilitarian tradition and lead the students to maintaining proper awareness of countervailing traditions of the liberals, with special reference to German Idealist philosopher W. H. Hegel
		CO3	To equip students to analyse contemporary political reality with the help of the theoretical tools provided by Socialist theorists.
		CO4	To familiarise students with the application of the notion of governmentality introduced by Michel Foucault.
		CO5	To evaluate the creative potential of Gandhi's and Ambedkar's views on Social order, modern state craft and methods of conflict resolution
PS 1642	STATE AND SOCIETY IN KERALA	CO1	Understand the major social and political trajectories that moulded the modern state of Kerala
		CO2	Understand the present political structure of Kerala and evaluate the deep rooted societal identities of Kerala and relate its relevance
		CO3	Analyse the aspects of political economy of Kerala

		CO4	Demonstrate the understanding of the Contemporary discourses in Kerala's society
PS 1643	DECENTRALISATION AND PARTICIPATORY DEMOCRACY	CO1	To acquire knowledge on the concept of decentralisation and to be able to understand its theoretical perspectives
		CO2	To understand the concept of participatory democracy and to internalise its values
		CO3	To evaluate the emergence of decentralisation in India and to analyse the features of 73rd and 74th Constitutional Amendment Ac
		CO4	To familiarise and practice the contrivances of participatory democracy
PS 1644	NEW SOCIAL MOVEMENTS	CO1	To understand the notion of New Social Movements (NSMs) using major approaches and theories
		CO2	To explore the gender-based New Social movements with examples from the Western and non-Western World
		CO3	To evaluate the trajectory and impact of New Social Movements in India.
		CO4	To analyse the nature of New Social Movements in Kerala and the underlying reasons for its emergence

Name of the Programme: BSc PHYSICS

Course Code	Course Title	Course Outcomes	
		SEMESTER 1	
PY 1141	BASIC MECHANICS & PROPERTIES OF MATTER	CO1	To understand the dynamics of Rigid bodies.
		CO2	Identify and describe oscillations of different kinds seen inphysical systems.
		CO3	To acquire basic knowledge of elasticity, surface tension and fluiddynamics
		SEMESTER 2	
PY 1241	HEAT AND THERMO DYNAMICS	CO1	To understand heat-transfer, Laws of thermodynamics andEntropy.
		CO2	To get preliminary understanding of Statistical Physics
		SEMESTER 3	
PY 1341	ELECTRO DYNAMICS	CO1	To get detailed knowledge of Electrostatics, Magnetostatics andElectromagnetic induction.
		CO2	Thoughtful concept of Maxwell's equations and its application.
		CO3	To obtain detailed knowledge of transient currents, alternatingcurrent and circuit theory
		SEMESTER 4	
PY 1441	CLASSICAL AND RELATIVISTIC MECHANICS	CO1	Develop understanding of dynamics of particles, motion undercentral force field and basic theory of collisions.
		CO2	Describe how the symmetries of space and time lead to conservation laws and to develop preliminary understanding ofLagrangian dynamics
		SEMESTER 5	
PY 1541	QUANTUM MECHANICS	CO1	Understand the statistical interpretation of wave function and todevelop knowledge of Schrodinger equation.
		CO2	To analyse and work on some exactly solvable problems inone dimension.
		CO3	To impart knowledge of the mathematical formalism of quantummechanics
PY 1542	STATISTICAL MECHANICS RESEARCH METHODOLOGY AND DISASTER MANAGEMENT	CO1	To obtain an insight in the basics of Maxwell's, Fermi -Dirac and Bose -Einstein statistics
		CO2	To understand basics of research methodology in scientific research.
		CO3	To enable students to respond, act and mitigate natural disasters.
	ELECTRONIC	CO1	To understand working, design and application of Diodes, Transistor circuits, Field Effect Transistors, Small and largesignal amplifiers, Feedback circuits and Oscillators.

PY 1543	S	CO2	To attain a basic knowledge level in preliminaries of modulationoperational amplifiers and simple circuits using op-amps.
PY 1544	ATOMIC AND MOLECULAR PHYSICS	CO1	To understand Vector atom model, Atomic spectra, X-ray spectra,molecular spectra and resonance spectra
PY 1551.1	ENERGY PHYSICS	CO1	To understand the different forms of renewable and conventional energy
		SEMESTER 6	
PY 1641	SOLID STATE PHYSICS	CO1	To study about Crystal structure and inter atomic forces X-ray, neutron and electron diffraction
		CO2	Free electron theory and Band theory Magnetic, Dielectric and Optical properties of materials, and basics of superconductivity
PY 1642	NUCLEAR AND PARTICLE PHYSICS	CO1	Tounder stand Nuclear structure and nuclear models, Radio-Activity, Nuclear forces Radiation detectors and particle accelerators Nuclear reactions, Nuclear fission and fusion
		CO2	Cosmic rays and elementary particles
PY 1643	CLASSICAL AND MODERN	CO1	Detailed knowledge of Interference and Diffraction, Polarization and Dispersion. Preliminaries of Fiber optics and Lasers. Basicsconcepts of Holography
PY 1644	DIGITAL ELECTRONICS AND COMPUTER SCIENCE	CO1	To study and work on Number systems, Boolean algebra and logicgates and some arithmetic and sequential circuits.
		CO2	To understand basics of computers and memory systems.
		CO3	To learn and apply C programming and computer orientednumerical methods
PY1661.2	SPACE SCIENCE	CO1	To understand the Universe, Stars and earth's atmosphere
PY 1645	ADVANCED PHYSICS LAB2	CO1	Familiarization with some simple experiments in electricity and magnetism Analysis of experimental data with error calculations
PY 1646	ADVANCED PHYSICS LAB3	CO1	Experiments in Electronics. Solving some simple problems in physics using numerical methods by implementing them in Cprogramming language

Name of the Programme: BA. ENGLISH & COMMUNICATIVE ENGLISH

Course Code	Course Title		Course Outcomes
		SEMESTER 1	
CG 1141	INTRODUCTION TO LITERARY STUDIES	CO1	Introduce varied literary representations.
		CO2	Comprehend the nature and characteristics of literature
		CO3	Possess a foundational understanding of literary forms and representation
CG 1171	SOFT SKILLS	CO1	Advance unique soft sills which is beneficial for a successful life and better career performances
		CO2	Increase personal, social and professional skills
		CO3	Confront their surroundings enthusiastically with confidence
CG 1131	ENGLISH FOR SPECIFIC PURPOSES	CO1	Understand ESP and differentiate English for General Purpose and English for Specific Purpose
		CO2	Be able to speak and write English for various specific purposes
		CO3	Understand ESP and differentiate English for General Purpose and English for Specific Purpose
		SEMESTER 2	
CG 1241	BRITISH LITERATURE	CO1	Familiarize the historical phases of British literature
		CO2	Provide glimpses of writers and literary texts that are pivotal to an understanding of British literature
		CO3	Discuss the development of British literature across time from Pre-Elizabethan to Restoration Era
CG 1242	NARRATIVES OF RESISTANCE	CO1	Be able to identify themes of resistance in different forms and genres of literature and to identify injustices related to race, ethnicity, sexuality, gender etc. prevalent in society
		CO2	Develop an idea of literature as a form of resistance to all forms of totalitarian authority
		CO3	Understand the inter connection between various genres in manifesting resistance and how it becomes an undeniable presence in the everyday narratives of literary and other artistic expressions
CG 1271	NARRATIVES OF SOCIAL	CO1	Make students cognizant regarding pressing social issues and to apply language skills, knowledge and social skills to identify and defend human rights violations
		CO2	Acquire skills of social work intervention in human needs and societal issues

	JUSTICE AND RESTITUTION	CO3	Consider the importance of law and imbibe a clear set of values which informs the social work practice
CG 1231	LANGUAGE FOR THE MEDIA	CO1	Develop specific language skills for various media
		CO2	Comprehend the trends and evolution of language use in media
		CO3	Understand the role and use of language in the evolutionary history of media
SEMESTER 3			
CG 1321	EVOLUTION OF THE ENGLISH LANGUAGE	CO1	Knowledge of the paradigm shifts in the development of English
		CO2	Imbibe the plural socio cultural factors that went in to the shaping of the English Language
		CO3	Recognize the politics of many 'Englishes
CG 1341	BRITISH LITERATURE II	CO1	Sensitize students to the changing trends in British literature in the 18th and 19th centuries and connect it with the sociocultural and political developments
		CO2	Develop the critical thinking necessary to discern literary merit and to recognize paradigm shifts in literary representations
		CO3	Connect literature to the historical developments that shaped the British history
CG 1342	POPULAR LITERATURE	CO1	Understand the categories of the —popular and the —canonical
		CO2	Identify the conventions, formulas, themes and styles of popular genres such as detective fiction, the science fiction and fantasy, and children's literature and assess the literary and cultural formation of the popular
		CO3	Sensitize students to the ways in which popular fiction reflects and engages with questions of gender, identity, ethics and education.
CG 1371	TRANSLATION STUDIES	CO1	To appreciate Translation Studies as an independent academic discipline
		CO2	To critically reflect on the process of translation and its types
		CO3	To build a genuine interest and to focus on a career in the field of translation
CG 1331	ENVIRONMENT STUDIES AND DISASTER MANAGEMENT	CO1	understand environmental crises and disaster management situations
		CO2	take lead in spreading environmental values and creating awareness among the public
		CO3	respond in a better way to a natural calamity or disaster and articulate environmental concerns using appropriate vocabulary
SEMESTER 4			
CG 1441	READING PROSE	CO1	Recognize various types of prose writings.
		CO2	Analyse, understand and appreciate prose writings
		CO3	Write creatively and critically in an expository or argumentative way
CG 1442	WORLD CLASSICS	CO1	Read and appreciate classical works.
		CO2	Evaluate classical texts critically.
		CO3	Place and assess their own culture and classics.
CG 1431	HISTORY OF ENGLISH LANGUAGE	CO1	Identify the various language families
		CO2	Trace the evolution of the English language
		CO3	List the changes in the different areas of the language
CG 1471	PRINT AND ONLINE WRITING	CO1	Get acquainted with print and online media and its characteristics
		CO2	Equip students with basic knowledge about news reporting and the challenges in online media
CG 1472	THEATRE STUDIES	CO1	To sensitize students that theatre is praxis
		CO2	To develop the listening and writing skill of students
		CO3	To help students appreciate theatre
CG 1441	20TH CENTURY WORLD LITERATURE	CO1	Get acquainted with varied socio-cultural and political experiences and expressions
		CO2	Gain a theoretical grounding to read literatures in English from different regions and accept the fact that world literature is literature that gains in translation
		CO3	Learn to avoid homogenising cultures and languages and protect the diversity of languages and cultures present in literary works
CG 1442	20TH CENTURY MALAYALAM LITERATURE	CO1	Discern the varied milieu of the development and growth of Malayalam literature and be sensitive to its socio cultural and political implications
		CO2	Get a basic knowledge of the literary and the non-literary works produced in Malayalam and the politics of its plurality
		CO3	Sense the distinctness of the socio-cultural- political arena in which Malayalam literature develops

	URE IN TRANSL ATION		
CG 1471	LANGUAGE EDITING AND PUBLISHING	CO1	Students must be able to identify the different steps and stakeholders involved in the editorial process
		CO2	Acquire a working knowledge of the mechanics of editing and proof reading and utilize the same on a practical level to create error-free, well edited texts
		CO3	Be sensitized to the legal aspects involved in editing and publishing and find gainful employment in the editing and publishing industry
CG 1472	CONTENT WRITING	CO1	Understand what content writing is and attain an awareness of its scope
		CO2	Gain familiarity with various digital platforms and the formats of online publications
		CO3	Strengthen content writing skills through practice tasks and gain an awareness about style and specifications in digital media platforms
CG 1431	LITERATU RES OF TRAVEL AND TOURISM	CO1	Familiar with various forms of travel writing
		CO2	Able to effectively produce content using them
		CO3	Acquire language proficiency for professional opportunities and academic settings related to Travel and Tourism
SEMESTER 5			
CG 1541	FILM STUDIES	CO1	Recognize the language of films and use it creatively
		CO2	Analyze films from both technical and non-technical perspectives
		CO3	Use film as a medium of communication and derive an interest in various careers related to film
CG 1542	INDIAN LITERATURE	CO1	Trace the historical and literary genesis and development of Indian Writing in English
		CO2	Comprehensive understanding of the major movements in Indian Writing in English across varied periods and genres
		CO3	Address the plurality of literary and socio-cultural representations within Indian life as well as letters
CG 1543	CRITICISM AND THEORY	CO1	Analyze and appreciate texts critically, from different perspectives and methodologies
		CO2	Appreciate Indian Aesthetics and find linkages between Western thought and Indian critical tradition
		CO3	Gain a critical and pluralistic understanding and perspective of life
CG 1571	THEATRE STUDIES	CO1	Develop a culture of theatre in students
		CO2	Help students in applying theories and contexts in play texts
		CO3	Enhance creativity in students by helping them in the production of a play
CG 1572	ENGLISH LANGUAGE TEACHING	CO1	Understand the theoretical basis of language teaching, and apply it to the actual teaching process
		CO2	Be able to assess critically the implications of the various approaches, methods, techniques
		CO3	Have the ability to develop material for teaching, to plan lessons and conduct them effectively
CG 1573	LANGUAGE FOR ADVERTISIN G AND MARKETING	CO1	Prepare a primary advertising model
		CO2	Application of skills
		CO3	To give students an appreciation of Advertising and Marketing Communications development focusing on the CLIENT's perspective
CG 1551.1	ENGLISH FOR COMMUNICA TION	CO1	Learners majoring in some subject other than English will have a working knowledge of the type of English that is required in real life situations, especially the globalized workplace
		CO2	Well trained to write clear, well-framed, polite but concise formal letters and e-mails for a variety of purposes
		CO3	Acquire some of the soft-skills that go hand in hand with English –namely, the ability to prepare for an interview and face it confidently, the ability to participate boldly a group discussion and contribute meaningfully to it, the ability to make a simple and interesting presentation of 5-10 minutes before a mixed audience on anything that they have learnt in the previous semesters of the UG programme
CG 1551.2	FILM APPRECIATI ON	CO1	Decipher the meaning of a movie
		CO2	Watch, understand and analyze films from a critical perspective
		CO3	Equip them to be resourceful to find a career in areas related to film
SEMESTER 6			
CG 1641	GENDER STUDIES	CO1	Analyse the ways in which gender, race, ethnicity class, caste and sexuality construct the social, cultural and biological experience of both men and women in all societies
		CO2	Interrogate the social constructions of gender and the limiting of the same in to the malefemale binary in its intersections w
		CO3	Recognize and use the major theoretical frames of analysis in gender studies in relation to the sustainable goals of development
CG 1642	LINGUISTIC S AND STRUCTU RE OF	CO1	Be able to analyse actual speech in terms of the principle of linguistics
		CO2	Improve the accent and pronunciation of the language

	ENGLISH LANGUAGE		
		CO3	Introduce the students to internationally accepted forms of speech and writing in English.
CG 1671	SCREEN WRITING AND SUBTITLING	CO1	Understand the concepts and techniques of scriptwriting and subtitling
		CO2	Undertake writing scripts to build a genuine interest in the field and focus on a career in screenwriting
		CO3	Analyse the audio-visual material provided and overcome the challenges in translating cultural symbols in the source language
CG 1672	PUBLIC RELATIONS AND CORPORATE COMMUNICATION	CO1	Produce effective, sensitive and ethical public relation and communication skills beneficial to the institution
		CO2	Conduct public relation campaigns through press releases and other interactive methods with special focus on corporate communication
		CO3	Help them find employment in the public/corporate sector
CG 1661.1	PROOF READING AND COPY EDITING	CO1	Gain Through knowledge of the theoretical and practical knowledge of copy editing
		CO2	Copy-edit non–technical materials of moderate difficulty and produce consistently well-organized written discourse
		CO3	Find employment in the editing field as copy-editors, sub-editors and web editors
CG 1661.2	PROFESSIONAL COMMUNIACTION PRACTICE	CO1	Develop the skill ecosystem of the students
		CO2	Mold ethical consciousness
		CO3	Be able to meet the demands of the industry and professional options
CG 1661.3	ACADEMIC WRIITING	CO1	Comprehend the concept of academic writing CO2: Improve academic writing skills
		CO2	Learn to become responsible scholars
		CO3	Undertake research writing and documentation with better perception

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Name of the Programme: BSc. MATHEMATICS			
Course Code	**Course Title**	**Course Outcomes**	
SEMESTER 1			
MM 1141	Methods of Mathematics	CO1	Understand the various methods of differential calculus and its properties such as extremum problems, Rolle's Theorem, MeanValue Theorem and its consequences.
		CO2	Understand the various methods of integral calculus, its propertiesthrough area, volume, length related concepts.
		CO3	Acquire the skill of problem solving.
SEMESTER 2			
MM 1221	Foundations of Mathematics	CO1	Begin the rigorous study of Mathematics, understand the conceptof sets and functions.
		CO2	Realize the logical aspects such as connectives, truth tables, conditional statements and understand the usage of various quantifiers like universal and extential quantifiers in statements.
		CO3	Understand the fundamental concepts of Cartesian system andpolar coordinate system and the relation between them.
SEMESTER 3			
MM 1341	Elementary Number Theory And Calculus - I	CO1	Acquire the knowledge of algebraic structures through congruence classes.
		CO2	Acquire the skill in differentiating and integrating vector valued functions.
		CO3	Analyse vector functions to find derivatives, tangent lines, integrals, arc length and curvature.
SEMESTER 4			
MM 1441	Elementary Number Theory And Calculus - II	CO1	Conceive the concept of irreducibility of polynomials in differentrings and the Fundamental Theorem of Algebra.
		CO2	Acquire knowledge in the calculus of functions of two variables and three variables.

	II	CO3	Visualisation of functions of several variables.
SEMESTER 5			
MM 1541	Real Analysis -I	CO1	Understand the notion of real numbers and ideas of limits in aformal manner.
		CO2	Conceive the concept of limits of sequences and series, limit offunctions.
		CO3	Produce rigorous proofs of results that arise in the context of realanalysis.
MM 1542	Complex Analysis – I	CO1	Understand the basic properties of complex numbers.
		CO2	Understand the definition of complex functions, power series representation of complex functions.
		CO3	Develops a knowledge about analytic functions and Cauchy-Riemann equations.
MM 1543	Abstract Algebra – Group Theory	CO1	Acquire the knowledge of binary structures such as groups, subgroups, cyclic groups by using the skill of binary operations.
		CO2	Understand various properties of above said binary structures andits characterisations.
		CO3	Acquire the skill of problem solving.
MM 1544	Differential Equations	CO1	Know how differential equations arise in various physical problems.
		CO2	Solve differential equations of first order and exact differential equations.
MM 1545	Mathematics software-LATEX & Sage Math	CO1	The aim of learning LATEX is to enable student to typeset the project report which is a compulsory requirement for finishing their undergraduate mathematics programme succesfully.
		CO2	The aim of learning SageMath is to enable students to see how the computational techniques they have learned in the previous semesters can be put into action with the help of software so as to reduce human effort.
MM 1551.1	Open Course – Operations Research	CO1	Acquire skills to formulate Linear Programming Problem andsolve them using graphical method and simplex method.
		CO2	Understand variety of problems such as Assignment Problem, Transportation Problem etc.
		CO3	Acquire the knowledge to CPM and PERT techniques to plan,schedule and control project activities.
SEMESTER 6			
MM 1641	Real Analysis - II	CO1	Identify the continuity and discontinuity of various functions.
		CO2	Understand differentiation from a conceptual point of view.
		CO3	Acquire the skill of problem solving.
MM 1642	Complex Analysis - II	CO1	Represent functions as Power and Laurent series and classifyisolated singular points.
		CO2	Critically evaluate application of Residue Theorem in theevaluation of some integrals.
		CO3	Evaluate improper integrals in various situations.
MM 1643	Abstract Algebra – Ring Theory	CO1	Familiar with the concept of rings and subrings
		CO2	Familiar with the concept of ring homomorphism
		CO3	Introduce more rigorous topics like various type of integral domains..
MM 1644	Linear Algebra	CO1	Understand the algebraic and geometric representation of vectorsin Euclidean n-space.
		CO2	Learn to solve system of linear equations using the language ofmatrices.
		CO3	Conceive the concept of linear transformations, eigen values,eigen vectors and diagonalizations.
MM 1645	Integral Transforms	CO1	Understand the concept of Laplace Transforms
		CO2	Introduce the concept of Fourier series and Fourier Transforms.
		CO1	Build an awareness of some of the fundamental concepts in GraphTheory.

MM 1661.1	Graph Theory (Elective)	CO2	Study the Konigsberg Bridge Problem, The Chinese Postman Problem, and the Teleprinter's Problem and their graph modelsand solutions.
		CO3	Learn about trees and its properties.

Name of the Programme: BSc. STATISTICS			
Course Code	**Course Title**	**Course Outcomes**	
SEMESTER 1			
ST 1141	STATISTICAL METHODS I	CO1	Describe origin and meaning of Statistics, its uses and relation with other disciplines and its limitations and misuses
		CO2	Describe methods of collection of primary data and sources of secondary data
		CO3	Design a questionnaire and a schedule
		CO4	Classify and tabulate data
		CO5	Diagrammatically represent data through line diagram, bar diagrams, pie diagrams, pictograms, cartograms and graphically represent frequency distribution by frequency polygon, frequency curve and ogives
		CO6	Learn measures of central tendency and measures of dispersion, describe their properties
		CO7	Learn positional averages – quartiles, deciles and percentiles
		CO8	Learn moments - raw and central moments and their inter-relationships and describe Sheppard's corrections for moments for grouped data
		CO9	Describe skewness and kurtosis and learn various measures of them
		CO10	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
SEMESTER 2			
ST 1241	STATISTICAL METHODS II	CO1	Describe the concept of correlation and compute Karl Pearson's correlation coefficient and Spearman's rank correlation coefficient
		CO2	Discuss partial and multiple regressions for three variables
		CO3	Describe the concepts of curve fitting
		CO4	Fit the regression equations using the method of least squares.
		CO5	Describe data mining and data warehousing
		CO6	Define data mining models and algorithms
		CO7	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
SEMESTER 3			
ST 1341	PROBABILITY AND DISTRIBUTIONS I	CO1	Describe random experiment, sample space, events, types of events
		CO2	Describe various definitions of probability, conditional Probability and multiplication theorem, and their applications in problem solving
		CO3	Learn the concept of geometric probability
		CO4	Describe univariate random variables in Discrete as well as in continuous cases, distribution function, probability mass function and probability density function, apply their properties in problem solving
		CO5	Describe bivariate random variable, joint distribution function, joint probability mass function, marginal and conditional distributions, independence of random variables and apply their properties in problem solving
		CO6	Describe functions of random variables both in univariate and bivariate cases, transformations of random variable and apply the concepts in problem solving
		CO7	Describe mathematical expectation, expectation of function of random variables (up to bivariate case) and apply its properties in problem solving
SEMESTER 4			
ST 1441	PROBABILITY AND DISTRIBUTI	CO1	Describe the univariate discrete distributions- Degenerate, Bernoulli, Binomial, Poisson, Geometric and Hyper geometric

	IONS II	CO2	Define multinomial distribution and its properties
		CO3	Describe the univariate continuous distributions-Uniform, Triangular, Gamma, Beta 2 types, Exponential, Normal, Lognormal and Cauchy.
		CO4	Explain the concepts of multivariate normal distribution.
		CO5	Derive the marginal and conditional distribution of bivariate normal distribution
		CO6	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
SEMESTER 5			
ST 1541	LIMIT THEOREMS AND SAMPLING DISTRIBUTIONS	CO1	Understand the convergence of a sequence of events
		CO2	Explain the laws of large numbers
		CO3	Apply Chebychev's inequality and central limit theorem
		CO4	Describe central and non-central sampling distributions
		CO5	Make use of tables of $\chi 2$, t and F distributions
		CO6	Explain the probability distributions of rth order statistic
		CO7	Explain probability distributions of 1st and nth order statistic from U (0, 0) and exponential distributions
		CO8	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
ST 1542	ESTIMATION	CO1	Define the desirable properties of a good estimator
		CO2	Explain whether an estimator satisfy any of the desirable properties or not
		CO3	Construct confidence intervals for mean, variance, proportion in a population and difference between means and difference between proportions in two populations.
		CO4	Explain Gauss Markov set up
		CO5	Illustrate the estimability of a linear parametric function
		CO6	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
ST 1543	TESTING OF HYPOTHESIS	CO1	Describe the fundamental concepts of testing of hypothesis
		CO2	State Neyman-Pearson lemma
		CO3	Apply Neyman Pearson's lemma for mean and variance of a normal population, the Mean of binomial and Poisson distribution
		CO4	Define most powerful test and UMP test
		CO5	Explain likelihood ratio test and its properties
		CO6	Apply large sample tests and small sample tests
		CO7	Describe non-parametric test
		CO8	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
ST 1544	SAMPLE SURVEY METHODS	CO1	Explain the basic concept of sample survey
		CO2	Distinguish between sample survey and census survey
		CO3	Apply various sampling schemes like SRS, Stratified sampling and Systematic sampling
		CO4	Compare the efficiencies of estimates obtained using different sampling techniques.
		CO5	Describe the merits and demerits of different sampling techniques
		CO6	Obtain the estimates for population mean using Ratio and Regression estimators, and compare their efficiencies
		CO7	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various module

SEMESTER 6			
ST 1641	DESIGN OF EXPERIMENTS AND VITAL STATISTICS	CO1	Carry out one-way and two-way analysis of variances
		CO2	Explain the basic concepts and principles of experimental design
		CO3	Carry out the analysis of CRD, RBD and LSD
		CO4	: Carry out analysis in RBD and LSD with one or two missing observations
		CO5	Carry out the analysis of 22 and 23 factorial experiments
		CO6	Compute various measures of fertility, mortality and population growth
		CO7	Construct life tables
		CO8	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
ST 1642	APPLIED STATISTICS	CO1	Identify the various index numbers and compute them for data sets
		CO2	Explain the concepts of base shifting, splicing and deflation of index numbers, consumer price index number
		CO3	Explain the component of time series and estimate trend and seasonal effect
		CO4	Explain the roles and responsibilities of various organizations
		CO5	Explain the methods of data collection and dissemination in population census
		CO6	Explain the methods of estimation of National Income
		CO7	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules
ST 1643	DESIGN OF EXPERIMENTS AND VITAL STATISTICS	CO1	Explain the evolution and significance of OR
		CO2	Describe the concept of OR
		CO3	Solve LPP using graphical method and simplex method
		CO4	Solve LPP using Big M method and Two-phase method
		CO5	Explain the concept of SQC and mention its application
		CO6	Construct control chart for variables and attributes
		CO7	Describe acceptance sampling plans
		CO8	Practicals: Use R built in functions to solve numerical problems associated with topics covered in various modules

POST GRADUATE PROGRAMME

Name of the Programme: MSc. CHEMISTRY

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
CH 211	Inorganic Chemistry I	CO1	The students get a clear idea about Co-ordination compounds,noble gase, isoploy/heteropoly acids, and interhalogens.
		CO2	The students could be able to familiarize the various analytical testing procedures.
		CO3	The studies on environmental aspects of chemistry enable them toface the burning environmental issues by adopting suitable ecofriendly measures.
CH 212	Organic Chemistry I	CO1	Make them aware about various reaction mechanisms,reagents and steriochemistry of organic compounds.
CH213	Physical Chemistry I	CO2	Give the students an authoritative idea on quantum mechanics,Kinetics, Thermodynamics, Photochemistry and Surface Chemistry
SEMESTER 2			
CH 221	Inorganic Chemistry II	CO1	Students get better knowledge on crysatalline compounds, Co-ordination compounds and compounds of elements such as sulphur, nitrogen, phosphorous and boron.
CH 222		CO2	Give idea about physical organic chemistry, organic photochemistry, chemistry of natural products and biomolecules.
CH 223	Physical Chemistry II	CO1	Give advanced level of knowledge on Quantum mechanics & thermodynamics.
		CO2	It also gives an elaborate idea on spectroscopy and electrochemistry.
CH 214	Inorganic Chemistry practicals I	CO1	Give practical skill on colorimetric, and complexometric estimations.
		CO2	Also equip them to identify the rare earth elements.
CH 215	Organic Practicals I	CO1	Give opportunity to separate, identify and synthesize various organic compounds.
CH 216	Physical Chemistry Practicals I	CO1	Enable the students to carry out physical chemistry experiments and thereby to verify the exactness of differenttheorems and laws in Chemistry
SEMESTER 3			
CH 231	Inorganic Chemistry II	CO1	Give knowledge in organometallic compounds, bioinorganic compounds, Co-ordination compounds, nuclear chemistry andspectroscopic aspects of inorganic compounds,
CH 232	Organic Chemistry III	CO1	Give an elaborate idea on methods in organic synthesis, separation techniques and structure elucidation of compounds using spectroscopic studies.
CH 233	Physical Chemistry III	CO1	Give advanced level of knowledge in quantum mechanics,statistical mechanics, spectroscopic techniques and electrochemistry.
SEMESTER 4			
CH 241	Chemistry of Advanced Materials	CO1	Give advanced knowledge on nanomaterials, smart materials andspecialty polymers.
CH 242	Organic Chemistry IV	CO1	Give knowledge on medicinal chemistry, supramolecularchemistry, Green chemistry, and polymerchemistry.
CH 234	Inorganic Chemistry Practicals II	CO1	The student get practical skill on estimation of simple mixture of ions, analysis of alloys and ores.
		CO2	It also enable the students to carryout spectral interpretation of various inorganic compounds
CH 235	Organic Practicals II	CO1	Could be able to conduct volumetric and colorimetric estimationsand spectral identification of various organic compounds.
CH 236	Physical practical	CO1	Enables the students to conduct potentiometric and conductometric titrations and give insight into the experimentsbased on the study of surface tension, viscosity, refractive index parameters.

Name of the Programme: M.COM

Course Code	Course Title	Course Outcomes	
SEMESTER 1			
		CO1	To convey basic understandings on the theories of Business Ethics

CO2 11	Business Ethics and Corporate Governance	CO2	To provide a understanding on Corporate Governance practicesand the provisions of the Companies Act relating to corporate governance
CO2 12	Legal Framework for Business	CO1	To enable student acquire updated knowledge and developunderstanding of the regulatory framework for business
		CO2	To make students aware of opportunities available in variouslegal compliances so as to enable them employable.
		CO3	To expose students in emerging trends in good governancepractices including governance.
CO2 13	Research Methodology	CO1	To provide an insight into the fundamentals of social scienceresearch.
		CO2	To understand the need, significance and relevance of researchand research design.
		CO3	To acquire practical knowledge and required skills in carrying out research.
CO2 14	Planning and Development Administration	CO1	To generate an overall insight on planning process in Indian Economy
		CO2	To make the students aware about new planning initiatives in India
CO2 15	Advanced Corporate Accounting and Reporting	CO1	To acquaint the students about important accounting standards
		CO2	To gain ability to prepare financial statements includingconsolidated financial statements of group companies and financial reports of varioustypes of entities by applying relevant accounting standards.
		CO3	To expose the students to advanced accounting issues andpractices such as insurance claims, investment accounting and liquidation of companies
SEMESTER 2			
CO2 21	E -Business and Cyber laws	CO1	To equip the students with the emerging trends in business
		CO2	To equip the students to introduce and explore the use of information technology in all aspects of business
		CO3	To familiarise with the students cyber world and cyber regulations
CO2 22	Strategic Management	CO1	To create a conceptual awareness on various strategies
		CO2	To familiarise students with the formulation, implementation andevaluation of strategies
CO2 23	Quantitative Techniques and Financial Econometrics	CO1	To familiarise the students with the various techniques used in data analysis
		CO2	To create an awareness about statistical quality control
		CO3	To understand the use of SPSS software in processing and analysis of data
CO2 24	International Business	CO1	To understand the students regarding the origin and development of international Trade
		CO2	To understand the students with the various theories of International Trade
		CO3	To familiarise the students with the capital flow between countries
CO2 25	Investment Management	CO1	To provide a general understanding about investment avenues andpersonal finance.
		CO2	To give a broader understanding about behavioural finance andhow it equip to decide personal investment
SEMESTER 3			
CO2 31F	Income tax Planning and Management	CO1	To provide the students an in depth knowledge of the provisions relating to computation of income tax
		CO2	To gain knowledge on fundamental priciples and practices on Income Tax Laws
		CO3	To familiarise with tax planning principles
CO2 32F	Security Analysis and Portfolio Mahagement	CO1	To help the students to understand various issues in Security Analysis and Portfolio Management
		CO2	To equip the students to value the real worth of securities
		CO3	To provide a comprehensive understanding on the principles of Security analysis
CO2 33F	International	CO1	To familiarise the students with the international financialmarkets and instruments

	Financial Management	CO2	To convey an understanding about foreign exchange risk management
CO2 34F	Strategic Cost and Management Accounting	CO1	To comprehend and familiarize the established techniques,methods and practices in Strategic Cost and Management Accounting to the students
		CO2	To introduce the evolving Strategic approaches and techniques inCost and Management field and to developed industrial behaviour amongthe students in the emerging business areas.
		SEMESTER 4	
CO2 41W	GST and Customs Duty Law and Practice	CO1	To gain expert knowledge of the principles and laws relating to indirect taxes
		CO2	To impart skill in applying and analysing the provisions of Goodsand Service Tax Act and Customs Act in handling practical situations
CO2 42F	Risk Management and Derivatives	CO1	To understand the risk management process and its application
		CO2	To give a broader awareness on derivatives and its applications
CO2 43F	Accounting Standards	CO1	To acquaint the students to understand the structure, process andorganizational set up involved in evolving accounting standards in India
		CO2	To enable the students to apply some key standards while preparing and presenting thefinancial statements Course
CO2 44S	Management Optimization Techniques	CO1	To convey basic principles and application of optimization tools of resource utilization.
		CO2	To provide an insight into optimal project implementationTechniques under deterministic and probabilistic conditions

Name of the Programme: MSc Physics

Course	Course Title		Course Outcomes
		SEMESTER 1	
PH 211	CLASSICAL MECHANICS	CO1	Learn Lagrangian mechanics, analyse two-body central forceproblem, small oscillations and rigid body dynamics.
		CO2	Learn Hamiltonian mechanics and Hamilton-Jacobi method Learn Special and General theories of Relativity.
		CO3	Acquire preliminary knowledge of nonlinear dynamics and chaos
PH 212	MATHEMATICAL PHYSICS	CO1	Develop detailed knowledge of Linear algebra, Complex analysis, Fourier Series and Tensor analysis.
		CO2	Learn Probability theory, Group Theory and Special Functions. Develop in-depth knowledge of Differential equations andsolution methods.
PH 213	BASIC ELECTRON	CO1	Know common electronic circuits using Diodes, BJTs, FETs, OPAMPs and 555 timer ICs.
		CO2	Familiarization with solid- state devices. Preliminaries of DigitalElectronics , Optoelectronics and instrumentations.
		SEMESTER 2	
PH 221	MODERN OPTICS AND ELECTROMAGNETIC THEORY	CO1	Understand and comprehend common topics in modern optics and preliminaries of nonlinear optics, Electromagnetic waves and Relativistic electrodynamics, Radio wave propagation, Transmission lines, waveguides and antennas.
PH 222	THERMODYNAMICS, STATISTICAL PHYSICS AND BASIC QUANTUM	CO1	Assimilate and comprehend Thermodynamic relations andClassical and Quantum statistics and understand Phase transitions.
		CO2	Learn Foundations of quantum mechanics, the paradoxes andsome exactly solvable problems in quantum mechanics.
PH 223	COMPUTER SCIENCE AND NUMERICAL TECHNIQUES	CO1	Learn basic computer architecture and microprocessors. To attainworking knowledge on Python and C++ programming languages.
		CO2	To implement numerical methods in problem solving in physics
PH 251	GENERAL PHYSICS PRACTICALS	CO1	Learn experimental techniques in general physics
		CO2	Learn analysis of data and error estimation
PH 252	ELECTRONICS AND COMPUTER	CO1	Learn construction of analog electronic circuits and c ++programming
		SEMESTER 3	

PH231	ADVANCED QUANTUM MECHANICS	CO1	Learn approximation methods in quantum mechanics, the connection between symmetry and conserved quantities, the angular momentum, and the properties of systems of identical particles.
		CO2	To understand the theory of quantum scattering and learn topics in relativistic quantum mechanics and preliminaries of quantumfield theory
PH 232	ATOMIC & MOLECULAR SPECTROSCOPY	CO1	Learn and apply general tools of spectroscopy.
		CO2	To enhance understanding of Molecular, rotational, IR, Electronic, Raman, ESR , NMR, Mossbauer, Photo electron andPhoto acoustic spectroscopy
PH 233E	ADVANCED ELECTRONICS -I	CO1	To summarize various techniques of digital and analog communication systems.
		CO2	Illustrate various techniques for digital signal processing based Fourier and Z transform
SEMESTER 4			
PH 241	CONDENSED MATTER PHYSICS	CO1	Learn crystal structure, lattice vibrations and free electron and band theories. Learn semiconductors, Dielectric and Magneticproperties of matter and superconductivity.
PH242	NUCLEAR AND PARTICLE PHYSICS	CO1	Learn Nuclear forces, nuclear models and nuclear reactions
		CO2	To understand details of Nuclear fission and fusion, Nuclear detectors, particle accelerator and Elementary particle physics
PH243E	ADVANCED ELECTRONICS - II	CO1	Outline the basic concepts of embedded systems, artificial intelligence and neural networks.
		CO2	Illustrate fundamental data communications codes, radar and satellite communication systems.
PH 261	ADVANCED PHYSICS	CO1	Learn advanced experimental techniques in general physics
PH 262	ADVANCED ELECTRONICS PRACTICALS	CO1	Learn construction an implementation of analog and digitalcircuits along with microprocessors.

Name of the Programme : **MSc Zoology with Specialoization in Biosystematics & Biodivesity**

Course Title		Course Objrctives	
SEMESTER I			
ZO 211	EVOLUTION AND ZOOGEOGRAPHY	CO1	To impart knowledge on the basic aspects of evolution and zoogeography.
		CO2	To study the fundamentals of origin of species and role of variation in evolution.
		CO3	To understand the basics of the phylogeny, zoogeography and animal distribution.
ZO212	BIOCHEMISTRY	CO1	To impart knowledge on various biochemical molecules and path ways in life processes.
		CO2	To demonstrate knowledge and understanding of the molecular machinery of living cells, the principles that govern the structures of macromolecules and their participation in molecular recognition and understanding of the principles and basic mechanismsof metabolic control and molecular signaling
ZO213	Biophysics, Instrumentation and Nanoscience and Nanotechnology	CO1	To get knowledge and understanding of the fundamental of biophysical aspects of biology and application of instruments in biological laboratory.
		CO2	To understand the fundamentals of nano bioscience and nanotechnology at the application levels.

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Name of the Programme: MSc Mathematics			
Course Code	**Course Title**	**Course Outcomes**	
SEMESTER 1			
MM 211	LINEAR ALGEBRA	CO1	Acquire knowledge about vector spaces , subspace, bases and dimensions.
		CO2	Understand linear maps, their algerbras, matrix of linear maps
		CO3	Find the Eigen values and Eigen vectors of linear transformations.
MM 212	REAL ANALYSIS I	CO1	Learn about the functions of bounded variation and rectifiable curve.
		CO2	Understand the concept of Riemann- Stieltjes integral
		CO3	Understand the concept of uniform convergence of sequence of functions
MM 213	DIFFERENTIAL EQUATION	CO1	Acquire the knowledge of the existance of series solutions of differential equations.
		CO2	Acquire the knowledge of specual functions like Legendre polynomial , Bessel's function, Gamma function and theirproperties.
		CO3	Acquire the knowledge of finding the solution of first order partial differential equations by different methods.
MM 214	TOPOLOGY-I	CO1	Demonstrate knowledge and understand of metric spaces.
		CO2	Undertstand terms definitions and theorems related to Topology.
		CO3	Demonstrate knowledge and understanding of concepts such asopen and closed sets, interior, closure and boundary.
SEMESTER 2			
MM 221	ABSTRACT ALGEBRA	CO1	Acquire knowledge about important Mathematical concepts in Abstract Algebra such as groups , rings , integral domains andfields
		CO2	Learn applications of Algebra on irreducible polynomials.
		CO3	Apply Sylow Theorem in the study of simple groups.
MM 222	REAL ANALYSIS II	CO1	Acquire basic concepts from Measure Theory including sigma algebra, outer measure, measurable sets, measurable functions,the Lebesgue integral etc.
		CO2	Get an overview of the central results of the theory of Lebesgue integration.
		CO3	Be familiar with the concepts of convex functions in the space LP and inequalities including Jensen's inequality , Holder'sinequality,Minkowski's inequality.
MM 223	TOPOLOGY II	CO1	Create new topoligical spaces by using product and quotient topologies.
		CO2	Understand separation properties and study various theorems related to them.
		CO3	Conceive the concept of nets and filters and understand nets as generalised sequence.
MM 224	PARTIAL DIFFERENTIAL EQUATIONS	CO1	Acquire the knowledge of finding solutions of partial differential equations.
		CO2	Acquire the knowledge of parabolic, elliptic and hyperbolic equations.
		CO3	Discuss the applications such as heat equations and wave rquations
SEMESTER 3			
MM 231	COMPLEX ANALYSIS I	CO1	Power series of complex functions.
		CO2	Complex integration to understand analytic functions in a better way.
		CO3	Properties of Mobius transformations briefly and complex numbers as points on a sphere.
MM 232	FUNCTIONAL ANALYSIS I	CO1	Understand the basic idea on normed space through examples and study various properties and characterisation of normed space. Also understand the idea of continuity of linear maps between normed spaces.
		CO2	Understand two fundamentals results in functional analysis - Hahn-Banach Theorem and Hahn- Banach Separation Theoremand its consequences.
		CO3	Understand the idea of Banach Space (complete normed space.) through examples and its various properties.
MM 233	OPERATIONS RESEARCH	CO1	Study scientific approach to problem solving.
		CO2	Use quantitative methods and techniques for effective decision making.
		CO3	Understand the formulation of Mathematical models for decision and controls problems to deal with the situations arising out ofrisk and uncertainity.
MM 234	GRAPH	CO1	Understand the relation between graphs and groups.
		CO2	Provide the idea of cut vertex, blocks, connectivity, Euler graph and Hamiltonian graph and learn to identify them.

	THEORY	CO3	Conceive the concept of strong digraph , tournament, matching , factorisation and their properties.
SEMESTER 4			
MM 241	COMPLEX ANALYSIS II	CO1	Demonstration of compactness and convergence in the space ofanalytic functions and Riemann Mapping Theorem.
		CO2	Clear understanding of Weirstass factorisation Theorem, Gammafunction, Riemann Zeta function, Runge's Theorem, simple connectedness and MittagLeffler's Theorem.
		CO3	Study the notion of analytic continuation; begins with SchwarzReflection Principle and ends in Monodromy Theorem.
MM 242	FUNCTIONAL ANALYSIS II	CO1	The idea of compact operators and the spectral theorem for compact operators.
		CO2	The notion of inner product space and learns its various properties.
		CO3	The orthogonality of two vectors in an inner product space and its various properties.
MM 243	FIELD THEORY [ELECTIVE]	CO1	Explain the concept of solvable group and acquire knowledge of properties of solvable groups
		CO2	Introduce the concept of irreducible polynomial and demonstrate the creation of field containing the roots of irreduciblepolynomial
		CO3	conceive the idea of splitting field of a polynomial and understandits relationship with dimension of vector space
MM 244	ANALYTIC NUMBER THEORY (ELECTIVE)	CO1	Review some basic cocepts and results of number theory such as divisibility , greatest common divisor , prime numbers euclidsalgorithm etc
		CO2	Study arithmetical functions and its applications
		CO3	Learn the application of the congruence, qudratic residues andprimitive roots for solving numerical problems

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