



SREE NARAYANA COLLEGE

(Affiliated to the University of Calicut)
NAAC Accredited with B Grade

Erattakulam P.O, Alathur 678682

sncalathur1970@gmail.com

04922 222 391

www.sncollegealathur.ac.in



CRITERION: 2

**TEACHING- LEARNING AND
EVALUATION:**

**STUDENT PERFORMANCE AND
LEARNING OUTCOME**

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CRITERION	2: Teaching- Learning and Evaluation
KEY INDICATOR	2.6 Student Performance and Learning Outcome
METRIC NO	2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated
FILE DESCRIPTION	<ul style="list-style-type: none">• Supporting documents



SREE NARAYANA COLLEGE ALATHUR

P.O. Erattakkulam, Pin – 678 682, Kerala, India

(Managed by the Sree Narayana Trusts, Kollam)

Affiliated to the University of Calicut.

Accredited by NAAC with 'B' Grade



Estd. 1970

Dr. R.Bindu M.Sc., Ph.D

Principal

Phone: 04922-222 391, 2244991, Email: snalathur1970@gmail.com

Ref:

Date:

PROGRAMME OUTCOMES (POs) & PROGRAMME SPECIFIC OUTCOMES (PSOs)

B.Com

- To equip the students with the skills of preparing financial statements for various type of organizations.
- To enable the students to acquire knowledge about financial reporting standards and to understand corporate accounting methods.
- To familiarize the students with certain statutes concerning and affecting business organizations in their operations.
- To help the students to acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.
- To familiarize the students with the various concepts and elements of cost.
- To create cost consciousness among the students.
- To familiarise the students with corporate law and to make them aware of the importance of corporate governance in the management of organizations.
- To enable the students to understand the concept and relevance of Management Accounting
- To provide the students an understanding about the use of accounting and costing data for planning, control, and decision making.
- To enable students for acquiring basic knowledge in business research methods and to develop basic skills in them to conduct survey researches and case studies.
- To impart basic knowledge and equip students with application of principles and provisions Income - tax Act, 1961 amended up to date.
- To provide knowledge of auditing principles and techniques and to familiarize the students with the understanding of issues and practices of corporate governance in the global and Indian context.
- To provide basic knowledge about the structure, organization and working of financial system in India.
- To familiarize the students with the concepts, tools and practices
- To familiarize the students with the world of investments.
- To impart knowledge about different forms of banking services and the procedure for opening and operating bank accounts.
- To enable the students to learn the computation of premium, bonus and claims and knowledge about various methods of pricing of insurance products
- To enable the students to learn the theories of foreign exchange behavior and to understand the different types of exchange rate risks.

BA Functional English

The Curriculum of B.A. Functional English has been designed keeping in view the role of English as a major language of international communication in the present world scenario. A multi-focal academic programme, this U.G. Programme aims at equipping the student with excellent communicative skill in diverse applications of English Language designed to open up a wide spectrum of Career Avenue in a fast evolving knowledge society. Feature sare:

- Advanced Level English Programme with an interactive approach.
- Primary focus on basic language skill—LSRW (Listening, Speaking, Reading and Writing)
- Application of English in major areas—Media, Business, Creative writing, Translation, Advertising, Film, Sports and Entertainment.
- Fostering human values through exposure to major works of literature in English and stimulating self-exploration and self-expression.
- Moulding a generation of techno-savvy student competent in tapping ICT for generation of knowledge.
- Providing support for IELTS, TOEFL and other international language testing system.

BA Economics

Coming to the curriculum of Economics, our objective is to impart

- A knowledge of fundamental concepts and theoretical propositions
- A methodology by which economic ideas are framed, tested and modified
- An understanding of the institutions, social, political and economic that influence economic issues
- An ability to present one's own analysis of the problems and issues in the language of an 'Economist'

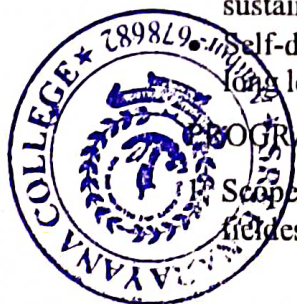
B.Sc. Botany

- **Critical Thinking:** Take informed actions after identifying the assumptions that frame students' thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at their ideas and decisions (intellectual, organizational, and personal) from different perspectives.
- **Problem Solving:** Understand and solve problems of relevance to society to meet the specified needs using the knowledge, skills and attitudes acquired.
- **Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
- **Effective Citizenship:** Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
- **Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.

Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context of socio-technological changes

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Scope and importance of Botany: Understand scope and importance of Botany in every field especially in dealing with societal and environmental issues, agriculture, ethics and



- healthcare.
2. Environmental concern: Understand the and the role of plants in sustaining life on earth and the interrelationship between human beings and nature, create awareness on natural resources and their importance in sustainable development, analyze the importance of biodiversity conservation, estimate biodiversity loss and develop conservation strategies.
 3. Scientific temper: Develop scientific temper and undertake scientific projects.
 4. Practical applications: Identify and classify plants according to the principles of plant systematics, apply techniques like plant propagation methods, organic farming, mushroom cultivation, preparation of biofertilizers, biopesticides etc. in daily life.
 5. Awareness on life processes: Understand plant life processes, biomolecules, basic hereditary and evolutionary principles.

B.Sc. Chemistry

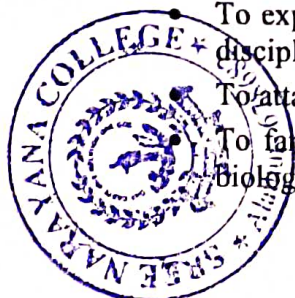
To enable the students

- To understand basic facts and concepts in chemistry.
- To apply the principles of chemistry. To appreciate the achievements in chemistry and to know the role of chemistry in nature and in society.
- To familiarize with the emerging areas of chemistry and their applications in various spheres of chemical sciences and to apprise the students of its relevance in future studies.
- To develop skills in the proper handling of instruments and chemicals.
- To familiarize with the different processes used in industries and their applications.
- To develop an eco-friendly attitude by creating a sense of environmental awareness. To be conversant with the applications of chemistry in day-to-day life.

B.Sc. Zoology

The expected outcome of the syllabus:

- To know the scope and importance of Zoology.
- To develop scientific temper among students.
- To inculcate interest in nature and living forms and their conservation.
- To make the students eco-friendly by creating a sense of environmental awareness in them.
- To give better exposure to the diversity of life forms.
- To give awareness about natural resources and their importance in sustainable development.
- To study different ecological sites for animals in their natural habitats by field study.
- To provide opportunities for the application of the acquired knowledge in day- to - day life.
- To develop skills in doing experiments, familiarizing equipment and biological specimens.
- To undertake scientific projects which help to develop research aptitude in students.
- To expose students to various fields in biological sciences and to develop interest in related disciplines.
- To attain interdisciplinary approach to understand the application of the subject in daily life.
- To familiarize the emerging areas of Zoology and their applications in various spheres of biological sciences and to appraise the students of its relevance in future studies.



B.Sc. Microbiology

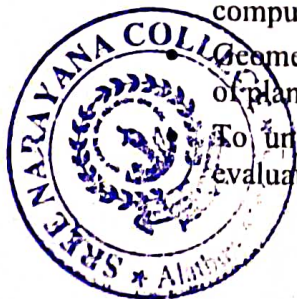
- Acquire knowledge about the fundamental principles and scientific theories related to various scientific phenomena in day-to-day life.
- To develop communication skills and get expertise in scientific writing.
- Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments. Equip them with the skills to think creatively and draw logical inferences from the scientific experiments to draw the objective conclusions or provide new solutions to the problems. To make them Capable of working effectively in diverse teams in both classroom, laboratory and in industry and field-based situations.
- To get an awareness of the impact of science on the environment and society.

Programme specific outcomes (PSOS) of B.Sc. Microbiology are to:

- Gain integrated knowledge on different aspects of microbiology, biochemistry, biostatistics and computer applications bioinformatics and emerging worldwide microbiological technologies, issues, and perspectives.
- Acquire skills specific to microbiology and allied fields for converting information to knowledge through hypothesis, design, execution and analysis. PSO3 Analysis of scientific issues across the spectrum of related disciplines.
- Enable the students to improve the quality of human lives in relation to the environment with the knowledge in microbiology.
- Capacity to develop, employ and integrate technical and professional skills as a member of a team upholding the essence of collaboration, cooperation, ethics and integrity.

B.Sc. Mathematics

- Logic, the study of principles of techniques and reasoning, is fundamental to every branch of learning.
- The mathematics required for viewing and analyzing the physical world around us is contained in calculus.
- Using the idea of definite integral developed in previous semester, the natural logarithm function is defined and its properties are examined. This allows us to define its inverse function namely the natural exponential function and also the general exponential function.
- An introductory treatment of linear algebra with an aim to present the fundamentals in the clearest possible way
- Basic ideas and methods of real and complex analysis are taught.
- The goal of numerical analysis is to provide techniques and algorithms to find approximate numerical solution to problems in several areas of mathematics where it is impossible or hard to find the actual/closed form solution by analytical methods and also to make an error analysis to ascertain the accuracy of the approximate solution.
- Linear programming problems are having wide applications in mathematics, statistics, computer science, economics, and in many social and managerial sciences.
- Geometry is, basically, the study concerned with questions of shape, size, and relative position of planar and spatial objects.
- To understand the notion of improper integrals, their convergence, principal value and evaluation.



B.Sc. Environment & Water Management

- To develop basic understanding of Fundamentals of Environmental Science as a discipline.
- To bring sensitization towards the environment and also increase student competency & employability.
- To inculcate a sense of responsibility among students about various principles and laws of environment
- To encourage students about applicability of knowledge and Interdisciplinary approach in day to day life.

MA English Language & Literature

The students are expected to develop both an understanding of the cultures represented by the literatures discussed and abilities of critical thinking. The courses on marginalized discourses promote values-based thinking. The Project/Dissertation in the Fourth Semester is expected to be a window to research/project writing for prospective research scholars and professionals. The elective course on Teaching of English is directly career-oriented

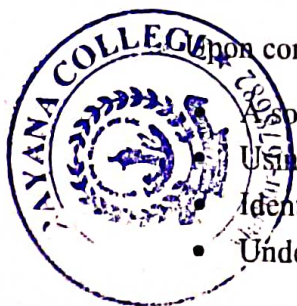
M.Com

- To make an awareness and understanding about the emerging business in the contemporary Indian economic scenario to get an effective knowledge about the changing business scenario in accordance with the changes in the economic environment of the country.
- To familiarise students with the concepts of macro-economic in which a Business organization operates. To give an idea about the policies of the government and assess their impact on business.
- To make an understanding about the concept of Corporate Governance and the communication mechanism
- To Apply the various Theories and Models of Corporate Governance and the recent initiatives in India and abroad
- To make an understanding about the various committees on Corporate Governance and the Legal framework
- To acquaint students with important quantitative techniques, which enable sound business decision making
- To make students learn the process of applying appropriate quantitative techniques for validating findings and interpreting results
- To Evaluate the personality traits of human beings and various ethical issues in Organisational Behaviour.
- Understand and apply the significance of risk and uncertainty in decision .

M.Sc. Mathematics

Upon completing the M. Sc degree in the field of Mathematics, students have/capable of:

- Acquire a solid understanding of graduate level algebra, analysis and topology.
- Using their mathematical knowledge to analyze certain problems in day to day life.
- Identifying unsolved yet relevant problems in a specific field.
- Undertaking original research on a particular topic.



- Communicate mathematics accurately and effectively in both written and oral form.
- Conducting scholarly or professional activities in an ethical manner.

M.Sc. Zoology

The programme also works across related majors within the M.Sc zoology

- Distinguish between the Structure, Function, Behaviour and evolution of different animals
- For instance if you major in zoology, you can also still take courses from across the other complementary.
- Master of Science majors of conservation biology and ecology, giving you an in-depth knowledge of those most closely related programmes
- Apply the wide range of subject based skills to various fields that provide a base for future career in disciplines such as Health Sciences, Agriculture, Environmental Management, Biotechnology, Publishing, Teaching and Research
- Perform, Assess and implement practical techniques and procedure to solve biological problems and analyse and quantify data collected during any project.
- Understand the applications of Biological techniques to various fields of biology.
- When you graduate with a Master of Science (Zoology) you will have learned how to work at a high level of academic achievement.
- Work to deadlines under pressure and communicate effectively.

Program Specific Outcomes (M.Sc. Zoology)

- Understand Nature, environment natural resources and their conservation, Classification & Behaviour of different animals, Human genetics, Cytology and Evolution.
- Apply the wide range of subject based skills to various fields that provide a base for future career in disciplines such as Health Sciences, Agriculture, Environmental Management, Biotechnology, Publishing, Teaching and Research.
- Distinguish between the Structure, Function, Behaviour and evolution of different animals.
- Perform, Assess and implement practical techniques and procedure to solve biological problems and analyse and quantify data collected during any project.
- Understand the applications of Biological techniques to various fields of biology

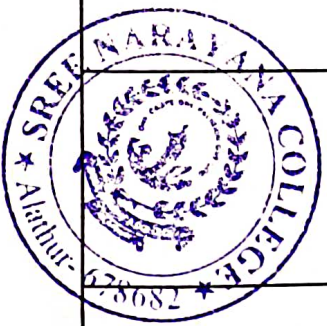


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SREE NARAYANA COLLEGE ALATHUR
COURSE OUTCOMES OF ALL DEPARTMENTS

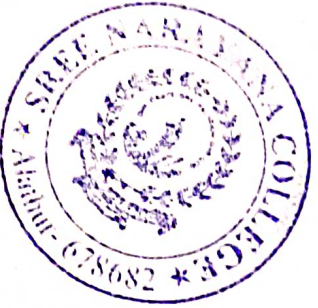
DEPARTMENT OF COMMERCE

PROGRAM ME CODE	PROGRAMME NAME	COURSE CODE	COURSE NAME	OBJECTIVE	OUTCOME OF THE COURSE
B.COM	COOPERATION				
	SEM I	BCM1B01	BUSINESS MANAGEMENT	To provide a thorough understanding of the various thoughts and theories on Management and its application in real business situations.	1. Understand the concept of Management. 2. Understand the importance of Management in a global perspective. 3. Understand the differences between management and leadership in real life situations. 4. Analyze the concept of corporate social responsibility towards various stake holders. 5. Understand about the most modern techniques of management practiced in developed countries.
		BCM1C01	MANGERIAL ECONOMICS	To provide knowledge about the basic principles of Micro and Macro economics for developing an understanding of various theories in economics and its integration to markets and business environment and to use them in managerial decision making	1. Understand Macro & Micro economics & its role in managerial decision making. 2. Understand the concept of law of diminishing marginal utility theory. 3. Understand the structure and importance of different types of markets. 4. Understand the role played by government in regulating Indian economy 5. Understand a conceptual knowledge regarding India's foreign trade and the application of this knowledge in securing business opportunities.



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	SEM II	BCM2B02	FINANCIAL ACCOUNTING	To impart knowledge on the modern accounting principles and its practice in real business situations. It also aims to make the students familiar with the latest changes in the field of accounting and method of recording, maintenance and preparation of financial statements.	1. Students learn to prepare accounts even from incomplete information. 2. The learner learns to prepare Company accounts 3. Understands the concept of debentures and learns to account for debentures. 4. Understand the application of IFRS in Companies 5. Critically learns 'AS' and IFRS.
		BCM2C02	MARKETING MANAGEMENT	To provide knowledge on the theory and practice of the various concepts, principles, tools and techniques of marketing and to motivate students to be an excellent marketer	1. The learner understands the core marketing concepts and consumer buying behaviour 2. The Scholar learns the concept of creating and capturing value. 3. Understand the concept of marketing channels in the competitive environment. 4. Learns to enrich the firm's competitive strength. 5. Understand and develop an idea about the latest trends in e-commerce and e-marketing.



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	SEM III	BCM3A11	BASIC NUMERICAL METHODS	To enable the students to acquire knowledge of basic mathematical operations, solving equations, working on matrices, statistics and application of mathematical and statistical tools and techniques for solving complex business situations	1. The learner learns the concepts of equations and quadratic formula. 2. Facilitates the scholar to use matrices for large volume data processing. 3. This helps to solve problems involving arithmetic and geometric progressions. 4. Able to choose the right mode of interest and EMI for debt repayment 5. Develop the skill of using descriptive statistical tools.
		BCM3A12	PROFESSIONAL BUSINESS SKILL	To update and expand basic Informatics skills of the students and equip them to effectively utilize the digital knowledge resources for studies and business.	1. Facilitates easy business communication 2. Improved knowledge of E-learning resources and its delivery broadens vision and insight of management. 3. Knowledge of artificial intelligence and data analysis helps to diversify and grow business cutting across obstacles 4. Knowledge of existing national and international cyber laws makes communication and business easier. 5. Digital marketing and its application of social media channels and advertisements enhances changes and horizon of business



P. B. B. B.

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			To familiarize the students with various laws in force on establishment and running of business in the country and the legal aspects to be observed.	1. Helps to establish and run business as directed by the government. 2. Knowledge of Indian Contract Act 1872 helps to enter into valid contracts in life and business. 3. Learning of Sale of Goods Act helps to do business keeping all legal formalities. 4. Understanding of the privileges and rights of consumers helps to do legally standing business admitting the status of the customers; increases business and relationships in the long run. 5. Able to create LLP business with sound legal knowledge.
	BCM3B03	BUSINESS REGULATION	To help the students to acquire conceptual and practical knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.	1. Becomes competent to prepare accounts related with redemption of preference shares, bonus shares, right issue of shares and buy back of shares. 2. Realizes the concept of preparation of final accounts of banking companies. 3. Develop the skill of preparation of final accounts of life insurance companies. 4. Able to prepare the final accounts of group companies. 5. Understand the concept of disclosure based accounting standard and interim reporting. **
	BCM3B04	CORPORATE ACCOUNTING		



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			To familiarize the students with the different aspects of managing human resources in an organization and to understand the different employment training, compensation and grievance handling procedure in an organization	1. Knowledge of human resource management helps to run business effectively. 2. Understand the necessary skills required for the employment in an organization. 3. Familiarity with the induction and organizational training practices helps to have effective trained work force in the organisation.. 4. Understand the concept of career planning and performance appraisal. 5. Insight on compensation and grievance management practices helps to take effective and appropriate decisions on time.
SEM IV	BCM4A13	ENTREPRENURSHIP DEVELOPMENT	: It is intended to familiarize the students with the concept of entrepreneurship, to identify and develop the entrepreneurial talents of the students and to generate innovative business ideas in the emerging industrial scenario.	1. It motivates the learner to become an entrepreneur 2. Knowledge of supports available helps to reap the benefits of easily 3. It is intended to trigger the mind set of youth to establish and run MSMEs in life 4. Knowledge of establishing industrial units helps to start with business units easily. 5. The learner can draft and finalise project report without external helps and supports.



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		BCM4A14	BANKING AND INSURANCE	It is intended to enable the students to acquire knowledge about basics of Banking and Insurance and to familiarize the students with the modern trends in banking.	1. Candidates get clear picture of the banking business India and he can plan accordingly. 2. Knowledge of negotiable instruments, features & formalities helps to deal with care. 3. This helps the candidate to be up-to-date in banking formalities and fund transfer. 4. Knowledge of insurance business helps to hedge, avoid, and reduce risk in business. 5. Knowledge of LIC and IRDA helps to move with Insurance people with confidence.
	BCM4B05	COST ACCOUNTING	To familiarize the students with the various concepts and elements of cost and to create cost consciousness among the students.	1. The learner gets insights into the costing and cost accounting tools and techniques. 2. The learner understands the scientific material cost control measures in use... 3. The scholar gets used to the scientific labour and overhead cost control measures. 4. Knowledge of various methods of costing helps the learner to practice in life. 5. Variance analysis helps to identify its causes and take corrective actions. ***	



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				To familiarize the students with corporate law and to make them aware of the importance of corporate governance in the management of organizations. It is also intended to learn the formation, management and winding up of companies.	1. Knowledge of Indian Companies Act gives the legislative backgrounds of a company. 2. The candidate knows the formalities for formation of a company which will help to form more corporates in life. 3. The knowledge of raising funds will help the candidate to choose between debt and equity easily. 4. The candidate can easily manage a company as he knows the rights, duties and powers of all positions. 5. Knowledge of situations when a company may go for liquidation helps to run the business effectively.
	BCM4B06	CORPORATE REGULATIONS		To familiarize student with the use quantitative techniques in managerial decision making	1. Knowledge of QT broadens vision and outlook of the candidate to face business problems. 2. Understanding of correlation and regression analysis helps to predict with greater degree of accuracy. 3. Awareness of probability and other theories helps to have critical thinking and rational decisions. 4. Familiarity with theoretical distributions helps to correlate issues with standard theories and take decisions. 5. Knowledge of LPP and modeling will be of great help in decision making.
	BCM4CO4	QUANTITATIVE TECHNIQUES FOR RESEARCH			

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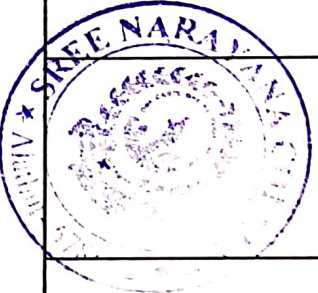
		BCM5B09	INCOME TAX LAW AND ACCOUNTS	It aims at providing a basic knowledge and equips students with the provisions of the Income Tax Act in India. It is intended to provide the candidate with basic knowledge of heads of Income and computation of taxable income under various heads of Income.	1. To understand the method and methodology of taxation on income in India. 2. To learn the provisions related to computation of Taxable Salary Income. 3. Knowledge of taxing Income from house property helps the learner to compute taxable income under the head House Property correctly. 4. Knowledge of computing Income under the head profits and gains of business or profession helps the learner to do it effectively in life. 5. Knowledge of computing Income under the head Capital Gains and other sources makes the learner self-confident and competent to practice income tax.
		BCM5B10	COOPERATIVE THEORY AND PRACTICE	To provide conceptual clarity and theoretical base in co-operation and to provide an overall idea about important types of co-operatives	1. It helps to learn about cooperation, cooperative movement and its principles 2. It facilitates a comparative study of cooperation and other economic systems 3. It helps to learn cooperative training houses and methods of training. 4. Idea on different types of cooperatives helps to choose from as when needed. 5. History of successful business houses motivates to start new cooperative business houses.



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				<p>To enable the students to acquire knowledge about co-operative legal frame work in India and Kerala and to understand the formalities for registering co-operatives and the administrative set up.</p>	<p>1. Knowledge of cooperative movement in India helps to form new cooperatives. 2. Knowledge of cooperative legislations helps to go by law and take valid decisions. 3. Learning of Kerala Cooperative Societies Act helps to run societies easily. 4. Administrative set up of Cooperatives helps to contact the right person at the right time. 5. Banking Regulation Act helps to have a comparative study of both the Acts.</p>
	SEM VI	BCM5B11	LEGAL ENVIRONMENT FOR COOPERATIVES	<p>It is intended to equip students with specialized knowledge in the field of direct and indirect taxation system and inspire them for better employment opportunities and self-employment. It also aims to understand the importance of Income Tax and GST in the Indian and global economy and its contribution to the economic development.</p>	<p>1. Students will be able to Compute tax liability of individuals 2. The Learner can do filing of returns of income meeting statutory obligations 3. The scholars understand the concept of GST and e-filing procedures 4. The candidates understand the offences and penalties under the Acts. 5. The Learner learns the rights, duties and powers of CAG and tax authorities</p>
		BCM6B12	INCOMETAX AND GST		



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		BCM6B13	AUDITING AND CORPORATE GOVERNANCE	<p>It is intended to provide knowledge of auditing principles and techniques and to familiarise the students with the understanding of issues and practices of corporate governance in the Global and Indian context. It also envisages imparting knowledge on the framework of corporate governance in terms of codes and standards to be applied.</p>	<p>Knowledge of auditing helps gives newer insights and wide vision on the topic. ● Learns to do verification, vouching and valuation independently. ● Knows to set internal control system effectively to check frauds, errors and omissions. ● Solid understanding of the models and benefits of corporate governance. ● Evaluate different stakeholders' roles and significance in corporate governance.</p>
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A. Binu

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		INTERNATIONAL COOPERATIVE MOVEMENT	<p>To enable the students to acquire knowledge about the evolution and development of cooperative movement in the world. To familiarize with the international cooperative alliances, specialized organizations and the inter cooperative relations</p>	<p>Acquire knowledge about the cooperative movement in the world, ● Understand the structure and aim of international alliances ● Be aware about the significance of international organizations. ● Impart knowledge on the inter-cooperative relations in the country.</p>
	BCM6B14	INTERNATIONAL COOPERATIVE MOVEMENT	<p>To provide the students a conceptual and practical understanding of the dimensions of cooperative management. To develop the knowledge on functions, rules, regulations and the benefits of the cooperative management and administration.</p>	<p>1. Understand the concepts and characteristics of cooperatives Understand the functional and management aspects of cooperatives 3 Develop an insight about cooperative leadership 4Equip students with preparation of documents and financial statements Develop skills do verification and valuation of assets and liabilities.</p>
	BCM6B15	COOPERATIVE MANAGEMENT AND ADMINISTRATION		

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		BCM6B16	3 WEEKS PROJECT AND VIVA VOCE	To familiarise students with research aspects	Chance to practically apply quantitative techniques and research methodology
M.COM	FINANCE			2019-20	
	SEM I	MCM1C01	BUSINESS ENVIRONMENT AND POLICY	To familiarise students with the concepts of macro-economic in which a Business organization operates. To give an idea about the policies of the government and assess their impact on business.	Analyse the environment of a business from the various internal and external perspectives • Evaluate how the economic environment and its configurations influence in business decision making. • Apply the role of New Economic Policy and the Economic reforms in the perspective of Business. • To make understand the various policies related to FDI & Multi-National Corporations. • To give an in-depth knowledge about the recent Government policies regarding Environment management.
		MCM1C02	CORPORATE GOVERNANCE AND BUSINESS ETHICS	To familiarise the students with the knowledge of corporate ethics • To enable the students to understand the emerging trends in good governance practices. • To create corporate financial reports in the global in the global and Indian context.	To make an understanding about the concept of Corporate Governance and the communication mechanism • To Apply the various Theories and Models of Corporate Governance and the recent initiatives in India and abroad • To make an understanding about the various committees on Corporate Governance and the Legal framework • Evaluate the role of various stakeholders, whistle blowing and the recent developments in India. • To create Important ethical principles in Business in the cultural diversity



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		MCM1C03	QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS	To acquaint students with important quantitative techniques, which enable sound business decision making To make students learn the process of applying appropriate quantitative techniques for validating findings and interpreting results.	To remember and understand properties of probability distribution and to solve the problems • To apply hypothesis testing for validation and interpretation of the results • To evaluate the application of non-parametric tests for validation. • To understand the tool for finding the relationship between variables and its magnitude • To create soft skill knowledge for data analysis
		MCM1C04	MANAGEMENT THEORY AND ORGANISATIONAL BEHAVIOUR	To impart a thorough understanding about various concepts and theories in management and organisational behaviour.	Understand the various psychological process and different motivation theories which will influence the performance. To Evaluate the personality traits of human beings and various ethical issues in Organisational Behaviour. , To understand importance of group dynamics, need for work life balance and managing change. To apply the the various terms related to organisational culture and Techniques for managing organisational relationships.



A. B. Basha

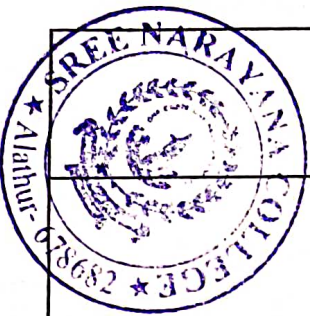
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		MCM1C05	ADVANCED MANAGEMENT ACCOUNTING	1. To enable students to understand and apply tools, techniques, and concepts in managerial decision-making process. 2. To inculcate analytical skills in interpreting and diagnosing business problems	1. To remember and understand the knowledge to use different methods of measuring financial and non-financial performance. 2. To measure and solve financial and non-financial performance-based business problems. 3. To understand and apply comprehensive performance management initiatives for organizations 4. Understand and apply the significance of risk and uncertainty in decision making. 5. To apply various techniques of interpreting Variances.



R. Bindu

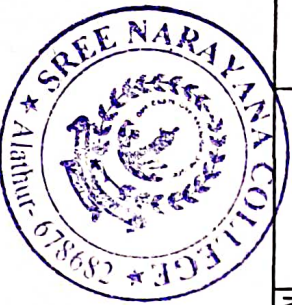
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	SEM II	MCM2C06	ADVANCED CORPORATE ACCOUNTING	<p>1. To provide knowledge and skills in the theory and practice of corporate financial accounting. 2. To provide insight in to some of the important accounting standards of IFRS /Ind AS 3. To enable problem solving abilities among students in matters of various corporate situations such as consolidation of group information, corporate restructuring and liquidation</p>	<p>To understand the theory and practice of Corporate Financial Accounting • To create problem solving capacity in Corporate restructuring and liquidation • To understand skill in recognition, measurement and presentation of deferred tax • To understand insight into Accounting standards of IFRS, Ind AS, and Lease accounting • To evaluate different types of accounting</p>
	MCM2C07	ADVANCED STRATEGIC MANAGEMENT	<p>To understand the Strategic Management Process and to provide basic idea about the Social and ethical issues • To understand and evaluate the Environment analysis and SWOC.</p>	<p>Evaluate the strategic options at Corporate level and the different growth strategies • To understand the Strategy implementation and different approaches in planning and allocating resources • To apply and evaluate the Strategy evaluation, tools and techniques used and processes with case studies</p>	

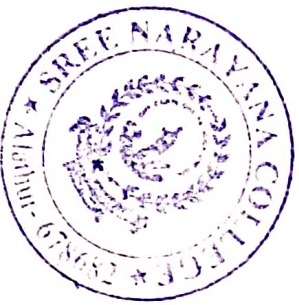
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			<p>1. To enable the students to know the applications of Cost accounting tools, Techniques and concepts in managerial decision-making process. 2. To provide students adequate knowledge of cost management and control techniques and to enable them to apply these for managing business</p>	<p>1. To understand the conceptual knowledge of Cost Accounting, comparison of cost accounting with other branches of accounting. 2. Provide students with a basic understanding of the different terminologies used in Cost Accounting and different types of cost 3. Understand the treatment regarding the application of process costing and treatment of Joint products and By products. 4. To understand and evaluate the practical application of Absorption Costing, Throughput Accounting, ABC Analysis and Transfer Pricing. 5. To evaluate the application of Productivity Management</p>
	MCM2C08	ADVANCED COST ACCOUNTING	<p>To study about the Theories of International Trade and reasons for internationalisation • Evaluate the International Business Environment opportunities and threats of Indian Companies</p>	<p>To understand the Strategy development in IB and the different business entry strategies. • To evaluate the role International economic situations in the development of Business. • To analyse the different strategies of Internationalization and the contribution to Indian Course outcome economy.</p>
	MCM2C09	INTERNATIONAL BUSINESS		



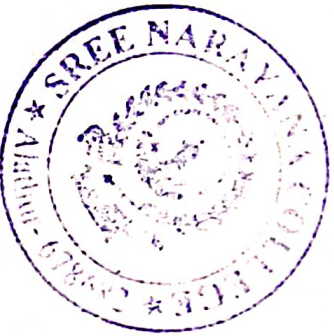

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				1. To familiarize students with concepts of management science and tools supporting decision making 2. To enable students to apply Management science techniques in appropriate decision situations.	To understand students with concepts of management science • To evaluate the application of various tools which support decision making process • To apply inventory management and managing the queue system in service sector. • To evaluate and create the technique of project planning scheduling and controlling • To understand knowledge in share analysis and different strategies in game theory
	SEM III	MCM3C11	FINANCIAL MANAGEMENT	To acquaint the students with the basic analytical techniques and methods of financial management of business organization. To provide the students the exposure to certain advanced analytical techniques that are used for taking financial policy decisions	To understand the role of finance and finance manager in an organisation • To Evaluate and apply sources of financing and corresponding cost of capital • To Understand and evaluate working capital decisions • To understand and apply Capital structure and leverage analysis • To understand and apply dividend theory and dividend decisions




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		MCM3C12	INCOME TAX LAW, PRACTICE AND TAX PLANNING 1	To enable students to understand computation of income under various heads, taxable income of various entities, tax planning and procedure of assessment.	To understand tax planning tips to individuals on the basis of residential status. • To understand and evaluate the computation of income under five heads and to apply tax planning tips for these five heads of income. • To understand and apply tax planning tips for Hindu Undivided family, set off and carry forward provisions and tax planning tips for individuals. • To remember and understand the powers of income tax authorities and should be able to calculate advanced tax liability and TDS of an individual. • To create ability to file the return of income of individuals and should be aware of different types of assessment
		MCM3C13	RESEARCH METHODOLOGY	To acquaint students with process and methodology of research To enable students to identify research problems, collect and analyse data and present results.	To understand and apply different research approaches and methodologies • To evaluate and apply Population survey and sample survey – theories and techniques – • To understand and apply the Data collection methods and enable them to conduct a comprehensive research. • To Evaluate the Measurement and scaling and the validation and reliability testing • To understand and evaluate Data processing, analysing, interpretation and report writing a create awareness about plagiarism



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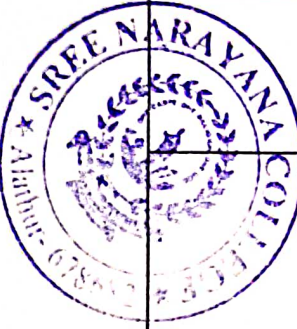
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		MCM3EEF01	INVESTMENT MANAGEMENT	To establish a conceptual framework for the study of security analysis and portfolio management. This course will provide the students the ability to understand and utilize the skill of optimizing returns.	TO understand the concept of risk, return, diversification and hedging • To understand and apply the different types of bonds and bond valuation • Provide thorough understanding and evaluation of fundamental analysis and technical analysis • To understand the measurement of portfolio risk, optimal portfolio, portfolio selection models • To understand and create portfolio management, portfolio evaluation and revision
		MCM3EEF02	FINANCIAL MARKETS AND INSTITUTIONS	To provide the students a sound information and knowledge of broad framework of financial markets and institutions. To impart the students an understanding of the inter-linkages and regulatory framework within which the system operates in India	<ul style="list-style-type: none"> • To provide the students a sound information and knowledge of broad framework of financial markets and institutions. • To acquire knowledge in national and international commodity market • To understand various types financial instruments and their sale and buy back • To gain knowledge about the working of major financial institutions • To familiarize with different forms of foreign capital inflows and its role in Indian financial system



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				To generate awareness among students about various competitive examinations To motivate students to take part in NET examination.	Easily clear JRF and NET exams
		MCM1A04	NET COACHING		
		MCM2A04	SPREAD SHEET APPLICATION	1.To gain an understanding of how managers use spread sheet analysis to formulate and solve business problems and to support managerial decision making. 2. To become familiar with the processes needed to develop, report, and analyse business	Mastering Microsoft excel to help them in satisfying their research requirements
SEM IV		MCM4C14	FINANCIAL DERIVATIVES AND RISK MANAGEMENT	To make the students efficient in the area of derivatives, by giving them the knowledge of basics in options, futures, swaps etc.	1. To understand and apply the terms and concepts of underlying risk management 2. To understand and evaluate growth and development of future. 3. To understand and apply the option trading and various strategies involved in it. 4. To understand about the pricing of options- call and put option 5. To evaluate and apply SWAP contract and pricing of different instruments under SWAP.



A. Bindu

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	MCM4EFT03	INTERNATIONAL FINANCE	<p>To understand the concept and significance of international finance •</p> <p>To understand the international financial markets and exchange theories • To get an idea about foreign exchange exposure and risk management</p>	<p>Students should familiarize with the concept and significance of International Finance, IDA, IFC and ADB • Students should understand international financial markets, foreign exchange rate, its measurement and movements. • Students should acquire knowledge in exchange rate theories and models of exchange rate, risk management in foreign exchange • Students should develop knowledge in international capital budgeting, asset liability management and foreign portfolio management • Students should acquaint knowledge in Working capital management, international cash and inventory management and international monetary investment</p>	
	MCM4EF04	ADVANCED STRATEGIC FINANCIAL MANAGEMENT	<p>To build an understanding among students about the concepts, vital tools and techniques used for financial decision making by a business firm.</p>	<p>To build an understanding among students about the concepts, vital tools and techniques used for financial decision making. • To understand the concept of capital structure planning and policies, and to find the value of firm. • To familiarize with the concept of lease financing and various methods of lease financing • To gain knowledge in theories of merger, different types of merger and the financial impact of merger • To understand take over strategy and procedure and regulations.</p>	
	MCM4PV01	PROJECT WORK AND COMPREHENSIVE VIVA VOCE	<p>To familiarise students with research aspects</p>	<p>Chance to practically apply quantitative techniques and research methodology</p>	

BA Economics

BA CORE 1

ECO1B01

1

MICROECONOMICS- This course is designed to expose first semester

students, who may be new to



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Economics CORE 2 ECO2 B02
Economics COMPLEMENT/HIS1(2)C01

MODERN INDIAN
HISTORY(1857 TO
THE PRESENT)1

economics, the basic principles of microeconomic theory.
an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

This course is the first of the two courses designed to be introduced to the students of allied disciplines of History as complementary course. The focus of this course is on the Modern Indian History focusing the Colonialism and National Movement. This course covers the History of

MACROECONOMICS- Colonialism and National Movement up to the
1
Gandhian Age

economics to diagnose the reasons of the Great Depression in the 1930s. 'The General Theory of Employment, Interest and Money' published by John Maynard Keynes in 1936 was the influential book which laid the foundation of Macroeconomics. Today, principles of macroeconomics help us understand the trends in aggregate variables like national income, employment, price level and investment. It also helps us explore and understand the determinants of short run fluctuations and long run movements in these variables.

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Economics COMPLEMENT/ICP1(2)CO1

Economics
Economics

Economics CORE 3 ECO3 B03

QUANTITATIVE
METHODS FOR
ECONOMIC ANALYSIS I
Students of economics should have sound quantitative skills to collect, analyse and interpret empirical data. They also require these skills for advanced studies in quantitative economics. Quantitative skills have become an essential toolkit for most branches of economics.
This course is intended to provide students an introduction to quantities methods and tools that are used in the study of economics at the undergraduate level.

This course is designed to introduce fundamental market concepts and structures. The emphasis of the course is to give conceptual clarity to the student coupled with the use of the principles Micro economic analysis to the decision making of firms and market.

Economics CORE 4 Eco3B04

Micro Economics 11
This course is designed to introduce fundamental market concepts and structures. The

emphasis of the course is to give conceptual clarity to the student coupled with the use of the principles Micro economic analysis to the decision making of firms and market.



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INDIAN

CONSTITUTION AND

POLITICS:

FEDERALISM

To understand the process of constitution of India come into existence, its salient features its philosophical base, fundamental rights, duties.

Economics COMPLEMENT/ICP4(3) CO2

QUANTITATIVE METHODS FOR ECONOMICS

ANALYSIS II

This course is designed to transmit the body of basic statistics and mathematics that

Economics CORE 5 ECO4 B05

enables the study of economic theory at the undergraduate level. The aim of this course is to

equip the students to quantify economic variables and to enable them to apply statistical techniques in Economics.

MACROECONOMICS

II

Macroeconomics emerged as a separate discipline following the failure of classical economics to diagnose the reasons of the Great Depression in the 1930s. 'The General Theory of Employment, Interest and Money' published by John Maynard Keynes in 1936 was the influential book which laid the foundation of Macroeconomics. Today, principles of macroeconomics help us understand the trends in aggregate variables like national income, employment, price level and investment. It also helps us explore and understand the determinants of short run fluctuations and long run movements in these variables.

Economics CORE 6 ECO4 B06



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Economics MODERN INDIAN HISTORY (1857 TO THE PRESENT):II
COMPLEMENT/HIS4(3) C01

This course is the Second of the two courses designed to be introduced to the students of allied disciplines of History as complementary course. The focus of this course is on the Modern Indian History focusing the Colonialism and National Movement. This course covers the History of Colonialism and National Movement from the Gandhian Age to the Age of Globalization.

Economics CORE 7 EC05 B07 FISCAL ECONOMICS

Fiscal economics deals with the fisc (treasury) of the country. It is related to decision making in the public sector or finance of the government. The basic aim of this course is to

introduce students to the application of the techniques, methods and principles of Economics for decision making in fiscal economics.

Economics CORE 8 EC05 B08 INDIAN ECONOMIC DEVELOPMENT

The course is designed to expose the learners to some of the key issues facing the

Indian economy both at national and regional levels. In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres. The learners are also exposed to numerical



R. B. Prasad
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Information relating to various aspects of Indian economy and India's economic policies. They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India.

Economics CORE 9
ECOS B09
ECONOMICS OF
CAPITAL MARKET

The financial sector liberalization across the world including India has led to unprecedented growth in the financial sector, especially in the capital market, leading to the introduction of new and diversified financial instruments and financial practices, providing ample career opportunities to the students of economics. This course is designed to give an exposure to the students of economics to the changing world of financial markets and to give them an opportunity to familiarize with the basic concepts related to capital market which they read in newspapers and hear and see through electronic media in their daily walks of life

Economics CORE10
ECOS B10
MATHEMATICAL
ECONOMICS

Mathematical economics is an approach where mathematical symbols and theorems are used for economic analysis. Modern economics is analytical and mathematical in structure. Thus the language of mathematics has deeply influenced the whole body of the science of economics. Every student of economics must possess a good proficiency in the fundamental methods of mathematical economics. One of the significant developments in Economics is the



P. B. Biju
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increased application of quantitative methods and econometrics. A reasonable understanding of econometric principles is indispensable for further studies in economics

Economics OPEN COURSE ECO5 D01 ECONOMICS IN EVERYDAY LIFE

This course is an open course which will be offered to only those students for whom Economics is not the core course.

Economics CORE 11 ECO6 B11 FINANCIAL ECONOMICS

This course intends to familiarize the students with the basic concepts in financial economics along with some of the basic models which are used to benchmark valuation of assets and derivatives. These include the CAPM, and the Binomial Option Pricing models

Economics CORE 12 ECO6 B12 INTERNATIONAL ECONOMICS

International economics deals with the economic relations among nations --- both

trade and financial relations—A good understanding in international economics is necessary for a student of economics and those who wish to work in these areas or governmental organizations. The basic aim of this introductory course on international economics is to present before the students the questions, and answers, related to international economic relations



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Economics CORE 13 ECO6 B13 DEVELOPMENT OF ECONOMIC THOUGHT

This course presents review of the history of economic thinking and economic analysis. The main goal of this course is to provide students with understanding of historical evolution of economic thought. In addition students are also led to familiarize with

- i) Developments in major field of economics,
- ii) Schools of thought in economics
- iii) Works of some great economist from antiquity to contemporary times

Economics CORE 14 ECO6 B14 ECONOMICS OF GROWTH AND DEVELOPMENT

This course is designed to introduce students to the exciting and challenging subject of economics of growth and development, which draws from several branches of economics. It intends to provide the theoretical framework for growth and development discourses under different schools of economic thoughts and also into better insights and knowledge on issues and challenges on economic development

This course is designed to introduce the undergraduate students the importance of research and its basic tools for understanding the social reality. It intends to

Economics PROJECT ECO6 B15(Pr) Project -viva

provide exposure to the fundamentals of techniques and methods in social research. It helps them to equip themselves the ability to understand and participate in the process of economic research.



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It also helps to fam

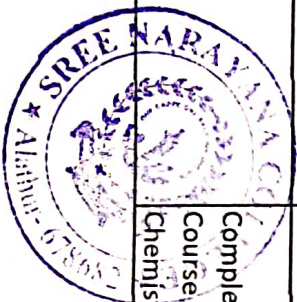
Department of Chemistry

Programme Code	Programme Name	Course Code	Course Name	Year of Introduction	Objective
BSc	Chemistry	CHE1B01	Core Course I : heoretical and Inorganic Chemistry I	2020-21	To gain detailed knowledge of the principle of volumetric analysis and properties of s and p block elements. To provide the basic groundwork for a research project. Students will be able to analyse basic theory of acid base concept.
	Chemistry		Core Course V : Inorganic Chemistry Practical I	2020-21	



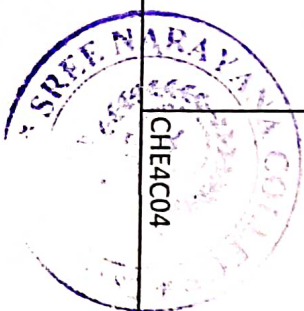
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	Chemistry	CHE2B02	Core Course II: Theoretical and Inorganic Chemistry II	2020-21	Module I – To introduce the students to the failures of classical physics theories in explaining many experiments and the emergence of quantum theory with which all of them could be satisfactorily explained. Module II – To enable the students to understand the basic postulates of quantum mechanics and how to solve the time-independent Schrödinger wave equation of different systems including H atom. Module III – To introduce the quantum mechanical treatment of chemical bonding in diatomic molecules using VB and MO theories. Module IV - To introduce the students to the quantum mechanical treatment of hybridisation and bonding in polyatomic systems.
	Chemistry		Core Course V : Inorganic Chemistry Practical I	2020-21	To enable the students to gain skills in preparation of standard solutions and quantitative volumetric analysis.
B.Sc	Zoology	CHE1C01	Complementary Course I : General Chemistry	2019	To provide the students a thorough knowledge about the chemistry of quantitative and qualitative analysis and the theories of chemical bonding. It will also impart the ideas about atomic nucleus and the importance of metals in biological systems.
			Complementary Course V : Chemistry Practical	2019	



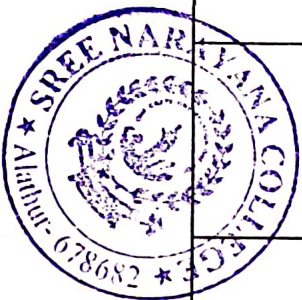
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		CHE2C02	Complementary Course II : Physical Chemistry	2019	To provide the students a thorough knowledge about different terminologies in thermodynamics and the continuity between different states of matter. To impart an idea about the basic principles of electrochemistry.
			Complementary Course V : Chemistry Practical	2019	
		CHE3C03	Complementary Course III : Organic Chemistry	2019	To provide the students a thorough knowledge about basic theory and concepts of organic chemistry.
			Complementary Course V : Chemistry Practical	2019	
		CHE4C04	Complementary Course IV : Physical and Applied Chemistry	2019	To provide the students a thorough knowledge about colloidal chemistry, nanochemistry and the importance of chemistry in daily life. It also provides a basic idea related to separation and spectral techniques. It also imparts the idea of green processes with special emphasis on environment.



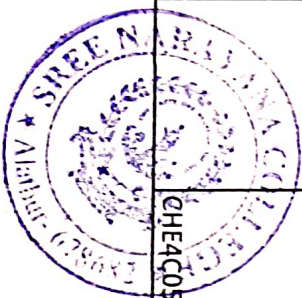
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		CHE4C05(P)	Complementary Course V : Chemistry Practical	2019	To develop proficiency in quantitative and qualitative analysis and expertise in organic preparation and determination of physical constants.
B.Sc	Botany	CHE1C01	Complementary Course I : General Chemistry	2019	To provide the students a thorough knowledge about the chemistry of quantitative and qualitative analysis and the theories of chemical bonding. It will also impart the ideas about atomic nucleus and the importance of metals in biological systems.
			Complementary Course V : Chemistry Practical	2019	To provide the students a thorough knowledge about different terminologies in thermodynamics and the continuity between different states of matter. To impart an idea about the basic principles of
		CHE2C02	Complementary Course II : Physical Chemistry	2019	
			Complementary Course V : Chemistry Practical	2019	



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		CHE3C03	Complementary Course III : Organic Chemistry	2019	To provide the students a thorough knowledge about basic theory and concepts of organic chemistry.
			Complementary Course V : Chemistry Practical	2019	
		CHE4C04	Complementary Course IV : Physical and Applied Chemistry	2019	To provide the students a thorough knowledge about colloidal chemistry, nanochemistry and the importance of chemistry in daily life. It also provides a basic idea related to separation and spectral techniques. It also imparts the idea of green processes with special emphasis on environment.
		CHE4C05(P)	Complementary Course V : Chemistry Practical	2019	To develop proficiency in quantitative and qualitative analysis and expertise in organic preparation and determination of physical constants.



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B.Sc	Environment and Water Management	CHE1C01	Complementary Course I : General Chemistry	2019	To provide the students a thorough knowledge about the chemistry of quantitative and qualitative analysis and the theories of chemical bonding. It will also impart the ideas about atomic nucleus and the importance of metals in biological systems.
			Complementary Course V : Chemistry Practical	2019	
		CHE2C02	Complementary Course II : Physical Chemistry	2019	To provide the students a thorough knowledge about different terminologies in thermodynamics and the continuity between different states of matter. To impart an idea about the basic principles of electrochemistry.
			Complementary Course V : Chemistry Practical	2019	



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		CHE3C03	Complementary Course III : Organic Chemistry	2019	To provide the students a thorough knowledge about basic theory and concepts of organic chemistry.
			Complementary Course V : Chemistry Practical	2019	
		CHE4C04	Complementary Course IV : Physical and Applied Chemistry	2019	To provide the students a thorough knowledge about colloidal chemistry, nanochemistry and the importance of chemistry in daily life. It also provides a basic idea related to separation and spectral techniques. It also imparts the idea of green processes with special emphasis on environment.
		CHE4C05(P)	Complementary Course V : Chemistry Practical	2019	To develop proficiency in quantitative and qualitative analysis and expertise in organic preparation and determination of physical constants.
		EWM3B03T	Environmental Chemistry I	2019	To give awareness about environment - Atmosphere, Lithosphere, Hydrosphere, Tools and technique in environment science

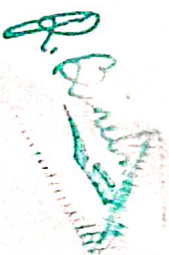


Programme Code	Programme Name	Course Code	Course Name	Objectives	Outcome
COMMON COURSE					
		ENGA1A01	TRANSACTIONS: ESSENTIAL ENGLISH LANGUAGE SKILLS	To impart the necessary English language skills to	learners acquire the necessary English language skills to enable the learners to express themselves fluently and accurately in a variety of contexts.
I SEM BA/BSc/B. Com					
		ENGA1A02	WAYS WITH WORDS: LITERATURE S IN ENGLISH	To help students develop an interest in reading and in appreciating and	Students are develop an interest in reading and in appreciating and discussing literature. They become acquainted with the different genres and literary styles of a text.
II SEM BA/B.Sc/B. Com					
		ENG2A03	WRITING FOR ACADEMIC AND PROFESSIONAL SUCCESS	To develop writing skills required for academic writing. To gain an understanding	Learners acquire the skills required for academic writing and apply the conventions of academic writing integrating writing and thought correctly.
III SEM BA/B.Sc					
		ENG52A04	ZETZGEIST: READINGS ON CONTEMPORARY CULTURE	To inculcate the values enshrined in the constitution of India. To familiarise the students with the vital	Learners inculcate the values enshrined in the constitution of India. Understand the vital concerns of the world like environmental degradation, marginalization. Acquire values of human understanding, mutual respect and cultural incusion.
FUNCTIONAL ENGLISH ECONOMICS MATHS CHEMISTRY BOTANY					
		ENG3A05	SIGNATURES: EXPRESSING THE SELF	To enable the students to read and critically appreciate the different genres of self expression and understand how	Students acquire the ability to read and critically appreciate the different genres of self expression and understand how personal narratives intersect with the larger social realities.



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	ZOOLOGY			personal narratives	
IV SEM BA/B.Sc	FUNCTIONAL ENGLISH	ENG4A06	SPECTRUM: LITERATURE AND CONTEMPORARY ISSUES	To expose the learners to issues of globalization, xenophobia, racism, war, discrimination against minorities. To inculcate the spirit of	The learners become aware of issues of globalization, xenophobia, racism, war, discrimination against minorities. Develop a spirit of universal brotherhood and undergo a positive change in societal perception.
	ECONOMICS				
	MATHS				
	CHEMISTRY				
	BOTANY				
	ZOOLOGY				
I SEM BA	FUNCTIONAL ENGLISH	FEN1BO1	COMMUNICATION SKILLS IN ENGLISH	To develop confidence and fluency in the use of English in all	Learners improve their ability to express themselves in formal and informal situations. Attain mastery in all macro skills of English
		FEN1(2)CO1	LITERATURES IN ENGLISH: FROM CHAUCER TO PRESENT	To create in the student an overall perspective of the History of English Literature, major	Learners become familiar with the various movements and ages in English Literature. Get acquainted with great classics in English Literature.
		FEN2BO2	ADVANCED ENGLISH GRAMMAR	To enable students to use English correctly and confidently in	Through exposure to advanced level of grammar, students improve their skills to speak and write English accurately.
II SEM BA	FUNCTIONAL ENGLISH	FEN1(2)CO2	CULTURAL STUDIES: PERSPECTIVES IN CULTURE	Enables the students to analyse and explain major theories that influenced and came	Learners will be able to discover the contours of Cultural Studies as a field of inquiry. They are equipped to use interdisciplinary critical perspectives to examine the diverse meanings of cultural objects and processes.
		FEN3BO3	LANGUAGE AND TECHNOLOGY	To help learners understand the impact of communication	Learners realize the new methods of instructional practices using communication technology and acquire the skill of using the internet and smartphones for better
		FEN3BO4	APPLIED PHONETICS	To understand English Phonetics and its	Acquire the skill in handling the target language effectively in an internationally acceptable manner and develop skill in
	FUNCTIONAL ENGLISH				



III SEM BA	FUNCTIONAL ENGLISH	FEN4(3)CO2	CULTURAL STUDIES: CULTURAL SPACES	Enables the students to analyse and explain major theories that influenced and came out of Cultural Studies.	Learners will be able to discover the contours of Cultural Studies as a field of inquiry. They are equipped to use interdisciplinary critical perspectives to examine the diverse meanings of cultural objects and processes.
		FEN4B05	FUNDAMENTALS OF LINGUISTICS	To familiarize students with the origin, history and development of language particularly	The learners understand the relationship between linguistics and related disciplines. Acquire the ability to use linguistics as a tool in understanding and processing written or spoken text.
IV SEM BA	FUNCTIONAL ENGLISH	FEN4B06	BUSINESS ENGLISH	To help students learn the fundamentals of business correspondence and acquire practical knowledge in it. To equip them with better employability skills.	Learners develop the ability to prepare various forms of business correspondence. Develop their employability skills.
		FEN4(3)CO1	LITERATURES IN ENGLISH: AMERICAN AND POST COLONIAL	To create in the student an overall perspective of the History of American and Post Colonial	Learners become familiar with the various movements and ages in American and Post Colonial Literature. Get acquainted with great classics in this field.
		FEN4B07	TRANSLATION STUDIES	To make students familiar with the basic	Learners gain an overall view of the basic theories of translation. Acquire skill in translating various kinds of texts.




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FEN4B08	PRINT MEDIA	To create an awareness of the basic theories, concepts, history and fundamentals of to print media. To give basic training in writing for the newspaper so as to equip them to be print media professionals.	Gain knowledge of the history of the media and functional knowledge of the fundamentals of media writing through practice.
FENSBO9	THEATRE FOR COMMUNICATION	To impart a general understanding of the history of theatre and performance as a powerful medium of creative communication practice. To introduce them to modern theatre practice. To stimulate creativity and give expression to their ideas through dramatic forms.	Learners become familiar with the theories of drama and theatre of the east and the west. Gain ability in analysing plays and conceptualizing and implementing theatrical practices.

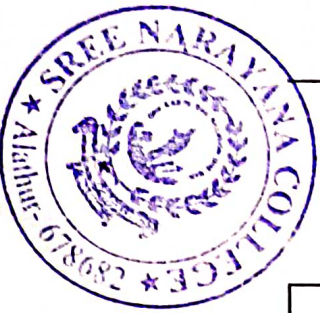
V SEM BA


FUNCTIONAL
ENGLISH



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FEN5B10	CONTEMPORARY LITERARY THEORY	To familiarize students with contemporary literary theories and enhance their taste of research.	Learners become familiar with contemporary literary theories and develops a critical perspective in approaching literary texts.	
FEN5D01	ENGLISH FOR COMPETITIVE EXAMINATIONS	To introduce learners to the core areas of English often tested in Competitive exams and to make them equipped to fare well in the English components of these exams through practice.	Learners get an idea of how to prepare for competitive exams. They improve their competence and confidence in attending the English components of competitive examinations.	
FEN6B11	ENGLISH LANGUAGE TEACHING	To help learners understand the basic principles and practical	Learners achieve the rudimentary skills for being a successful English teacher and also acquire better communication and presentation skills.	
FEN6B12	ELECTRONIC MEDIA	To give students basic training in writing for electronic media and practical skills needed for working in this field.	Learners become familiar with the fundamentals of Electronic Media and acquire basic skills in using them.	

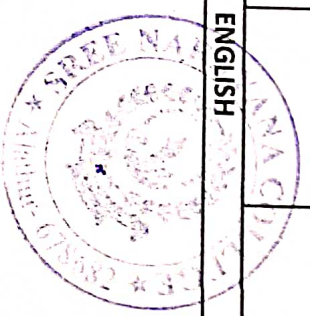



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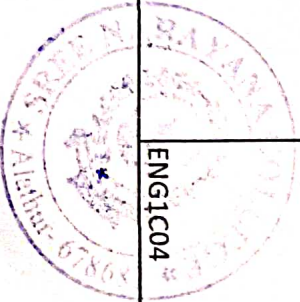
VI SEM BA	FUNCTIONAL ENGLISH	FEN6B13	CREATIVE WRITING	To familiarize the learners with the basic concepts and components of different genres of creative writing. To ignite their creative writing talents through practice and to develop their critical and analytical faculties.	Learn to identify and appreciate various genres and writing styles. Develop ability to critically analyse texts and prune their writing skills.
		FEN6B14	FILM STUDIES	To introduce students to film studies as a discipline and to develop in them analytical and critical skills to appreciate cinema as an art form.	Acquire an understanding of the aesthetics of cinema and develop skills to appreciate film as an art form.
		FEN6B15	ADVERTISING: THEORY AND PRACTICE	To gain an understanding of the role of advertising in	Identify the role of advertising in the corporate world and the importance of creativity in advertising.
V and VI Sem	FUNCTIONAL ENGLISH	FEN6B16	Project Work	To develop skill in doing research and writing on a topic based on the knowledge and art gained through the course of study.	Acquires skill in doing research and writing on a topic based on the knowledge and art gained through the course of study.
MA	ENGLISH				

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I SEM	ENG1C01	BRITISH LITERATURE FROM CHAUCER TO 18TH CENTURY	The course is intended to introduce to students to various trends in British literature from Chaucer to the 18th century.	Students understand the various trends in British literature from Chaucer to the 18th century and become familiar with the major author and their works.
	ENG1C02	BRITISH LITERATURE - 19TH CENTURY	The course is intended to introduce to students to various trends in British literature of the 19th century.	Students understand the various trends in British literature of the 19th century and become familiar with the major author and their works.
	ENG1C03	HISTORY OF ENGLISH LANGUAGE	The course offers an overview of the History of English Language from its origin to the present.	Students get an understanding of History of English Language from its origin to the present.
	ENG1C04	INDIAN LITERATURE IN ENGLISH	The course is intended to familiarize the students with various trends and movements in Indian English Literature from its inception to the present.	The students get acquainted with various trends and movements in Indian English Literature from its inception to the present.



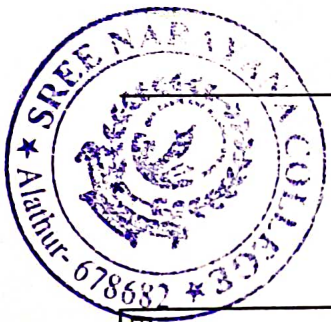
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		ENG1A01	WRITING SKILLS	To impart practical skills in writing to students. To develop the linguistic, cognitive and logical skills required for different kinds of writing.	Students gain practical skills in writing and develop the linguistic, cognitive and logical skills required for different kinds of writing.
		ENG2C05	TWENTIETH CENTURY BRITISH LITERATURE UPTO 1940	The course is intended to introduce to students to various trends in British literature of the 20th century upto 1940.	Students understand the various trends in British literature of the 20th century upto 1940 and become familiar with the major author and their works.
		ENG2C06	LITERARY CRITICISM AND THEORY - PART 1	To introduce students to the major theories of literary analysis in the west and in India.	Students to the major theories of literary analysis in the west and in India. They are equipped with critical faculty to approach a literary text from varied perspectives.
II SEM		ENG2C07	AMERICAN LITERATURE	This course is aimed at acquainting students with the dominant trends in American Literature from the early colonial period to the 20th century	Students get acquainted with the dominant trends in American Literature from the early colonial period to the 20th century

P. Bindu

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ENG2C08	POSTCOLONIAL WRITINGS	This course on Postcolonial literature explores colonialism and its cultural impacts, through writings produced by people from countries with a history of colonialism and resistance to it.	Students become familiar with major Post colonial writings and understand colonialism and its cultural impacts, through writings produced by people from countries with a history of colonialism and resistance to it.
ENG2A02	TRANSLATION THEORY AND PRACTICE	To familiarise the students with the core translation theories and to offer them training in the translation of literary and non-literary texts.	Students become familiar with the core translation theories and gain skill in translation of literary and non-literary texts.
ENG3C09	TWENTIETH CENTURY BRITISH LITERATURE POST 1940	The course is intended to introduce to students to various trends in British literature after 1940.	Students become familiar with various trends in British literature after the 1940s and get exposed to the major authors and their works.
ENG3C10	LITERARY CRITICISM AND THEORY - PART 2	To introduce students to the major theories of literary analysis in the west and in India.	To introduce students to the major theories of literary analysis in the west and in India.

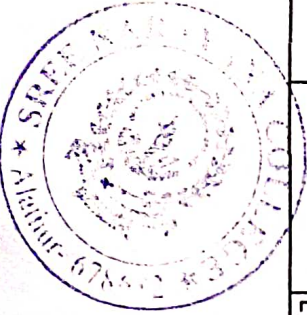
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III SEM					
ENG3E04	INTRODUCTION TO LINGUISTICS	To familiarize the learners with the nature and organization of language, the history of linguistics and its key concepts.	Learners are familiarized with the nature and organization of language, the history of linguistics and its key concepts.		
ENG3E07	WORLD DRAMA	The course is intended to familiarize the students with various trends and movements in drama around the world from its inception to the present.	Students become familiar with the various trends and movements in drama around the world from its inception to the present.		
ENG3C11	ENGLISH LITERATURE IN THE 21ST CENTURY	The course is intended to introduce the students to current trends in British literature.	Students get acquainted with the major writers and their works in English.		
ENG4P01	DISSERTATION	To inculcate research aptitude and develop critical faculty.	Student gains a research aptitude and develops critical faculty.		
ENG4V01	COMPREHENSIVE VIVA VOCE	To test the knowledge acquired in the different areas of study.	Student exhibits the knowledge acquired through different areas of study		

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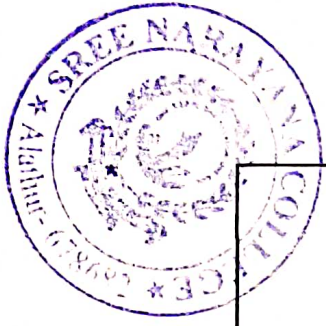
<p>ENG3E10</p> <p>FILM STUDIES</p>	<p>To familiarise students with the language and history cinema, some of the key concepts in film studies, different film movements around the world, and major film theories. Enables students to explore the different ways of watching and films as works of art and cultural texts.</p>	<p>Students become familiar with the language and history cinema, some of the key concepts in film studies, different film movements around the world, and major film theories. They acquire the skill in exploring the different ways of watching and films as works of art and cultural texts.</p>
<p>ENG3E14</p> <p>INDIAN ENGLISH FICTION</p>	<p>The course is intended to familiarize the students with various trends and movements in Indian English fiction from its inception to the present.</p>	<p>The students get acquainted with various trends and movements in Indian English fiction from its inception to the present.</p>



DEPARTMENT OF MICROBIOLOGY


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Programme Code	Programme Name	Course Code	Course Name	Objectives
		MBG1B01.	GENERAL MICROBIOLOGY	The course contents are designed to gain knowledge about the history of microbiology, eukaryotes and prokaryotes, ultrastructure of bacteria, microscopy and sterilization concepts. The learner will acquire basic knowledge about the
		MBG2B02	MICROBIAL PHYSIOLOGY AND TAXONOMY	The objective of this course is to enhance and develop knowledge on microbial growth, culture media, modes of reproduction in bacteria and microbial taxonomy
				CO1 Discuss the environmental and nutritional factors affecting the microbial growth and classify them according to these. CO2 Describe the mechanism of nutrient transportation across the bacterial membranes. CO3 Explain the preparation of various cultural media and to distinguish them for microbial cultivation CO4 Differentiate various cultural methods and preservation techniques CO5 Illustrate the reproduction systems and the growth phases of bacteria and bacteriophages CO6 Examine various methods for estimation of microbial cells. CO7 Analyze the taxonomy of microorganisms through the comparative study of various criteria used and classify them into corresponding groups



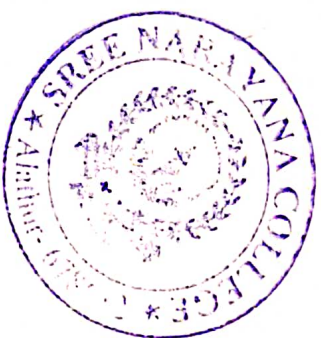
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	MBG3B03	Environmental and Sanitation Microbiology	This course aims to communicate the students with basic principles of environmental and sanitation microbiology. Learner acquires basic understanding of air, water and soil microbiology, solid waste management and xenobiotic metabolism	CO1 Describe the organisms in air with their sources and distribution CO2 Explain the methods of waste water treatment, air sampling , solid waste management, bioremediation and bioleaching CO3 Discuss the microbial distribution in aquatic environment with special emphasis on factors affecting them CO4 Compare the water purification procedures and the tests for the microbiological examination of water CO5 Explain air borne and water borne diseases with their mode of transmission CO6 Discuss the concept of xenobiotics and related environmental problem
	MBG4B05(P)	Microbiology Practical I	: This course prepares the student to address pressing environmental challenges by developing a fundamental understanding of the microbial communities and microbial processes in soil. It provides a brief exploration of plant pathogens and biofertilizers	
 MBG4B04		Soil And Agricultural Microbiology		CO1 Recall different types of soils and soil properties CO2 Distinguish the different groups of microorganisms present in soil and t factors affecting their growth. CO3 Describe the concept of ecosystem and its components and concept of biogeochemical cycles and N, S and P cycles. CO4 Differentiate different types of biological interactions such as microbe-microbe, plant-microbe and animal-microbe CO5 Explain the symptoms, disease cycle and control measures of different bacterial, viral and fungal diseases of plants CO6 Discuss the potential of different microorganisms in agriculture as biofertilizers and biopesticide


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	MBG4B05(P)	Microbiology Practical I	Learner acquires basic skills in aseptic techniques, usage of laboratory instruments, microscopy, different staining techniques, microbial cultivation and enumeration techniques	CO1 Familiarize with parts of a microscope and apply light Microscopy in microbiological studies CO2 Apply the skill of the staining for microscopic visualization CO3 Acquaint with common methods of sterilization and to apply the sterilization procedures in a microbiology laboratory and similar places where hygiene has to be maintained. CO4 Prepare different types of media for the cultivation of microorganisms in a microbiological lab. CO5 Determine the effect of various factors influencing the growth of microorganisms CO6 Demonstrate techniques for isolation and enumeration of microbes from various samples
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BSc	Microbiology	MBG5B306	Industrial Microbiology	<p>Learner will</p> <p>Understand the basic concepts of fermentation, fermenter and design, media formulation, sterilization methods and process control parameters in a fermentation process. Imparting Knowledge on isolation, screening, strain development, fermentation and recovery of a product and intellectual property rights.</p>	<p>CO1 Describe basic concepts of a fermentation process with various types CO2 Discuss the media formulations and their significance in fermentation process. CO3 Explain different methods for screening, isolation, improvement of strain, upstream processing and downstream processing of industrially important microorganisms and products. CO4 Compare various techniques used for the recovery of fermentation products. CO5 Demonstrate industrial production of microbial metabolites. CO6 Discuss different intellectual property rights related to microbial products.</p>
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Fifth sem	MIBGS1B07	Food and Dairy Microbiology	<p>The learner will get acquainted with the beneficial as well as harmful role of microorganisms associated with food and the significant applications of microbes in the food industry.</p>	<p>CO1 Memorize the types and importance of microbes that exist in different food items and understand different parameters affecting their growth in food. CO2 Explain major methods to detect microbes in food, with special importance to contaminants CO3 Illustrate the physical and chemical properties of milk and types of microorganisms present in milk. CO4 Differentiate different methods used for the microbiological examination of milk. CO5 Acquire in-depth knowledge about microbial production of fermented dairy and non-dairy food products and understand the health benefits of SCP, probiotics and prebiotics CO6 Gain an insight to the microbial spoilage of different kinds of food CO7 Discuss major food borne diseases caused by different groups of microorganisms CO8 Explain preservation of food by various physical and chemical methods CO9 Discuss the concept of quality control in food, regulatory practices and policies</p>
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			Demonstrate an understanding on the history of Immunology and structural organization of the human immune system. To understand the salient features of antigen antibody reaction, hybridoma technology etc and its applications. To understand Tumor Immunology and help the students to understand its immunoprophylaxis and immunotherapy including its molecular approach	CO1 Explain the biological functions of various immune cells and organs CO2 Recognize the cellular coordination in the generation of immune responses CO3 Illustrate the types, structure and basic features of antigen and antibody. CO4 Demonstrate the significance of MHC, C system and immunological tolerance. CO5 Classify antigen-antibody reactions involved in diagnosis of infections. CO7 Describe the types and mechanisms of hypersensitivity, autoimmunity and graft rejection reactions Discuss the causes, molecular mechanisms, Immunological responses and treatment options of tumor development
	MBG5B08	Immunology	Medical Microbiology-I	To impart knowledge of the basic principles of microbial infection. Apart from the mechanism of pathogenesis, morphological, cultural, biochemical, epidemiological and laboratory diagnosis of various bacterial infections also will be studied.
	MBG6B12(P)	Microbiology Practical II		
	MBG6B16 (P)	Project Work		
	MBG5D02	Open course- for other departments		

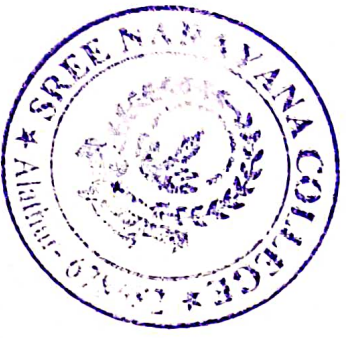


P. B. Srinivasan

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Sixth sem	MBG6B10	Genetics and genetic engineering	<p>The learner gets an opportunity to analyze the molecular concepts of cell cycle and its regulation, recombinant DNA technology & other socio-economically relevant molecular technologies. To give a basic understanding on the scope and importance of genetics by imbibing the principles of hereditary genetic transmission and interactions of genes with the environment.</p>	<p>CO1 Summarize the mendelian and non mendelian concepts inheritance CO2 Explain the concepts of linkage, crossing over and recombination CO3 Illustrate the cell cycle events and its regulation mechanisms in eukaryotes CO4 Demonstrate the recombination frequency as a tool of gene mapping in eukaryotes and gene transfer techniques as a tool in prokaryotes. CO5 Describe the pathways of cell cycle and their regulation strategies adopted by eukaryotic cells. CO6 Discuss the molecular mechanisms behind the programmed cell death and the inter-relation of death pathway with the cell cycle and immune response. CO7 Explain the principle behind rDNA technology, DNA sequencing, PCR and their applications in biological sciences. CO8 Discuss the development of GMOs and its potential risks and benefits on the environment CO9 Critical & ethical analysis of application r DNA technology in our society</p>
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Sree Narayana

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	MBG6B11	Medical Microbiology- II	<p>The learner acquires knowledge on various viral, fungal and protozoal disease and immune-prophylaxis. Develop a brief understanding of antibiotics and their classification</p>	<p>CO1 Discuss the important viral diseases including emerging viral diseases, with special emphasis on symptoms, pathogenesis, transmission and prophylaxis. CO2 Analyze symptoms, pathogenesis, transmission, prophylaxis and control of important fungal diseases of humans including emerging fungal diseases CO3 Explain Important protozoan diseases of humans such as malaria, amoebiasis and helminth infections and infections caused by flagellates CO4 Compare different types of vaccines and their routes of administration CO5 Distinguish antibiotics classes, their mode of action and mechanism of antibiotic resistance.</p>
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R. Bindu

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DEPARTMENT OF BOTANY

Programme Code	Programme Name	Course Code	Course Name	objectives	Outcomes
B.Sc	Angiosperm Anatomy, Reproductive Botany & Palynology	BOT1B01T	Botany	<p>to impart effective science , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Demonstrate the ability to differentiate plant organs by observing anatomical features. 2. Understand the non-living inclusions of plants and their significance. 3. Differentiate tissues and their functions. 4. Illustrate primary and secondary (normal and anomalous) structures of plant organs. 5. Explain various developmental details of angiosperms. 6. Realize the significance and applications of palynology.</p>

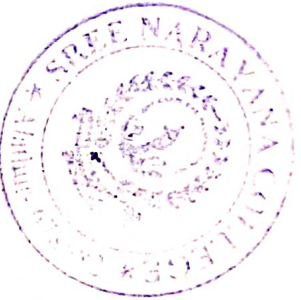



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B.Sc	Microbiology, Mycology, Lichenology & Plant Pathology	BOT2B02T	Botany
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to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to: 1. Understand basics of microbial life and their economic importance. 2. Develop general awareness on the diversity of microorganisms, fungi and lichens. 3. Analyze the ecological role played by bacteria, fungi and lichens. 4. Identify plant diseases and find out control measures. 5. Realize the significance of plant diseases as far as crop production is concerned.



R. Binu

Principal

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Palakkad - 678 682, Kerala



B.Sc	Phycology, Bryology & Pteridology	BOT3B03T	Botany
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to impart effective science education at the undergraduate level; Creating scientific temper; students to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

COURSE OUTCOMES (COs) By the end of the course, students are expected to: 1. Appreciate the diversity and evolutionary significance of lower plant groups. 2. Classify algae, bryophytes and pteridophytes. 3. Understand the economic and ecological importance of lower plant groups.

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B.Sc	Methodology and Perspectives in Plant Science	BOT4B04T	Botany	<p>to impart effective science , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Develop scientific temper and problem solving skills. 2. Undertake scientific projects and prepare project reports 3. Summarize, organize and display quantitative data and derive conclusions 4. Prepare permanent slides, applying the histochemical techniques</p>
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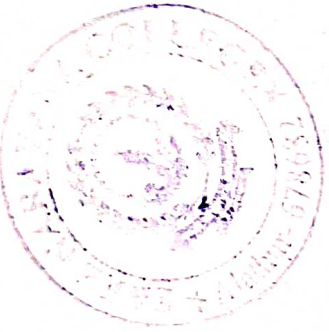
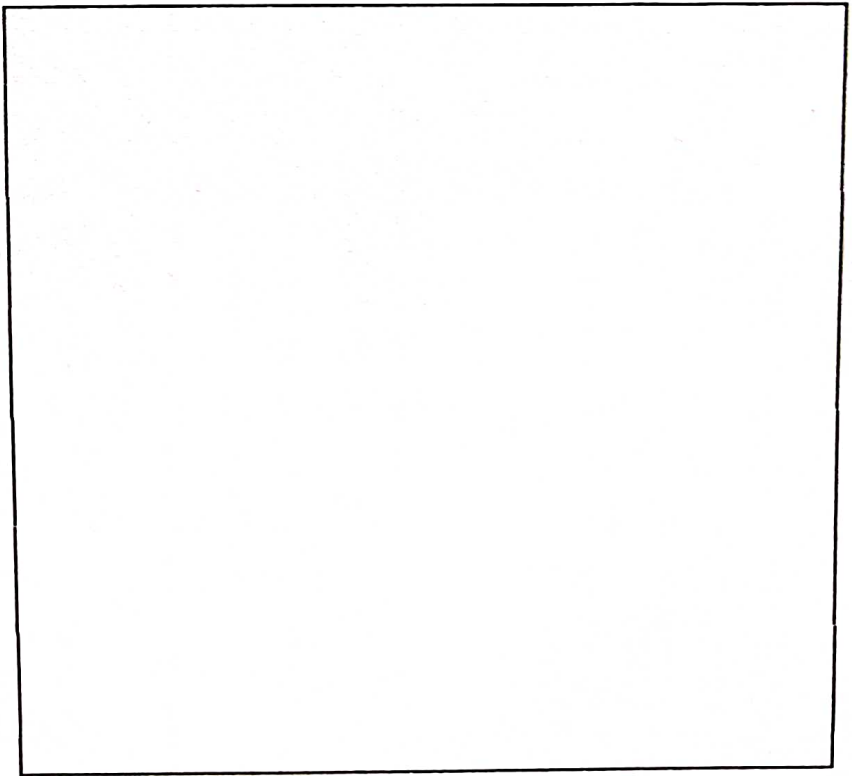


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B.Sc	Practical Paper - I Angiosperm Anatomy, Reproductive Botany, Palynology, Microbiology, Mycology, Lichenology, Plant Pathology, Phycology, Bryology & Pteridology, Methodology and perspectives in Plant Science	BOT4B05P	Botany
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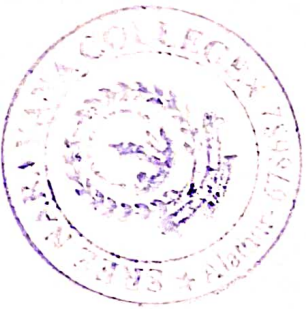
to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources



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B.Sc	Gymnosperms, Palaeobotany, Phytogeography & Evolution	BOTS5B06T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Understand the role of gymnosperms as a connecting link between pteridophytes and angiosperms 2. Appreciate the process of organic evolution. 3. Realize the importance of fossil study. 4. Understand the climatic conditions of the past and realize the changes happened 5. Recognize the phytogeographic zones of India.</p>
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B.Sc	Angiosperm Morphology & Systematics	BOTS5B07T	Botany
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to impart effective science , ducation at the undergradate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to: 1. Appreciate the diverse morphology of angiosperms. 2. Identify and classify plants based on taxonomic principles. 3. Make scientific illustrations of vegetative and reproductive structures of plants. 4. Develop the skill of scientific imaging of plants. 5. Realize the importance of field study. 6. Change their attitude towards over exploitation of rare/ endemic plants.



R. Bindu

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B.Sc	Tissue culture, Horticulture, Economic Botany & Ethnobotany	BOTS5B08T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Critically evaluate the advantages of tissue culture and horticulture over conventional methods of propagation. 2. Apply various horticultural practices in the field. 3. Experiment on the subject and try to become entrepreneurs. 4. Identify the economically important plants.</p>
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B.Sc	Cell Biology & Biochemistry	BOT5B09T	Botany
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to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to: 1. Appreciate the ultra-structure of a plant cell. 2. Enumerate the functions of each cell organelle. 3. Draw and explain the structure of biomolecules



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B.Sc	OPEN COURSE - CHOICE I	General Botany	BOT5D01 T	Botany	<p>to impart effective science , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p> <p>By the end of the course, students are expected to: 1. Have a general awareness on various branches of plant science. 2. Develop environmental concern in all their activities. 3. Realize the importance of plants in everyday life.</p>
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B.Sc	OPEN COURSE - CHOICE I	General Botany	BOTS5D02 T	Botany
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to impart effective science e , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to:
 1. Develop general awareness on applied aspects of plant science. 2. Realize the role of plants in everyday life. 3. Apply vegetative propagation methods in everyday life. 4. Realize the economic importance of plants



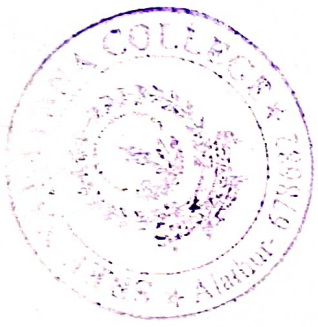
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 Palakkad-678 822, Kerala

B.Sc	OPEN COURSE - CHOICE III Basic Tissue Culture	BOT5D03 T	Botany
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to impart effective science , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to: 1. Understand plant tissue culture as a rapid propagation method. 2. Explain the steps involved in tissue culture. 3. Realize the applications of plant tissue culture



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Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

B.Sc	Genetics & Plant Breeding	BOT6B10T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Appreciate the facts behind heredity and variations. 2. Understand the basic principles of inheritance. 3. Solve problems related to classical genetics. 4. Predict the pattern of inheritance. 5. Understand various plant breeding techniques. 6. Realize the role of plant breeding in increasing crop productivity.</p>
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R. Bindu

Principal

Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

	Biotechnology, Molecular Biology & Bioinformatics	BOT6B11T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Analyze the role of biotechnology in daily life. 2. Understand the basic aspects of bioinformatics. 3. Explain the concepts in molecular biology.</p>
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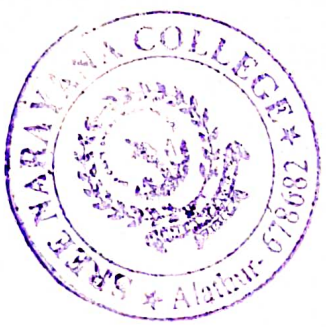
P. Binu
Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

B.Sc	Plant Physiology & Metabolism	BOT6B12T	Botany	<p>to impart effective science , education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Identify the physiological responses of plants. 2. Analyze the role of external factors in controlling the physiology of plants. 3. Explain the metabolic processes taking place in each cell. 4. Appreciate the energy fixing and energy releasing processes taking place in cells.</p>
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R. B. B. B.
Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

	Environmental Science	BOT6B13T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Realize the importance of ecological studies. 2. Develop environmental concern in all their actions and practise Reduce, Reuse and Recycle. 3. Try to reduce pollution and environmental hazards and change their attitude towards throwing away plastic wastes. 4. Spread awareness of the need of conservation of biodiversity and natural resources. 5. Analyze the reasons for climate change and find out ways to combat it.</p>
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R. Bindu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

B.Sc	Genetic Engineering	BOT6B14T (E1)	Botany
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to impart effective science, education at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

COURSE OUTCOMES (COs) By the end of the course, students are expected to: 1. Appreciate various techniques employed in genetic engineering. 2. Develop general awareness on genetically modified organisms. 3. Understand the ethical, social and legal issues associated with genetic engineering.



P. Bindu

Principal

Sree Narayana College, Aluthur
Palakkad - 678 682, Kerala

B.Sc	Advanced Angiosperm Systematics	BOT6B14T (E2)	Botany	<p>to impart effective science education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Develop deep knowledge in angiosperm systematics. 2. Demonstrate ability to identify and classify plants in a faster and better way. 3. Apply imaging technologies in plant systematics.</p>
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A. Bindu

Principal

Sree Narayana College, Athur
Palakkad - 678682, Kerala

B.Sc	Genetics and Crop Improvement	BOT6B141T (E3)	Botany	<p>to impart effective science education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Understand various techniques employed for increasing crop productivity. 2. Identify diseases affecting crop plants. 3. Attain general awareness on various crop research stations of the country.</p>
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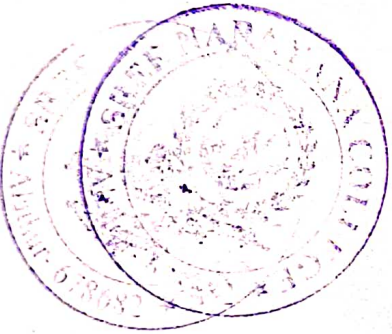
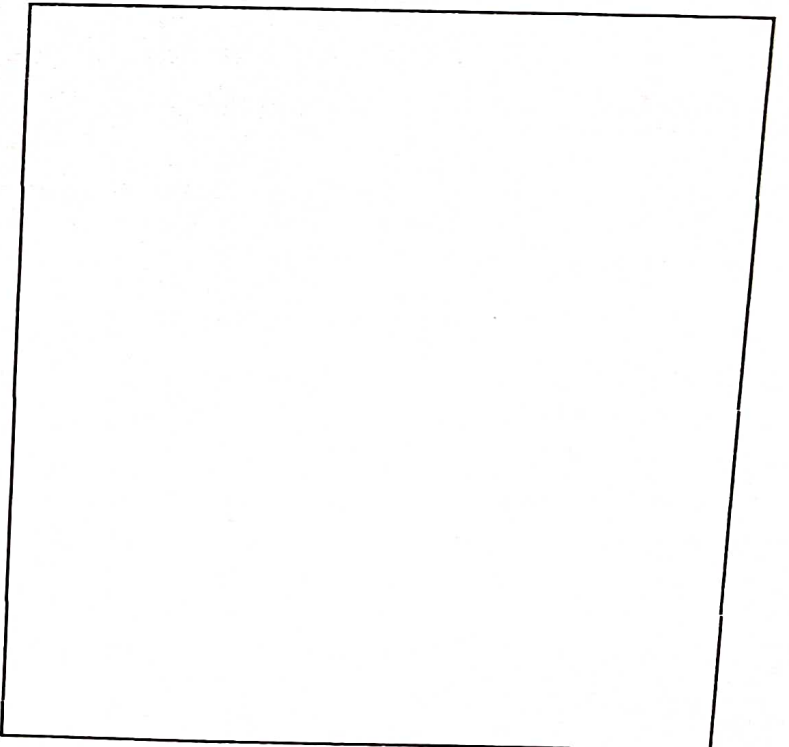


A. Binu
Principal

Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

B.Sc	Practical Paper-II: Gymnosperms, Palaeobotany, Phytogeography, Angiosperm Morphology, Systematics, Tissue culture, Horticulture, Econ. Botany, Ethnobot. Cell Biol. & Biochemistry	BOT6B15P	Botany
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to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

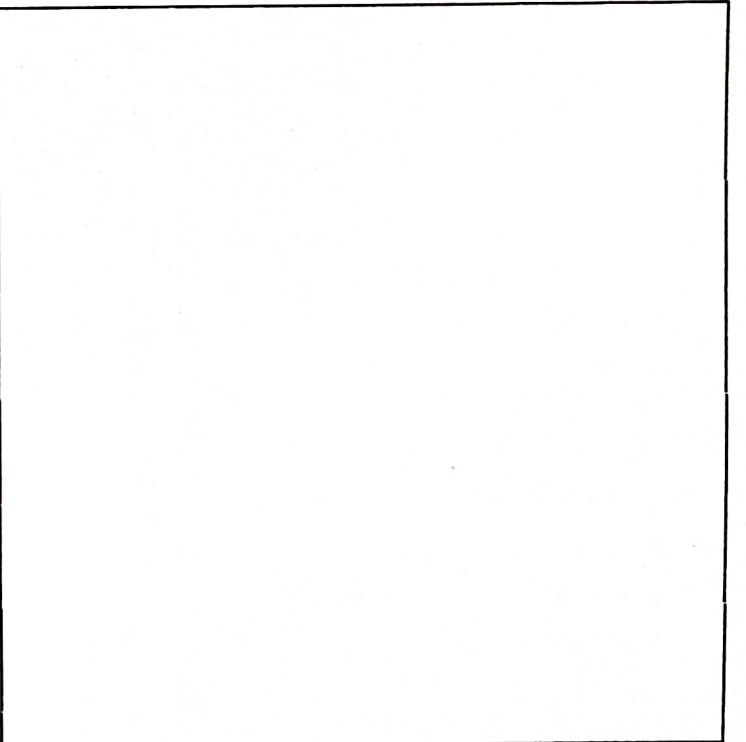


R. Princy

Principal
 Sree Narayana College, Alathur
 Palakkad - 678 682, Kerala

B.Sc	Practical Paper-III: Genetics, Pl. Breeding, Biotechnology, Molecular Biology, Plant Physiology & Environmental Science	BOT6B16P	Botany
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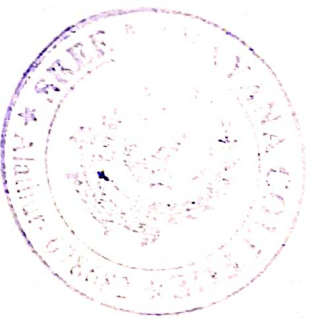
to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources



S. R. Binu
S. R. Binu

Principal
Sree Narayana College, Atathur
Palakkad - 678 682, Kerala

B.Sc	Y	CORE COURSE 17: PROJECT WORK / RESEARCH METHODOLOG	BT6B17Pr BOT6B17T	Botany		<p>to impart effective science e , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>
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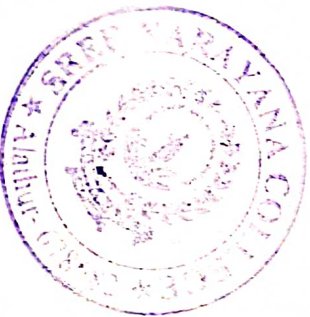


P. Binil

Principal

Sree Narayana College, Alathu
Palakkad- 678 682, Kerala

B.Sc	Angiosperm Anatomy & Microtechnique	BOT1C01T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Explain the types, structure and functions of plant tissues. 2. Explain primary and secondary (normal and anomalous) structures of plant organs. 3. Identify plant organs by observing anatomical features. 4. Illustrate primary and secondary (normal and anomalous) structures of plant organs. 5. Apply the histochemical techniques in laboratory works.</p>
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R. Bindu

Principal

Sriee Narayana College, Alathur
Palakkad - 678 682, Kerala

B.Sc	Cryptogams, Gymnosperms & Plant Pathology	BOT2C02T	Botany to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources	By the end of the course, students are expected to: 1. Analyze the role of the lower plants in the process of evolution. 2. Explain the ecological significance of lower plants. 3. Identify plant diseases and take remedial measures to control them.
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R. Sindhu

Principal
Sri Narayana College,
Palakkad - 678 692

B.Sc	Morphology, Systematic Botany, Economic Botany, Plant Breeding & Horticulture	BOT3C03T	Botany
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to impart effective science education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources

By the end of the course, students are expected to: 1. Appreciate the diverse morphology of angiosperms. 2. Identify and classify plants based on taxonomic principles 3. Make scientific illustrations of vegetative and reproductive structures of plants 4. Identify the economically important plants 5. Understand the basic principles of plant breeding 6. Apply various horticultural practices in the field.



A. Divya

Principal
Sree Narayana College, Alathur
Palakkad - 679 682, Kerala

B.Sc	Plant Physiology, Ecology & Genetics	BOT4C04T	Botany	<p>to impart effective science, education at the undergraduate level; Creating scientific temper; to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	<p>By the end of the course, students are expected to: 1. Explain the physiological processes in plants. 2. Understand the basic principles of heredity and variation. 3. Realize the importance of ecology. 4. Spread awareness of the necessity of conservation of biodiversity and natural resources 5. Solve problems related to classical genetics</p>
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P. Bindu

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

DEPARTM
ENT OF
MATHEMA
TICS

B.Sc	<p>Practical Paper 1 Angiosperm Anatomy, Microtechniqu e, Cryptogams, Gymnosperms, Plant Pathology, Morphology, Systematic Botany, Plant Physiology, Ecology, Genetics, Economic Botany, Plant Breeding & Horticultur</p>	BOT4C05P	Botany	<p>to impart effective science e , ducation at the undergraduate level; Creating scientific temper; s to develop an environmental concern in all activities of the students. 'Go green', the motto of the syllabus emphasizes the urgent need to conserve nature without destruction of natural resources</p>	
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Programme Code	Programme Name	Course Code	Course Name	Objectives	Outcomes
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A. Binu
Principal
Sree Narayana College, Alathur
Palakkad - 678682, Kerala

B.Sc	Mathematics	MTS1B01	Basic Logic and Number Theory
B.Sc	Mathematics	MTS2B02	Calculus of Single variable-1

1. To think systematically.
 2. To express ideas in precise and concise mathematical terms and also to make valid arguments.
 3. Develop the ability of writing a formal proof, using proof methods
1. Prove results involving divisibility
 2. Solve linear congruent equations.
 3. Understand the theory and method of solutions of LDE
1. Ideas of limit, continuity and differentiability
 2. theorems of differential calculus.
 3. sketching of curves .
- Solving problems in physics, chemistry, biology, engineering, economics and other fields.



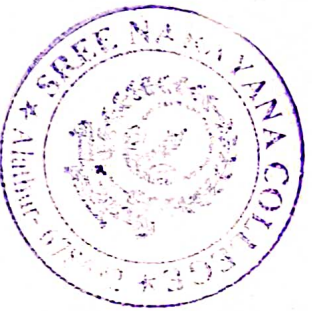
R. Bindu

Principal
 Sree Narayana College, Alathur
 Palakkad - 678 682, Kerala

B.Sc	Mathematics	MTS3B03	Calculus of Single variable-2
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1. The natural logarithm function is defined and its properties are examined.
 2. Improper integrals, their convergence and evaluation
 3. Natural exponential function and also the general exponential function.

Students will be able to handle vectors in dealing with the problems involving geometry of lines, curves, planes and surfaces
 in space and have acquired the ability to sketch curves in plane and space given in vector valued form



A. Binu

Principal

Sree Narayana College, Alathur,
 Palakkad - 678 682, Kerala

B.Sc	Mathematics	MTS4B04 MAT5B05	Linear Algebra Vector calculus	<p>1. Methods for solving a system of linear equations</p> <p>2. the Introduction of central topic of linear algebra namely the concept of a vector space..</p> <p>3. Several examples and general properties of vector spaces are studied.</p> <p>The Idea of a subspace, spanning vectors, basis and dimension are discussed and fundamental results in these areas are explored</p>	<p>The student will become competent to perform matrix algebra</p> <p>and also to calculate the inverse and determinant of a matrix</p> <p>The familiarity of the students with planar vectors and their algebraic properties under vector addition and scalar multiplication will make them realize that the idea of a general vector space is in fact an abstraction of what they already know</p>
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R. Bindu

Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

B.Sc	Mathematics	MATS5B06	Abstract algebra	<p>1. Solutions of polynomial equations in terms of coefficients of polynomials that involves only the operations of addition, subtraction, multiplication, division and taking roots.</p> <p>2. Derive a formula for solving polynomial equations of third and fourth degree.</p> <p>3. Group, Ring</p>	<p>Derive formulae for the solutions of third and fourth degree polynomial equations given by Cardan and Ferrari respectively</p>
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Principal
 Sree Narayana College, Alathur
 Palakkad - 678 682, Kerala

B.Sc	Mathematics	MAT5B07	Basic mathematical analysis	Provide students with a level of mathematical sophistication that will prepare them for further work in mathematical analysis and other fields of knowledge, and also to develop their ability to analyse and prove statements of mathematics using logical arguments	Learn to prove Archimedean property, density theorem, existence of a positive square root for positive numbers the learning will help them to appreciate the beauty of logical arguments and embolden them to apply it in similar and unknown problems
B.Sc	Mathematics	MAT5B08	Differential equations	what an ODE is, what it means by its solution, how to classify DEs, what it means by an IVP	They will learn a method to approximate the solution successively of a first order IVP. They will become familiar with the theory and method of solving a second order linear homogeneous and nonhomogeneous equation with constant coefficients.
B.Sc	Mathematics	MAT6B09	Real analysis	State the definition of continuous functions, formulate sequential criteria for continuity and prove or disprove continuity of functions using this criteria	Understand several deep and fundamental results of continuous functions on intervals such as boundedness, Intermediate Value theorem, maximum-minimum theorem, Steiner-Narayana College, Alathur



R. Bindu

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Sri Narayana College, Alathur
Kerala
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Fax: 0471-2511001
E-mail: principal@snarayanacollege.ac.in
Website: www.snarayanacollege.ac.in
Address: P.O. Alathur, Alathur, Kerala - 678 682, Kerala

B.Sc	Mathematics	MAT6B10	Complex analysis	<p>to understand necessary and sufficient condition for checking analyticity. to know of harmonic functions and their connection with analytic functions to know a few elementary analytic functions of complex analysis and their properties. to understand definition of complex integral, its properties and evaluation.</p>	<p>application of residue theory in locating the region of zeros of an analytic function.</p>
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R. Binu

B.Sc	Mathematics	MAT6B11	Numerical methods	Provide techniques and algorithms to find approximate numerical solution to problems in several areas of mathematics where it is impossible or hard to find the actual/closed form solution by analytical methods and also to make an error analysis to ascertain the accuracy of the approximate solution	Understand several methods such as bisection method, fixed point iteration method, regula falsi method etc. to find out the approximate numerical solutions of algebraic and transcendental equations with desired accuracy. Understand the concept of interpolation and also learn some well known interpolation techniques
B.Sc	Mathematics	MAT6B12	Number theory and linear algebra	Chinese Remainder Theorem. Vector Space, Basis. solve transportation and assignment problems by algorithms that take advantage of the simpler nature of these problems	application of CRT in different areas function.
B.Sc	Elective Course (MAT6B13(E02))		Linear Programming		1.solve linear programming problems geometrically 2. Understand the drawbacks of geometric methods .solve LP problems more effectively using Simplex algorithm via. the use of condensed tableau of A.W. Tucker.
B.Sc	Mathematics	MAT6P14(PR)	Project/viva		



A. Binu
Principal

B.Sc	Open Course for other departments(V th Semester)	MAT5D02	Mathematics For Natural Sciences	1. Mean, Median, Mode, 2. Probablilty distributions	Data Analysis
B.Sc	Complementar y courses	MTS1C01	Mathematics-1	Product and quotients- product, quotient, reciprocal & integral power rule	Linear Approximation and Tangent Lines- equation of tangent line and linear approximation, illustrations
		MTS2C02	Mathematics-2	Graphing in polar coordinates- Checking symmetry of graphs given in polar equation, drawings, tangents to graph in polar coordinates	Parametric curves- parametric equations of lines and circles, tangents to parametric curves, length of a parametric curve, speed
M.Sc	Mathematics	MTH1C01	Algebra- I	Group, Rings, Fields	Applications
M.Sc		MTH1C02	Linear Algebra	Vector Space, Basis, LT	Applications
M.Sc		MTH1C03	Real Analysis I	Basic Topology Finite, The Riemann Stieltjes Integral (Continued) - Integration of Vector vector-valued Functions, Rectifiable curves	Applications



Principal

Sree Narayana College, Alathur
Palakkad- 678 602, Kerala

M.Sc		MTH1C04	Discrete Mathematics	Automata, Different graphs	Application
M.Sc		MTH1C05	Number Theory	Quadratic Residues, Legendre Symbol	Applications
M.Sc	Audit Course	MTH1A01	Ability Enhancement Course		
M.Sc		MTH2C06	Algebra - II	Galois Theory, Finite fields	Application in Cryptography
M.Sc		MTH2C07	Real Analysis II	Lebesgue Integration, Lp spaces : Completeness and Approximation	Problem Solving
M.Sc		MTH2C08	Topology	Separation Axioms: Hierarchy of Separation Axioms, Compactness and Separation Axioms, The Urysohn Characterization of Normality, Tietze Characterisation of Normality	Application in different branches of Mathematics



R. Bindu

Principal

Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

M.Sc		MTH2C09	ODE & Calculus of Variations	Some special functions of Mathematical Physics, Systems of First Order Equations; Non linear Equations	Problem Solving
M.Sc		MTH2C10	Operations Research	Integer Programming; Sensitivity Analysis	Problem Solving
M.Sc	PROFESSIONAL COMPETENCY COURSE		Technical writing with LATEX		



R. Bindu

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala



M.Sc		MTH 3C11	Multivariable Calculus & Geometry	Level surfaces, Ruled surfaces and surfaces of revolution. Application s of the inverse function theorem, Lengths of curves on surfaces. Equiareal maps and a theorem of Archimedes. The second fundamental form, The Gauss and Weingarten maps, Normal and geodesic curvatures. Gaussian and mean curvatures, Principal curvatures of a surface	Practical application
M.Sc		MTH 3C12	Complex Analysis	CR Equation, Analyticity, Singularity	Evaluation of Integral

P. Bindu

Principal

Sree Narayana College, Alathur
Palakkad - 678 882, Kerala

M.Sc				Hilbert spaces: Basic notions; first examples, Cauchy- Schwartz inequality and Hilbertian norm Bessels inequality, Completes ystems, Gram-Schmidt orthogonalization procedure, orthogonal bases Parseval' identity; Projection; orthogonal decompositions; Separable case	Decomposition problems.
M.Sc		MTH 3C13	Functional Analysis	Integral Surface: Heat ,wave Equation	Problem Solving
M.Sc		MTH 3C14	PDE & Integral Equations	Cyclic linear codes, polynomial encoding and decoding, dual cyclic codes, BCH linear codes, Cyclic Hamming code, Decoding 2 error correcting BCH codes	Practical application
M.Sc			Coding theory		



A. B. B. B.

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

M.Sc		MTH4C15	Advanced Functional Analysis	<p>The closed graph Theorem</p> <p>The Banach - Steinhaus theorem, Bases in Banach spaces, Linear functionals; the Hahn Banach theorem, Separation of Convex sets</p>	Practical application
M.Sc	Elective Course (Fourth Semester)	MTH4E06	Algebraic Number Theory	<p>Lattices, The Quotient Torus, Minkowski theorem, The Space Lst, The Class-Group</p> <p>An Existence Theorem, Finiteness of the Class-Group, Factorization of a Rational Prime, Fermats Last Theorem</p> <p>Some history, Elementary Considerations, Kummer's Lemma,</p>	Practical application



A. B. Prasad
 Principal
 Sree Narayana College, Alathur
 Palakkad - 678 682, Kerala

M.Sc	Elective Course (Fourth Semester)	MTH4E09	Differential Geometry	Geodesics, Parallel Transport, The Weingarten Map, Curvature of Plane Curves, Arc Length and Line Integrals	Practical application
M.Sc	Elective Course (Fourth Semester)	MTH4E11	Graph Theory	Matchings, Matchings and Coverings in Bipartite Graphs, Perfect Matchings, The Personnel Assignment Problem, Edge Chromatic Number, Vizings Theorem	Application
M.Sc		MTH4P01	Project		
M.Sc		MTH4 V01	Viva Voce		



R. B. B. B.

Principal
Sree Narayana College, Alathur
Palakkad - 672 682, Kerala