

2.6.1 Programme outcomes, Programme specific outcomes and course outcomes for all Programme offered by the institution are stated and displayed on website and communicated to teachers and students. 2012-2013 onwards

Name of the Programme: Bachelor of Commerce

Programme Outcome(PO):

Upon completion of the degree requirements, students will be able to

PO1	To provide adequate basic understanding about Management Education among the students
PO2	To prepare students to exploit opportunities being newly created in the Management Profession
PO3	To train the students in communication skills effectively
PO4	To develop appropriate skills in the students so as to make them competent and provide themselves self-employment
PO5	To inculcate Entrepreneurial and Managerial skills
PO6	To work well in teams, including virtual settings
PO7	To understand finance and other core business content
PO8	To recognize and solve business problems in an ethical manner
PO9	To communicate business information professionally

PO10	To build the department as a centre of excellence for imparting high quality management education at the undergraduate level
PO11	To stimulate in students an interest in research and initiate them into research methodologies
PO12	To foster thinking minds that are sensitive to societal needs and issues thus making them good human beings and responsible members of the society
PO13	To provide an environment that facilitates all-round development of the student personality

Programme Specific Outcome(PSO):

PSO1	Ability to define, analyse the solutions for different business problems and using logical reasoning patterns for evaluating information, materials, and data for practical implementation.
PSO2	Provides verbal, reasoning, Data Interpretation, Quantitative and communication skill to solve specific business problems and decision making.
PSO3	Apply ethical principles and commitment towards professional ethics and responsibility.
PSO4	Function effectively as a member, leader, individual or group in diverse environment.
PSO5	Ability to conceptualize a complex issue into a coherent written statement and oral presentation and to communicate effectively on complex activities with technical community.
PSO6	Providing an opportunity for the students to gain practical exposure towards the workplace and make them industry ready.
PSO7	Promotes entrepreneurship by providing understanding of the fundamentals of creating and managing innovation, new business development, and high-growth potential entities.
PSO8	Ability to demonstrate technical competence in domestic and global arena of business through the study of major disciplines within the fields of business

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	Principles of Accountancy	To Acquire basic knowledge of accounting principles, concepts & Conventions .
	Core - II	Business Communication	To develop better written and oral business communication skills among the students and enable them to know the effective mode of communication.
	Allied - I	Business Economics	To understand the fundamental concept of Economics & will be able to correlate these concepts to real life situation to enable the students to learn the basic concepts of Partnership Accounting & Allied aspects of accounting.
II	Core - III	Financial Accounting	To make the students get acquainted with the basic Principles of Management.
	Core - IV	Business Management	To understand Partnership.
	Allied - II	Indian Economy	The Students will get an opportunity to enable the students to have an understanding of the present economic situation of India.
	Core - V	Business Law	To cultivate understanding of the various Trade Laws of Indian Contract Act, Sale of Goods Act.
	Core - VI	Corporate Accounting - I	To enable the students to be aware on the Corporate Accounting in conformity with the provisions of the Companies Act.
III	Core - VII	Banking Theory Law & Practice	To Provide the knowledge relating to the procedure for Opening Bank A/c, features of Cheque & Lending Principles of Bank.
	Allied - III	Business Statistical Methods	To promote the skill of applying of statistical techniques in business.
	SBEC - I	Capital Market	To enlighten students the role of capital market in india. To Create awareness about the stock market among the students.
	SBEC - II	MS-Office Practical - I	To Understand the students MS word, Excel & Powerpoint.
	NMEC - I	Marketing	To understand the concept of Marketing, Grading, Product & Marketing Information System(MIS)
	Core - VIII	Company Law	To enlighten the students, The provisions of Companies Act
	Core - IX	Corporate Accounting - II	To equip the students with accounting methods formated from inception to liquidation and to have knowledge about amalgamation, absorption & reconstruction.

IV	Core - X	Principles of Marketing	To highlight the various marketing functions & to impart necessary skills with help of the students to choose a career in the field of marketing.
	Allied - IV	Business Statistical Decision Techniques	To expose the students on the application of mathematical techniques in business.
	SBEC - III	Project Methodology	To provide basic knowledge about Project Methodology
	SBEC - IV	Tally Practical - II	To provide basic knowledge about Tally Package and concepts. It enable to use package for wide range of Business Application.
	NMEC - II	Human Resource Management	To make aware the students about concepts, forms or theories, approaches of HRM and their evolving dynamics in the emerging
V	Core - XI	Cost Accounting	To provide an indepth knowledge on cost ascertainment. To enable the students to appreciate the utility of costing in Industries.
	Core - XII	Auditing	To gain a fair working knowledge of the importance of vouching & internal check in practice in various organization.
	Core - XIII	Income Tax Law & Practice - I	To gain basic knowledge of the provisions of Income Tax Act under different heads of income.
	Core - XIV	Information Technology in Business	To provide an indepth knowledge on information technology in business.
	Elective - I	Office Organization	To enable the students to learn the office organization, types, office furniture & machines.
VI	Core - XV	Management Accounting	To develop an understanding of the conceptual frame work of management accounting.
	Core - XVI	Entrepreneurial Development	To instill ideas on identification, selection & preparation of projects & to have awareness on the institutions promoting entrepreneurship.
	Core - XVII	Income Tax Law & Practice - II	To provide an indepth knowledge of the provisions of Income Tax Act.
	Core - XVIII	Commerce Practical	To provide practical knowledge to fill forms like insurance, bank, loan application, membership form & income tax return forms etc.
	Elective - II	Secretrial Practice	To enlighten the students the duties of company secretary.

Name of the Programme: Bachelor of Arts (ENGLISH)

Programme Outcome(PO):

PO1	Produce focused, organized, well-developed writings and demonstrate competence in English
PO2	Demonstrate critical thinking skills through analysis, synthesis, and evaluation of important ideas using their proficiency in LSRW
PO3	effectively evaluate and fluidly integrate relevant sources, using appropriate research tools and strategies.
PO4	Recognize and comprehend different varieties of English

Programme Specific Outcome(PSO):

PSO1	The study of literature cultivates wisdom and a worldview
PSO2	It makes students appreciate their own cultural heritage and others also
PSO3	It helps students develop emotional intelligence and creativity
PSO4	It helps to consider multiple perspectives and understand the complexity of human nature
PSO5	Literature mirrors the society and its mannerisms

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	POETRY	To acquaint students with major trends in English literature through a detailed study of specific literary texts
	Core - II	GRAMMAR & USAGE	To acquaint students with major aspects of Grammar through a detailed study grammatic texts
	Allied - I	SOCIAL HISTORY OF ENGLAND	To create awareness regarding the structure of modern English and literary theory.
II	Core - III	PROSE	To make the students aware of various concept English Language Teaching
	Core-IV	INDIAN WRITING IN ENGLISH	To acquaint students with major trends in English literature through a detailed study of specific literary ages
	Allied-II	HISTORY OF ENGLISH LITERATURE	To acquaint students with major trends in English literature through a detailed study of specific literary ages
III	CORE-V	DRAMA	To acquaint students with major trends in English literature through a detailed study of specific literary ages
	Allied - III	LITERARY FORMS& TERMS	To make the students aware of various concept English Language Teaching
	NMEC-I	SOFT SKILL FOR CAREER COMMUNICATION	To enable the students to face the competitive exams with ease.
IV	Core - VI	FICTION	To create awareness regarding the structure of modern English Fiction
	Allied -IV	PHONETICS &TRANSCRIPTION	To make the students aware of various concept English Language Teaching
	NMEC – II	COMMUNICATION FOR PLACEMENT	To enable the students to face the competitive exams with ease.
	Core - VII	SHAKESPEARE	To create awareness regarding the structure of modern English and literary theory.

V	Core- VIII	LINGUISTICS AND LINGUISTICS	To improve the linguistic competence along with the literary competence of Students
	Core- IX	FEMINIST WRITING	To create awareness regarding the structure of modern English and literary theory.
	Core- X	AMERICAN LITERATURE	To introduce the various aspects of literary criticism for proper understanding and appreciation of literature.
	Elective - I	ENGLISH FOR COMPETITIVE EXAMINATION	To enable the students to face the competitive exams with ease.
VI	Core -XI	SOUTH ASIAN LITERATURE	To create awareness regarding the structure of modern English and literary theory.
	Core - XII	ENGLISH LANGUAGE TEACHING	To acquaint the students with different theoretical and practical aspects and components of language and literature teaching
	Core-XIII	GRAMMAR& SEMANTICS	To create awareness regarding the structure of modern English study
	Elective - II	ENGLISH LITERATURE FOR COMPETITIVE	To make the students aware of various concept English Literature.
	SBEC - IV	COMMUNICATION SKILLS - PRACTICAL	To acquaint the students with different theoretical and practical aspects and components of language and literature teaching

Name of the Programme: Bachelor of Business Administration (BBA)

Programme Outcome(PO):

PO1	To provide adequate basic understanding about Management Education among the students
PO2	To prepare students to exploit opportunities being newly created in the Management Profession
PO3	To train the students in communication skills effectively
PO4	To develop appropriate skills in the students so as to make them competent and provide themselves self-employment

PO5	To inculcate Entrepreneurial and Managerial skills
PO6	To work well in teams, including virtual settings
PO7	To understand finance and other core business content
PO8	To recognize and solve business problems in an ethical manner
PO9	To communicate business information professionally
PO10	To build the department as a centre of excellence for imparting high quality management education at the undergraduate level
PO11	To stimulate in students an interest in research and initiate them into research methodologies
PO12	To foster thinking minds that are sensitive to societal needs and issues thus making them good human beings and responsible members of the society
PO13	To provide an environment that facilitates all-round development of the student personality

Programme Outcome(PO):

PSO1	Ability to define, analyse the solutions for different business problems and using logical reasoning patterns for evaluating information, materials, and data for practical implementation.
PSO2	Provides verbal, reasoning, Data Interpretation, Quantitative and communication skill to solve specific business problems and decision making.
PSO3	Apply ethical principles and commitment towards professional ethics and responsibility.
PSO4	Function effectively as a member, leader, individual or group in diverse environment.

PSO5	Ability to conceptualize a complex issue into a coherent written statement and oral presentation and to communicate effectively on complex activities with technical community.
PSO6	Providing an opportunity for the students to gain practical exposure towards the workplace and make them industry ready.
PSO7	Promotes entrepreneurship by providing understanding of the fundamentals of creating and managing innovation, new business development, and high-growth potential entities.
PSO8	Ability to demonstrate technical competence in domestic and global arena of business through the study of major disciplines within the fields of business

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	Principles of Management	Methodological Perspective of Management as a discipline Principles and functions of Management Process of decision making Modern trends in management process
	Core - II	Business Communication	On completion of course the students should be able to understand the nuances of Business communication
	Allied - I	Business Mathematics and Statistics-I	To develop scientific ability To critically evaluate mathematical problems To have fundamental touch with industrial and commercial problems To know about modern trends in mathematics To prepare them for management studies To Organize a statistical survey To Understand the importance of summary measures to describe the characteristics of data set To Analyze the relationship between two variables To Use various forecasting techniques

II	Core - III	Organizational Behavior	Manage conflict amongst groups in business environment Comprehend and apply motivational theories in the workplace Identify changes within organizations and power and politics in organizations
	Elective - I	Financial Accounting	Understand the basics of accounting Identify the basic principles of accounting Understand the systems/process for recording transactions Prepare the final accounts of sole trader Give a general awareness about depreciation accounting Know about the concept of bill of exchange in business
	Allied - II	Business Mathematics and Statistics-II	To develop analytical and critical thinking skills in students and to analyze managerial problems in the light of mathematics and solving in such situations To provide a general outlook of certain statistical test which are useful to researchers in various fields
	Core - IV	Marketing Management	To provide the students with a conceptual base on marketing management and also equip them with the necessary skills for employment in the middle level cadre
	Core - V	Financial Management	To acquaint the students with the fundamental concept theories and techniques of the financial management with reference to the Indian context
	Core - VI	Human Resource Management	To make aware the students about concepts, forms of theories, approaches of HRM and their evolving dynamics in the emerging business scenario

III	Allied - III	Managerial Economics	To acquaint the students with the micro and macroeconomic bases of business decisions in a business organization
	SBEC - I	Campus to Corporate - (Viva-Voce)	To familiarize students with various communication methods that exists in business and to train them for smooth transition from campus to corporate.
		Fundamentals of Insurance	To provide an understanding of the Indian Insurance Sector. To make the students comprehend, the latest offerings and the day to day operations in Insurance
		Life Skill Education	To equip the students with the social and interpersonal skills that enable them to cope with the demands of everyday life. To build self-confidence, encourage critical thinking, foster independence and help people to communicate more effectively
	NMEC - I	Principles of Management	Methodological Perspective of Management as a discipline Principles and functions of Management Process of decision making Modern trends in management process
IV	Core - VII	Production and Materials Management	To make the students aware of various concepts and principles behind managing productions /Materials in a firm
	Core - VIII	Management Accounting	Students should acquire the basic knowledge required for application of tools for decision making by using various Management accounting tools and techniques To understand the basic concept and classifications of budget and its uses

IV	Core - IX	Business Law	<p>Identify the principles behind law of contract Get equipped to identify the validity of contracts Understand various special contracts</p> <p>To understand the condition of Indian economy, the role of planning process and how it has changed over the years, sectoral composition of GDP and role that that different sectors have played in India's growth process, the structure and role of financial sector and erformance of India's foreign trade</p>
	Allied - IV	Money Banking and Global Business	
	SBEC - II	Export and Import Documentation	<p>To familiarize students with the process of international and domestic trade procedures To form a base of policy framework in International Trading with special emphasis on India To apprise them of the documentation procedures and its sanctity in Intl' Business To evaluate and apply business strategies in International market conditions</p>
		In plant Training -(Viva -Voce)	<p>To enable the students to acquaint himself / herself with the procedure, practice and working of companies by having minimum period of 2 Weeks of Training inorder to get the practical exposure in the field of Management Studies</p>
		Practice of Business Relations	<p>To make an awareness about managerial relations between the various stakeholders of a business concern</p>
NMEC - II	Human Resource Management	<p>To make aware the students about concepts, forms of theories, approaches of HRM and their evolving dynamics in the emerging business scenario</p>	

V	Core - X	Business Policy and Strategy	To provide students with the fundamentals of Business Policies and strategic management in a comprehensive fashion and relate its concepts and techniques to the Indian as well as International Context.
	Core - XI	Operations Research	Understanding of the practical applications of the subject. Development of analytical thought process to help develop modeling
	Core - XII	Cost Accounting	Imbibe conceptual knowledge of cost accounting. Understand the significance of material management system To study the concept of labour cost Understand the concept of Overheads and machine hour rate. To learn the concept of process costing.
	Core - XIII	Fundamental of Research Methodology	To convert business problems into research problem and design research accordingly. To identify correct statistical tools to solve problem in hand. To write short research report.
V	Core - XIV	Management Information System	Relate the basic concepts and technologies used in the field of management Compare the processes of developing and implementing information systems Outline the role of the ethical, social, and security issues of information systems
	Elective - II	Service Marketing	To explain the differences between goods and services and the resulting challenges and opportunities for service businesses To introduce the expanded marketing mix for Services and the philosophy of customer focus for services

VI	Core - XV	Business Environment	To learn about global trends that influence our business environment and the living conditions and how different management systems and approaches that are used around the world to manage the business environment
	Core - XVI	Financial Institutions and Services	To provide the student with complete understanding of Indian financial markets, institutions and intermediaries. To equip the student with understanding of different financial instruments and their application in real life scenarios
	Core - XVII	Entrepreneurial Development	To develop the entrepreneurial abilities among the students and help them to start their ventures to become successful entrepreneurs. The students will become more capable in selfemployment
	Core - XVIII	Project Work-Viva-voce	To get familiar in one Management concepts by preparing and submitting a project report titled in the field of Management studies (Finance, HR, Marketing, Production)
	Core - XIX	Computer Application in Business	To be well versed with various computer fundamentals and to understand the power of the software tools and applications in business
	Elective - III	Retail Marketing Management	Gain a conceptual understanding of the various retail concepts. Build student appreciation of current trends, newer ways to sell and communicate with customer, greater emphasis on environment and social responsibility of retail sector, use of technology and analytical methods in retailing

Name of the Programme: Foundation Tamil			
For Candidates admitted in the Colleges affiliated to Periyar University from 2021-2022 onwards			
SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
1	பொதுத்தமிழ் - 1	இக்கால இலக்கியங்களும் உரைநடையும்	தற்கால இலக்கியப் போக்குகளையும் இலக்கணங்களையும் மாணவர் அறியுமாறு செய்து அவர்களின் படைப்பாற்றலைத் தூண்டுதல். பிழையின்றி எழுதவும் பிறமொழிச் சொற்களைத் தமிழ்ச்சொற்களாக மாற்றும் திறன் உருவாக்குவதாகும்.
2	பொதுத்தமிழ் -2	சமய இலக்கியங்களும் சிறுகதையும்	சமய இலக்கியங்களையும் சிற்றிலக்கியங்களையும் மாணவர்களுக்கு அறிமுகப்படுத்துதல், மொழித்திறனையும் சிறுகதை இலக்கிய வடிவத்தையும், கடிதம் எழுதுகின்ற திறனையும் மாணவர்களுக்கு உணர்த்துவது ஆகும்.

3	பொதுத்தமிழ் - 3	காப்பியங்களும் புதினமும்	காப்பியங்களின் போக்கையும் புதினத்தின் இலக்கிய வடிவத்தையும் யாப்பு, அணி போன்ற இலக்கண வகைகளையும் மொழிபெயர்ப்புத் திறனையும் மாணவர்கள் உணருமாறு செய்தல்.
4	பொதுத்தமிழ் - 4	பண்டைய இலக்கியங்களும் நாடகமும்	சங்க இலக்கியத்தின் சிறப்பையும் நாடகம் என்னும் இலக்கிய வகைமையின் தன்மையும் அகத்திணை, புறத்திணை இலக்கணங்களையும் மாணவர்களுக்கு அறிமுகப்படுத்துதல்.

2.6.1 Programme outcomes, Programme specific outcomes and course outcomes for all Programme offered by the institution are stated and displayed on website and communicated to teachers and students.

For Candidates admitted in the Colleges affiliated to Periyar University from 2012 onwards

Name of the Programme: Bachelor of Science (Biotechnology)

Programme Outcome(PO):

Upon completion of the degree requirements, students will be able to

PO1	To impart the knowledge about the theoretical development of Biotechnology.
PO2	To elucidate the use of various Biological Science concepts which are required for the development of Biotechnology.
PO3	To efficiently and successfully prepare students in good communication
PO4	To develop effective biological technical skills among students in order for them to be proficient and self-sufficient to start a self-employment

PO5	To train and raise awareness among students about the importance of learning basic to possibly advanced techniques.
PO6	To raise student awareness about social significance of biotechnology.
PO7	To equip the students with effective applications of various biotechnology tools for solving many real life problems.
PO8	To disseminate information about the pharmaceutical significance of biotechnology.
PO9	To emphasize the scope of using biotechnology tools in various disciplines.
PO10	To instruct students on how to use scientific equipment.
PO11	To increase awareness of the medical and biological significance of biotechnology.
PO12	To provide a platform for pursuing higher studies such as Post-graduate and Doctorate degrees

PO13

To prepare students for a variety of industrial-based activities.

Programme Specific Outcome(PSO):

Upon completion of the degree requirements, students will be able to

PSO1

Understanding basic concepts and mechanisms involved in biological systems.

PSO2

The students should be able to demonstrate proficiency in basic science and fundamental biotechnological tools

PSO3

Students' communication skills will improve, allowing them to collaborate with industrial and academic professionals from neighbouring states and countries to share knowledge.

PSO4	Students who learn how to handle scientific equipment can work in a variety of industries and academic fields, as well as start their own businesses.
PSO5	Students can become cutting-edge researchers in the future by learning basic to advanced biotechnological techniques and knowledge.
PSO6	Students who understand biology well could gain self-confidence and recognise their potential value to society.
PSO7	The graduates get motivated towards deep learning, higher studies and research in life sciences
PSO8	The graduates acquire employability skills in the field of Pharmaceutical, food and agricultural industries
PSO9	The graduates develop health and environment awareness towards social responsibility.
PSO10	Pupils can enter into bioinstrumentational research and maintain the functionality of scientific equipment if they have a thorough understanding of the working principles and procedures.
PSO11	Students can participate in scientific research to develop or discover pharmaceutically valuable molecules that can be used to cure or eradicate various pandemic health issues.

PSO12	The awareness of the significance of biotechnological approaches in pollution management can control or mitigate environmental pollution, and individuals will take personal responsibility to avoid environmental pollution-related activities.
PSO13	While completing the course, students will be socially responsible and knowledgeable in biotechnology, which will lead to job opportunities and promote them as entrepreneurs.

COURSE OUTCOME

Name of the Programme: Bachelor of Science (Biotechnology)

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
	Core - I	Cell Biology	Students understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles.
	Core Practical I	Lab in Cell Biology	Students understand fundamentals of cell biology techniques. Students are aware of the laboratory rules and regulations.

I	Allied -I	Biochemistry I	Students understand cellular metabolism quite enough to predict and control changes in cells. Biochemical study resulted in treatments for so many metabolic disorders, antimicrobial to combat
	Value Education	Manavalakkalai - Yoga	Practicing yoga on a routine basis can provide physical and mental health benefits Such as increased flexibility, increased muscle strength and tone, improved respiration, energy and
II	Core - II	Genetics	Student Obtain acquaintance on historical overview of microbial genetics and genetic Materials Comprehend the concept of replication of genetic
	SBEC-I	Bioinstrumentation	Demonstrate the basics of instrumentation by analysis Exemplify the structure of atoms and molecules by using the principles of Spectroscopy
	Core Practical II	Lab In Genetics	Students will Successfully quantify the important biological constituents of cell. Analyse the sex chromatin present in different cells.
	EVS	Environmental - Studies	Comprehend the transnational nature of environmental problems and how to identify them, such as interactions at local, regional, and global scales.
	Allied - II	Biochemistry II	Understanding of basic aspects in biology, chemistry, and biochemistry. Capability to apply basic chemistry fundamentals to biological systems and molecular biology.
	Allied Practical I	Lab in Biochemistry	Understanding good laboratory practises in a chemistry/biochemistry laboratory, safety and precautions, proficiency in preparing laboratory reagents, use of glassware,

III	Core - III	General Microbiology	Remember and recall the historical events which paved the development of different types of microscopes. Understand and differentiate the different types of
	SBEC-III	Developmental Biology	Students get used to main developmental biology concepts Explain the molecular mechanisms that underlie animal and plant development
	NMEC-I	Concept of Biotechnology	Describe the fundamental biochemical processes of cells such as ion/molecule uptake, energy transfers, metabolism and the immune system Describe the fundamentals of cell division and
	Core Practical III	Lab In Microbiology	Be aware of the laboratory rules and regulations Understand the importance, evolution and diversity of cells and preparation of Buffers Learns to visualize the cells by employing
	Allied - III	Biostatistics	Students get introduced to the applications of statistics in Bio-Technology, Bio-Chemistry and Microbiology. Understand and apply the statistical methods like
IV	Core IV	Molecular Biology	Molecular Events of understand and appreciate the diversity of life as it evolved over time by processes of mutation, selection and genetic change.
	NMEC-II	Biotechnology for Human Welfare	Describe the basic principles and techniques used for the study and manipulation of DNA Appreciate the application of biotechnology in diverse areas such as health and medicine,
	Core Practical IV	Lab in Molecular Biology	Students get hands on experience in isolation and separation of Protein, RNA and DNA. Students acquire knowledge about basic molecular biology tools.

	Allied - IV	E-Commerce Techniques	Students learned about the fundamentals of computing, such as how to formulate a computational problem, develop an algorithmic solution, implement their solution in software, and
	Allied Practical II	HTML Programming	Students will be able to comprehend and apply their knowledge in a variety of bioinformatics applications in life science research.
V	Core V	Plant Biotechnology	Students understand scientific and technical skills on plants study Acquire knowledge on limitations and challenges in plant cell tissue culture.
	Core VI	Immunology and Immunotechnology	Students design a model of Immunoglobulin/Antibodies Describe which cell types and organs are present in the immune response
	Core VII	Genetic Engineering	Acquaint with the vocabulary involved in molecular cloning strategies and techniques used to probe DNA for specific genes of interest Apprehend with the tools and techniques in rDNA
	SBEC III	Nanobiotechnology and Bioinformatics	The student will develop a fundamental knowledge of nanomaterials. The student will demonstrate a basic understanding of the length scale that defines nano
	Elective - II	Medical Biotechnology	Understand the role of biotechnology in healthcare Describe the pharming for human proteins and neutraceuticals Analyse the diagnosis and prediction of disorders.
	Core Practical V	Lab in Plant Biotechnology	Understand the concepts and principles of Plant tissue culture. Learn the techniques of sterilization and monitoring method of sterilization.

	Core Practical VI	Lab in Genetic Engineering and Immunology	Understand the practical skills in Immunology Acquire skills in genetic engineering Examining and analyzing the results involved in immune techniques and genetic engineering
VI	Core VIII	Animal biotechnology	To develop an understanding on basic pattern of animal cell culture and controlling characters Acquire knowledge on handling animal cell culture and their applications
	Core IX	Proteomics and Genomics	Students get better knowledge of molecular profiling of genes and proteins for its analysis. Students will develop the molecular skills, knowledge about the handling of instruments for
	Core X	Bioprocess & Enzymology technology	Students understand the applications of Microbes Students know about Fermentation, Microbial products, amino acids solvents, vitamins and antibiotics.
	SBEC-IV	Pharmaceutical Biotechnology	Student understands the concept therapy. Understand Pharmacology is the study of inherited variation in drug response. Understand the basic steps in the drug research,
	Elective-II	Food Biotechnology	Narrate the scope and economics of Food Biotechnology Understand the need of edible vaccine products for the mankind
	Core Practical VII	Lab in Animal Biotechnology	Students Study the culture techniques of the animal cell culture Students understand about the production of transgenic products and their therapeutic
	Core Practical VIII	Lab in Bioprocess Technology and Enzymology	Students gain sound technical knowledge and hands on practical skills in various aspects of bioprocess Biotechnology and enzymology Students acquire an overview about the

Name of the Programme: Bachelor of Science in Mathematics
For Candidates admitted in the Colleges affiliated to Periyar University from 2012 onwards

Programme Outcome(PO):
Upon completion of the degree requirements, students will be able to

PO1	To provide adequate basic understanding about Mathematics among the students
PO2	To prepare students to exploit opportunities being newly created in the Mathematics Profession
PO3	To train the students in communication skills effectively
PO4	To develop appropriate skills in the students so as to make them competent and provide themselves self-employment
PO5	To inculcate Problem Solving skills

PO6	To work well in teams, including virtual settings
PO7	To understand real life problems
PO8	To recognize and solve all types of problems in an ethical manner
PO9	To communicate basic concepts professionally
PO10	To build the department as a centre of excellence for imparting high quality mathematical education at the undergraduate level
PO11	To stimulate in students an interest in research and initiate them into research methodologies
PO12	To foster thinking minds that are sensitive to societal needs and issues thus making them good human beings and responsible members of the society
PO13	To provide an environment that facilitates all-round development of the student personality

Programme Specific Outcome(PSO):

Upon completion of the degree requirements, students will be able to

PSO1	Ability to define, analyse the solutions for different mathematical problems and using logical reasoning patterns for evaluating information, materials, and data for practical implementation.
PSO2	Provides verbal, reasoning, Data Interpretation, Quantitative and communication skill to solve specific problems and decision making.
PSO3	Apply ethical principles and commitment towards professional ethics and responsibility.
PSO4	Function effectively as a member, leader, individual or group in diverse environment.
PSO5	Ability to conceptualize a complex issue into a coherent written statement and oral presentation and to communicate effectively on complex activities with technical community.

PSO6	Providing an opportunity for the students to gain practical exposure towards the workplace.
PSO7	Promotes fundamentals of creating and innovating new concepts in theory oriented core subjects.
PSO8	Ability to demonstrate mathematical concepts using technology to competence in domestic and global arena.

COURSE OUTCOME			
Name of the Programme: Bachelor of Science in Mathematics			
SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
	Core - I	Classical Algebra	<ol style="list-style-type: none"> 1. Gain knowledge about binomial, exponential and logarithmic series. 2. Examine the consistency of linear equations and application of Cayley-Hamilton theorem.

I	Core - II	Differential Calculus	<ol style="list-style-type: none"> 1. Gain knowledge about curvature and envelopes. 2. Gain knowledge about integration and its applications.
	Allied - I	Allied Physics - I	<ol style="list-style-type: none"> 1. To know about the new concepts related to mathematical ideas 2. Basic preparation to deal with laboratory equipments
II	Core - III	Integral Calculus	<ol style="list-style-type: none"> 1. Gain knowledge about curvature and envelopes. 2. Gain knowledge about integration and its applications.
	Core - IV	Vector Analysis	<ol style="list-style-type: none"> 1. Recall the basic concepts and understand the expansions of Trigonometric functions 2. Acquire knowledge on Hyperbolic functions and Logarithm of complex numbers
	Allied - II	Allied Physics - II	<ol style="list-style-type: none"> 1. Apart from the mathematical problems students can work with equipments in the physics laboratory 2. To learn and relate Mathematics concepts with
III	Core - V	Statics	<ol style="list-style-type: none"> 1. To understand the impulse and impulsive force and to gain knowledge about collision of elastic bodies. 2. To understand the geometrical representation of
	Core - VI	Differential Equations and Lapalce Transforms	<ol style="list-style-type: none"> 1. Understanding the concepts of Maxima and Minima. 2. Developing the knowledge in Numerical Methods problem solving.
	Allied II	Mathematical Statistics	<ol style="list-style-type: none"> 1. Using mathematical ideas in evaluation of data 2. To use statistical operations among all the other type of problems 3. To make a new way and new approach to

	SBEC I	Office Automation Practical	Acquire practical knowledge about MS-Word, MS-Excel, MS-PowerPoint and Ms-Access.
	NMEC-I	Basics of Computers	1. This will lead the student community to a technological world 2. Basic concepts like operating systems, coloring, drawing are taught
IV	Core - VII	Dynamics	1. To recollect the basic concept of forces and understand the Varignon's theorem. 2. To understand the laws of friction and equilibrium of a particle on a rough inclined plane
	Core - VIII	Trigonometry and Analytical Geometry of 3D	1. To gain knowledge about Conic 2D 2. Understand the concepts of coplanar lines and skew lines and find the shortest distance between them
	Allied II	Inferential Statistics	1. To gain analysis technique 2. To learn about collecting and organising data to deal with various type of statistical problems 3. Enhances statistical methods for solving different
	NMEC-II	Basics of Internet	1. Which introduces a new approach to deal with internet 2. Apart from the internet usage students will learn to operate computers of different types
	SBEC - II	Quantitative Aptitude	1. Make sense of problems, develop strategies to find solutions and persevere in solving them. 2. Use appropriate technology in a given context. 3. Critique and evaluate quantitative arguments
	Core - IX	Modern Algebra I	1. Understand the concepts of various Subgroups and its applications 2. Acquire Knowledge about the concepts of homomorphisms, isomorphisms and

V	Core - X	Real Analysis I	<ol style="list-style-type: none"> 1. Understand basic concepts of sequence and series. 2. Understand and prove various theorems. 3. Understand the method to solve simple
	Core - XI	Complex Analysis I	<ol style="list-style-type: none"> 1. Find different Singularities and Residues 2. Understand various Linear Transformations and Conformal Mappings
	Elective I	Operatoinis Research	<ol style="list-style-type: none"> 1. Formulate simple reasoning and learning optimization problems. 2. Analyze a problem and can select a suitable strategy.
	Elective II	Number Theory	<ol style="list-style-type: none"> 1. To understand the basic properties of integers. 2. Formally understand and prove various theorems. 3. Applying theoretical results acquired to solve
	SBEC III	C Programming (Theory)	<ol style="list-style-type: none"> 1. Understand the structure of C program, its keywords, declaration of variables and defining symbolic commands. 2. Use arithmetic operators, logical operators,
VI	Core - XII	Modern Algebra II	<ol style="list-style-type: none"> 1. Find the linear dependence and independence, dimension of spaces. 2. Know the concepts of null spaces, range and Matrix representation of a linear transformation.
	Core - XIII	Real Analysis II	<ol style="list-style-type: none"> 1. Understand concepts of connectedness, completeness and compactness of metric spaces. 2. Understand basic concepts of Riemann Integration and solving simple problems.
	Core - XIV	Complex Analysis II	<ol style="list-style-type: none"> 1. Know the concepts of Limits, Continuity and Analytic functions. 2. Solve Complex Integrals. 3. Discuss Convergence of Sequences and Series,

v i	Core - XV	Graph Theory	<ol style="list-style-type: none"> 1. Formally understand and prove theorems and lemmas. 2. Apply theoretical knowledge acquired to solve realistic problems in real life.
	Elective - III	Numerical Analysis	<ol style="list-style-type: none"> 1. Use numerical methods to solve the algebraic and transcendental equations by using Bisection, Newton's method and some iterative methods. 2. Have a sufficient exposure in constructing
	SBEC - V	Latex Theory	<ol style="list-style-type: none"> 1. To learn the new type of documentation for mathematics 2. Have a great idea of typing the new concepts with more perfection

Name of the Programme: Hotel Management & Catering Science

For Candidates admitted in the Colleges affiliated to Periyar University from 2012 onwards

Programme Outcome(PO):

Upon completion of the degree requirements, students will be able to

PO1	To provide adequate basic understanding about Management Education among the students
PO2	To prepare students to exploit opportunities being newly created in the Management Profession

PO3	To train the students in communication skills effectively
PO4	To develop appropriate skills in the students so as to make them competent and provide themselves self-employment
PO5	To inculcate Entrepreneurial and Managerial skills
PO6	To work well in teams, including virtual settings
PO7	To understand finance and other core business content
PO8	To recognize and solve business problems in an ethical manner
PO9	To communicate business information professionally
PO10	To build the department as a centre of excellence for imparting high quality management education at the undergraduate level

PO11	To stimulate in students an interest in research and initiate them into research methodologies
PO12	To foster thinking minds that are sensitive to societal needs and issues thus making them good human beings and responsible members of the society
PO13	To provide an environment that facilitates all-round development of the student personality

Programme Specific Outcome(PSO):

PSO1	To provide the basic and essential knowledge regarding various activities undertaken and necessary to run socially responsible business organization
PSO2	To impart certain basic skills and aptitude which will be useful in taking up any particular activity in hospitality industry.
PSO3	To develop the personality so as to become responsible citizen with greater awareness about the Indian society and its culture.

PSO4

To provide a global view of several multinational hotel and their functions which support hotel system.

Name of the Programme: Hotel Management & Catering science(HMCS)

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	Food Production & Patisserie-I	To know the responsibilities of the kitchen staffs, aim and objectives of culinary, haccp and importance of hygiene, & culinary basic
	Core - II	Accommodation Operation -I	to know the importance of housekeeping in hospitality industry. How to make the guest to feel home away from home. To learn the hotel cleanliness and maintenance. And aesthetic up keep of the hotel.
	Allied - I	front office operation-I	Classify the hotels based on the location and rating based on the facilities. Greeting the guest and fulfill their requirement.
	Core - III	Food and Beverage Service -I	Evaluation of hotel industry to differentiate commercial and non-commercial establishment. Learning how to handle the equipment, to know the qualities of F&B staffs, to know the different types of service.

II	Core-IV	Bakery & Confectionery	To describe attributes of Bakery and Confectionery product to evaluate to different between control and standardized products. To test hypotheses using statistical techniques.
	Allied – II	Food science & Nutrition	Students will get the knowledge about the important nutrients effect of excess and deficiency, food colouring, flavor, reason for food contamination food adulation, importance of food groups and water.
III	Core-V	Food Production & Patisserie-II	Studying the indian, spices, masalas, and continents, learning the Indian cuisines, how to prepare a indent, costing and cost control, and also studying the international cuisine.
	Core-VI	Accommodation Operation -II	Gaining knowledge about textiles and laundry operation, legal agreements, handling emergency, purpose of flower arrangements.
	SBEC-I	Hospitality Communication	Developing their speaking skill, business communication, conversation.
	Allied-III	Hotel Accounting	Learning basic accounts for maintaining hotel accounts.
	Elective-I	Hotel French	English to French learning the alphabet, numerics, fruits, vegetables and self intro and simple conversation.
	NMEC - I	Front Office Management-I	Students will the learn how to handle the guest and providing the facilities, visa formalities etc...

Core -VII	Food & Beverage service-II	To know the production of alcoholic beverages storing temperature particularly gaining more knowledge about wines.
Core-VIII	Tourism Marketing	Purpose of tourism, economic status about the country, importance of Indian tourism, their advantages hotels and transports co-ordinate with tourism.
Elective-II	Hotel Administration and Entrepreneurship	Student master oral and visual presentation skills and established a foundation of confidence in the skill necessary to cause others to act. Student advanced their skills in customer development customer validation competitive analysis and
Allied -IV	Front Office Operation	To know the guest accounting, night auditing, checkout settlement process, system knowledge.
SBEC-II	Hospitality Communication -II	Preparing for interview. Facing interview panel, handling meeting.
NMEC-II	Principle of Tourism	Contextualize tourism with boarded culture critique tourism practice for their implication locally and globally .explain the divorce nature of tourism including culture global/local perspective and experience designing
		Familiarize in larder kitchen. Analyses the storage of meat and larder control.

<p>14</p>	<p>Core-IX</p>	<p>Food Production & Patisserie-III</p>	<p>Prepare cold cuts and forcemeats.</p> <p>To enhance on brines, marinades and charcuterie.</p> <p>To prepare sandwiches with its stuffing to make garnishes.</p>
<p>15</p>	<p>Core-X</p>	<p>Food and beverage service</p>	<p>Make a layout of food and beverage outlet.</p> <p>Understand formal and informal banquets.</p> <p>To run catering and analyze menu engineering.</p> <p>To operate gueridon service.</p> <p>Analyze the importance of kitchen.</p>

V	Core-XI	Hotel Engineering	Role and importance of maintenance dept in hotel industry. Meaning and its importance and method of earthing . Refrigeration principles and uses of refrigeration in hotel industry. Transportation
	Core -XII	Event Management	Familiarization on event management and its functions. Analyzing the planning of event. To know the concepts and designating of event. Acquire the information on public speaking. To setup the events in hotels. To know the budget calculation of event management.
	SBEC-III	Human Resource Management	Students will acquire knowledge in HRD application and basic advanced level. Can be able to analyze and appraise the performance. Gain knowledge in recruitment process. Training methodology and motivational practices will
	Core -XIII	Food & Beverage Management	Acquire information on job description and job specification of the bar man. Recognize bar operation. Obtain skills of a bar man. Preparation of cocktails and mock tails. Familiarize with the presentation of cocktails and mocktails.
	Core-XIV	Travel and Tourism Management	Relate lodging and food service operation to the travel and tourism industry. To know the role of travel and tourism industry. Avail city opportunities for education, training and carrier development. Acquire information on
VI	Core-XV	Application of computer in hospitality and tourism industry	Introduction to computers and computer software. Intro to social media, its role in hospitality promotion.
	Elective-III	Hotel & business law	Legislation of catering industry. Law relating to hotel guest relationship hotel and lodging rate control. Hotel and restaurant licenses. Food-legislation, prevention of food adulteration act, 1954

	SBEC-IV	Principles of management	Introduction to evaluation, school of management, management defined role of manager, managerial skill and management process. Organizing and organization structure organization chart and principles of organization
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Name of the Programme: Bachelor of Computer Applications (BCA)

Programme Outcome(PO)

PO1	Proficient in successfully designing innovative solutions for solving real life business problems and addressing business development issues with a passion for quality, competency and holistic approach
PO2	Enabled students to develop problem solving competence while using computer
PO3	Develop practical skills to provide solutions to industry, society and business.
PO4	Perform professionally with social, cultural and ethical responsibility as an individual as well as in multifaceted teams with positive attitude

PO5	Skills and analytical abilities in computer based solutions developed in students
PO6	Developed awareness about automation & Understood the issues of Green Computing.
PO7	Capable of adapting to new technologies and constantly upgrade their skills with an attitude towards independent and lifelong learning.
PO8	Gives overview of the topics in IT like networking, computer graphics, web development, trouble shooting, and hardware and software skills.
PO9	Exhibit understanding of broad business concepts and principles & To identify and define problems and opportunities.

Programme Specific Outcome(PSO):

PSO1	Imparted knowledge required for planning, designing and building Complex Application Software Systems
PSO2	Learn programming language such as Office Automation, C,C++, Java, Visual Basic, Android Programming , Image Editing Tools etc...

PSO3	To understand the fundamental concepts of computer system, including hardware and networking.
PSO4	In order to enhance programming skills of the young IT professionals, the program has introduced the concept of project development in each language/technology learnt during semester.
PSO5	Bachelor in computer applications (BCA) gives a number of opportunities to individuals to go ahead and shine in their lives.

**Name of the Programme: Bachelor of Computer Applications (BCA)
For Candidates admitted in the Colleges affiliated to Periyar University from 2017-2018 onwards**

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	CORE :I	Computer Applications for Automation	CO 1: Recognize when to use each of the Microsoft Office programs to create professional business documents. CO 2: Use Microsoft Office programs to create
	ALLIED-I	Algebra and Calculus	CO 1: To develop students understanding through laboratory activities to solve problems related to the concepts. CO 2: To familiarize students with linear algebra,

II	CORE :II	C Programming	CO 1: Understand the basic terminology used in computer programming CO 2: Write, compile and debug programs in C language.
	PRACTICAL-I	Office Automation	CO 1:Acquire knowledge in MS- word Text Manipulations,Usage of Numbering, Bullets, Tools and Headers, Usage of Spell Check. CO 2: Practicing of Find and Replace,Text
	PRACTICAL-II	Programming in C	CO 1: Understand the basic concept of C Programming, and its different modules that includes conditional and looping expressions, Arrays, Strings.
	ALLIED-I	Differential Equations & Laplace Transforms	CO 1: To develop students understanding through laboratory activites to solve problems related to the concepts. CO 2: To familiarize students with linear algebra,
	ALLIED-I PRACTICAL-I	Practical Lab-1: Allied Maths practical	CO 1: To develop students understanding through laboratory activites to solve problems related to the concepts. CO 2: To familiarize students with linear algebra,
	SBEC-I	Internet and its Applications	CO 1: Apply skills and concepts for basic use of computer hardware, software. CO 2: The networks, Internet in the workplace in the future coursework.
	CORE :III	Fundamentals Of Digital Computers	CO 1: Master the binary and hexadecimal number systems including computer arithmetic. CO2: Be familiar with the history and development of modern computers.
	CORE :IV	Structured System Analysis & Design	CO 1:Develop a working understanding of formal System analysis and design processes. CO 2:An appreciation for and understanding of the risks inherent to large-scale software development.

III	CORE : V	Data Structures And Algorithms	CO 1: Demonstrate familiarity with major algorithms and data structures. CO 2: Analyze performance of algorithms and choose the appropriate data structure and
	PRACTICAL-III	Data Structures Using C	CO 1:To efficient implement of various structures Have an understanding and practical experience of algorithmic design and implementation. CO 2:Have practical session of developing
	ALLIED-II	Principles Of Accounting	CO 1. Provide a basic knowledge about Basic Concepts Fundamentals of Book Keeping accounting concepts. CO 2. Understand use the Final accounts of a sole
	NMEC-I	Business Management	CO 1: Know thw conceptual learning skills in today's business environment. CO 2: Understanding the financial performance of an organisation.
IV	CORE :VI	Relational Database Management Systems	CO 1:To study fundamental concepts of RDBMS (SQL) CO 2: Learn about database management operations.
	CORE :VII	Operating Systems	CO 1: Understand the difference between different types of modern operating systems, virtual machines and its structure of implementation and applications.
	CORE:VIII	Object Oriented Programming With C++	CO 1: Gain the basic knowledge on Object Oriented concepts. CO 2: Ability to develop applications using Object Oriented Programming Concepts.
	PRACTICAL-IV	Programming In C++	CO 1: Explain object-oriented concepts and describe how they are supported by C++ including identifying the features and peculiarities of the C++.

ALLIED-II	Cost And Management Accounting	CO 1: Imbibe conceptual knowledge of cost accounting. CO 2: Understand the significance of material management system.
ALLIED -II PRACTICAL-I	Practical Lab-1: Allied Commerce Practcal	CO 1:Understanding and knowledge of Preparation of of invoice, receipts,vouchers. CO 2:To have knowledge on Drawing, endorsing and crossing of cheques.
SBEC-II	HTML And Javascript	CO 1:To give students the opportunity to enhance and enrich their skills in Web programming. CO 2:To know & understand concepts of internet programming.
NMEC-II	Human Resource Management	CO 1: To develop the understanding of the concept of human resource management and to understand its relevance in organizations. CO 2: To develop necessary skill set for
CORE:IX	Web Technologies	CO 1:Understand, analyze and apply the role of languages like HTML, DHTML, CSS, XML,Javascript, VBScript, PHP and protocols in the workings of the web.
CORE:X	Problem Solvingtechniques	CO 1:Identify constraints, uncertainties and risk of the system social, cultural, legislative,environmental, business etc. CO 2: Identify and apply relevant problem solving
CORE:XII	JAVA Programming	CO 1: Understanding of the principles and practice of object oriented analysis and design in the maintainable programs which satisfy their requirements.
ELECTIVE-I	E-CommerceTechnologies	CO 1: Obtain a general understanding of basic business management concepts. CO 2: Have complete knowledge about basic technical

V	ELECTIVE-II	System Software	CO 1: Understand the concepts and theory behind the implementation of high level programming languages. CO 2: Identify the primary functions of an System
	ELECTIVE-III	Computer Graphics	CO1:Understand the real graphics programming. CO2: Understand the mathematics basics, mainly linear algebra and implemented by and programming language like C.
	PRACTICAL:V	Programming In Java	CO 1:Understand the concept of OOP as well as the purpose and usage principles of inheritance, polymorphism, encapsulation & Identify classes etc.
	SBEC-III	Practical - Image Editing Tool	CO 1: To Perform in the area of design,Restore & Retouch using tools. CO 2: With help of photosope create a Cover page, action and automate.
	SBEC-IV	Multi Skill Development	CO 1:Increasing capacity & capability of existing system to ensure equitable access to all. CO 2:Promoting life long learning, maintaining quality and relevance, according to changing
	CORE XII	GUI Programming	CO 1: Design, create, build, and debug Visual Basic applications. CO 2: Explore Visual Basic's Integrated Development Environment (IDE).
	CORE XIII	Computer Networks	CO 1: Define, use and implement Computer Networks and the basic components of a Network system. CO 2: To Know and Apply pieces of hardware and
	ELECTIVE-IV	Software Testing	CO 1: Apply different testing and debugging techniques and analyzing their effectiveness. CO 2: Develop some basic level of software architecture/design.

VI	ELECTIVE-V	Data Mining And Ware Housing	CO 1: Describe the various architectures and main components of a data warehouse. CO 2: Design a data warehouse, and be able to address issues that arise when implementing a data
	ELECTIVE-VI	Parallel Processing	CO 1: Understand, appreciate and apply parallel and distributed algorithms in problem Solving. CO 2: Evaluate the impact of network topology on parallel/distributed algorithm formulations and
	ELECTIVE-VII	Multimedia	CO 1: Understand multimedia components using various tools and techniques. CO 2: Analyze and interpret Multimedia data. CO 3: Discuss about different types of media
	ELECTIVE-VIII	Image Processing	CO 1: Evaluate the techniques for image enhancement and image restoration. CO 2: : Analyze images in the frequency domain using various transforms.
	ELECTIVE-IX	Mobile Computing	CO 1: Implement mobile operating system. Remember the basic concepts of mobile computing. CO 2: Understanding mobile IP.
	PRACTICAL-VI	Programming In VB	CO 1:Design forms with text box, label box, insertimage etc. CO 2: Write and apply decision structures for determining different operations with ODBC.
	SBEC-V	Practical-Android Programming	CO 1: Learn the open source methods of Android application components. CO 2: The basics of event handling in Android & Demonstrate and deploy various tools in Android
	SBEC-VI	Shell Programming	CO 1: Work confidently in Unix/Linux environment. CO 2: Create an shell scripts to automate various tasks & implementations.

Name of the Programme: Bachelor of Science (B.Sc) Chemistry

Programme Outcome(PO):

PO1	Having leadership qualities in lab maintaing and follow proper protocol for instrument handling.
PO2	Able to work in group project as well as individual project to provide good outcoming result.
PO3	Systematic approach of problems during synthetic reaction and extractions of chemical compounds.
PO4	To work in various fields of chemistry like pharmaceutical chemistry, Dairy chemistry , leather chemistry and in sterling lab.
PO5	Able to identify various toxic nature in water by perfroming water analysis.

Programme Specific Outcome(PSO):

PSO1	Ability to synthesis, design new compounds and able to rectify solutions for upcoming problems.
PSO2	Able to assist in various qualitative analysis to prevent adulteration and precaution to avoid further confusion.
PSO3	To focus on problem shooting and solving in chemical reaction aspects.
PSO4	Well trained up in handling expolsive and dangerous chemicals in safe manner.
PSO5	To have an innovative thinking in synthetic reactions and maintaing lab performance.

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	General chemistry I	To handle chemicals and apparatus in laboratory, To study the basic principles of experiments, To study about the creation of atoms, Deep discussion of periodic table, IUPAC nomenclature of various organic and Inorganic compounds
	Allied	Allied Mathematics I	Elucidate Theory of equations, Determine Rank of matrix, Application of partial differentiation. To know Lagrange's equation of state.
	Language	Professional English I	Developing skills for students, To guide for improvement of language, Introducing scientific terminology in english.
	Allied	Allied Botany I	Study of Thallophytes, Algae and Sargassum. General study of Bacteria. study of microorganism and its importance
	Value Education	Yoga	Uses of Yoga in day today life, Importance of physical exercise, How to relax mind by physical exercise and meditation, Personality development for individuals, Protection of human resources for various activities, Law of nature to ensure earth safety.
	Core - II	General Chemistry II	Discussion of bonding between atoms, Uses of hydrides in industries and its preparation in laboratory, How to generate mechanism for a reaction, About liquid states, Various reactions involving in liquid state. Its physical and chemical properties.
	SBEC	Food and Nutrition	Sources of food, Nutrients and their deficiency, Food poisoning in food stuffs, their side effects, How to identify adulteration in food, Methods to avoid food poisoning, Preservation of food for a long time, Vitamins, minerals their uses and their deficiency.

II	Language	Professional English II	Improvising students to face problems in society, Development skills of speaking, Importance of values and morals in society.
	Allied	Allied Mathematics II	Study of differential equations and laplace transform, To learn newton's formula. Jacobian theorem for studies.
	Allied	Allied Botany II	Plant ecology system studies, Water body analysis, Climatic changes in ecosystem, physiology and osmosis study of water.
	Environmental Studies	Environmental Studies	Detailed study of environment and organisms in environment, Conservation of natural Resources, Awareness of Renewable and non renewable resources, Importance of biodiversity in day today life, Caution of pollution like soil pollution, air pollution. Act to
	Core Practical-I	Volumetric Analysis and Inorganic Preparations	To estimate the substance in compounds. To prepare inorganic complexes.
	Allied Practical	Allied Botany Practical	Identification of Fabaceae, Euphorbiaceae family, Study of Monocot and Dicot stem.
	Allied Practical	Allied Mathematics practical	Study of Hamilton theorem, position vector.
	Core - III	General Chemistry III	Nature and extraction of varoius metal from earth, Uses of organic reaction in industries, Detailed study of solid state, Various terms in thermodynamics, Work done in various process.

III	NMEC	Essential of Electricity	Importance of condensor, Capacitor inelctric circuits, Application of Daniel cell, Lead acid battery working, Recharging procedure of battery, Tendency of electric field.
	Allied	Allied physics I	To study the properties of varoius matter, Their physical properties, About traveling of sound, Determination of sound using instruments, Application of heat, Study of heat in various state, Gravitational force act on earth. Application of electric circuit
IV	Core - IV	General Chemistry IV	Nuclear chemistry description, Fission and fusion reaction, Preparation of heterocyclic compounds, application to various field, synthesis of various quinones, carnot theorem for system, Third law of thermodynamics
	SBEC	Polymer Chemistry	Basic concept of polymer, preparation of polymer, To write the structure and formula of polymer,
	Allied	Allied physics II	study of atomic physics, Descrption of nuclear physics, Application of semiconductor in various area, Laser and Maser Application.
	NMEC	Physics in every day life	Study of Mechanics and properties of matter.Measurement and effects of heat and temperature.study of sound and music.Laws of electricity and magnetism.Study of optics.
	Core Practical II	Inorganic Chemistry Practical-II	To perform qualitative Analysis of inorganic mixture.
	Allied Practical	Allied Physics Practical	To study the application of circuits, OR gate, AND gate. Calibration of ammeter, voltmeter.

V	Core -V	Inorganic Chemistry I	Detailed study of acids and bases, nature of f-block elements and its behaviour, study of coordination chemistry, various theories like VBT, VSEPR theory to explain stability of complex.
	Core - VI	Organic Chemistry I	Stereoisomerism, RS notation of compounds, Optical activity of molecules, various aminoacids synthesis and uses, DNA and RNA studies, alkaloids, steroids preparation.
	Core - VII	Physical chemistry I	Chemical equilibrium of reaction, To study rate of reaction, Various methods to predict chemical kinetics, To prepare batteries, Reactions involved in batteries.
	Elective	Analytical Chemistry I	Various separation techniques, How to perform analysis on chemical substance, Application of UV, IR, Raman spectroscopy for substance.
	SBEC	Agricultural chemistry	Preparation and uses of fertilizers, advantage of manures. Application of fungicides and herbicides. Nature of soil.
	SBEC	Dye stuff and effluent treatment	Synthesis of various dyes, application of dyes on fabrics, waste management of solvents. Safe removal of effluents from industries.
	Core -VIII	Inorganic Chemistry II	Application of bio-inorganic molecules, preparation of organometallic compounds, Preparation of organometallic compounds, Nanoscience in day today life.
	Core - IX	Organic Chemistry II	Carbohydrate synthesis, Nature of vitamins and antibiotics. Molecular rearrangement for synthesis of various compounds, Importance of Green Chemistry

VI	Core -X	Physical chemistry II	Solution to prepare, phase rule to study different state of chemical. Study of electrochemistry for industries, Photochemical reactions involved in various substance
	Elective	Analytical Chemistry II	Chromatographic separation techniques of various compounds, TGA & DTA analysis of simple and complex molecules. NMR and Mass Spectroscopy for structural elucidation.
	SBEC	Pharmaceutical Chemistry	Important terms in pharmacology, preparation of antibiotics, applications of analgesics, Various diabetic treatment, Anaesthesia treatment.
	SBEC	Industrial Chemistry	Chemical explosive and its disadvantages, various steps in leather preparation, preparation of paints, varnishes and cleansing agents, Manufacture of cement and glass.
	Core Practical III	Physical Chemistry practicals	To determine the kinetics and molecular weight determination of substance. Electro chemistry applications
	Core Practical IV	Gravimetric Estimations and Organic Practical	To analyse and preparation of the organic substance. To estimate the inorganic substance

Name of the Programme: Bachelor of Science in Microbiology

Programme Outcome(PO):

PO1	To understand the world of microorganisms that exist in all environments
PO2	To know about the influences that microorganisms and microbiological applications have on everyday on life
PO3	To understand the importance of genetics and biochemistry in microbiology for human welfare
PO4	To comprehend the pivotal role and medical significance of microbiology

Programme Specific Outcome(PSO): Upon completion of the degree requirements, students will be able to	
PSO1	To gain knowledge about the microbiological equipments especially Microscope, Incubator, Laminar Air Flow chamber, Centrifuge etc.,

PSO2	To know about the microorganisms especially Bacteria, Fungi, Algae, Protozoa, Virus.
PSO3	To apply the knowledge in various fields in microbiology particularly Agricultural, Medical, Environmental, Industrial areas.

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	Basics of Microbiology	Students will get overall understanding about the fundamentals of microbiology. To understand the concepts of microscopy. Gain knowledge about the microbial evolution and
	Allied - I	Biochemistry -I	Describe structures, properties and functions of carbohydrates. Understand the structures, properties and role of amino acids and proteins.
II	Core - II	Microbial Physiology	The students will get an overall understanding of basic cell structure and classification of microorganisms based on its nutritional requirements. Gain knowledge on the growth pattern of
	Allied - II	Biochemistry -II	Understand the basics of acid - base balance of human body and gain Develop competence in handling various chromatographic techniques. Describe carbohydrate metabolism and gain

III	Core - III	Microbial Genetics and Molecular Biology	Understand the knowledge about the genetic material and DNA replication. Created an understanding about mutation and its types. Procured the knowledge about Transcription and
	SBEC - I	Applied Biotechniques	To acquire the basic science behind the research techniques. Students will become familiar with biotechniques like chromatography, electrophoresis and
	Allied - III	Computer Application - I	
	NMEC - I	Concept of biotechnology	Describe the fundamental biochemical processes of cells such as ion/molecule uptake, energy transfers, metabolism and the immune system. Describe the fundamentals of cell division and
IV	Core - IV	Immunology and Immunotechnology	The students will get overall understanding of history and evolution of immunology and immune response developed by human system. To understand the concepts of antigen, antibody
	Allied -IV	Computer Application - II	
	SBEC - II	Mushroom Cultivation Techniques	Able to get basic idea about mushroom cultivation. Learned techniques about spawn multiplication. Learned about the diseases of edible mushrooms. Made the students ideally skilled forself-employment.
	NMEC – II	Biotechnology for Human Welfare	Describe the basic principles and techniques used for the study and manipulation of DNA. Appreciate the application of biotechnology in diverse areas such as health and medicine, agriculture and/or

V	Core - V	Medical Bacteriology	Understood the basic and general concepts of infections and the various parameters of causing infections. Assessment of their severity including the broad categorization of the methods of diagnosis.
	Core- VI	Food Microbiology	Know the positive and negative role of microbes in food. Gain knowledge about fermented food products. Understand the significance of food borne diseases.
	Core- VII	Medical Virology	Understood and Recognize characters of different types of viruses causing infections, assessment of their severity, methods of diagnosis and their prophylaxis. Recognize how the two different classes, DNA and
	Elective - I	Medical Parasitology	Understanding of taxonomy of parasite and host – parasite interaction. In depth knowledge on clinical diagnosis, pathogenicity and life cycle of protozoans.
	SBEC - III	Microbial Biotechnology	Understand the knowledge about The Basic Principles of Gene Cloning. Acquire knowledge about Molecular Cloning Tools. Created an understanding about Cloning Vectors Gene
VI	Core -VIII	Soil & Agricultural Microbiology	Able to understand the distribution of microbes in soil. Capable to get information about biogeochemical cycle. Able to get the knowledge about microbial interaction.
	Core - IX	Environmental Microbiology	Able to understand about the microbial diversity in environmental. Capable to get information about the ecosystem. Able to get overall understand the pollution.
	Core - X	Industrial Microbiology	Able to select and design a fermentation process for a specific product. Capable of identifying industrially important microbes and its potential applications.

	Elective - II	Medical Mycology	Basic understanding of fungi, their morphology and culture methods of fungi. Obtain knowledge on pathogenicity and laboratory diagnosis of medically important fungi.
	SBEC - IV	Entrepreneurial Microbiology	To make Knowledge about the role of microbes in Industries. Gained knowledge about fermented products. To understand the significance of patenting

Name of the Programme: Bachelor of Science in Computer Science		
STUDY COMPONENTS	COURSES	COURSE OUTCOME
		Recognize the basic Terminologies of C Programming

Core - I	Problem Solving Through C	<p>Understanding the statement structure and apply simple problems</p> <p>Understand and apply the pre-defined functions and user defined functions and then apply in simple problems</p> <p>Demonstrate the operation of Structures and unions.</p> <p>Recognize the operation of Files</p>
Core - I	C programming Practicals	<p>Study all the Basic Statements in C Programming.</p> <p>Practice the usage of branching and looping statements.</p> <p>Apply string functions and arrays usage.</p> <p>Analysis the use of pointers and files.</p>

Core - II	Data Structure and Algorithms	<p>Remember the concept of algorithms.</p> <p>Understanding the stack and queues.</p> <p>Apply linked list for other data structures.</p> <p>Evaluate the trees and sorting methods.</p> <p>Analyze the sorting and file organizations.</p>
Core - II	Data Structure Using C Practicals	<p>Study all the Basic operation of matrices and stack.</p> <p>Practice the usage of branching and looping statements in hash table.</p> <p>Apply arrays for stack and queue.</p>

		<p>Analysis the use of pointers for linked list, doubly linked list and tree traverse.</p>
Core - III	Computer Organization and Architecture	<p>Recognize the Basic Number system and logic gates.</p> <p>Understanding the flip flops and Karnaugh maps.</p> <p>Understand and apply micro operation and data transfer.</p> <p>Demonstrate the computer arithmetic and addressing modes.</p> <p>Analyze the memory and I/O organizations.</p>
		<p>Remember the concept of database.</p> <p>Understanding the data models and ER Diagram.</p>

Core - IV	Relational Database Management System	Apply SQL commands. Evaluate the DBMS in SQL. Analyze the Transaction management.
Core - IV	SQL and PL/SQL Practicals	Study all the Basic DDL and DML Commands. Practice the usage of SQL Statements. Apply PL/SQL code usage. Analysis the use of PL/SQL for complex problems.
		Remember the concept of networks and its types.

Core - V	Computer Network	<p>Understanding the wireless communications.</p> <p>Understand and Apply data link protocols.</p> <p>Evaluate the network design issues.</p> <p>Analyze the connection issues.</p>
Core - VI	Programming in java	<p>Remember the concepts of OOPS.</p> <p>Understand the basic Terminologies of languages and statements.</p> <p>Demonstrate the use classes and objects.</p> <p>Evaluate the packages and exception handling methods.</p>

		Analyze the I/O Streams and graphics classes.
Core - VI	Java Programming Practicals	Study all the Basic Statements in java Programming. Practice the usage of branching and looping statements. Apply Packages and Interfaces. Analysis the use of graphics tools in JAVA.
Core - VII	Operating System	Understand the structure and functions of Operating System Compare the performance of Scheduling Algorithms Understand and organize the memory Evaluate the deadlock measures Analyze the I/O hardware and software
		Understand the structure of the documents in Web.

Core - VIII	Web Technology	<p>Remember and understand the table handling tags.</p> <p>Understand and organize CSS.</p> <p>Implement scripts in web page.</p> <p>Evaluate script objects.</p>
Core - VIII	Web Technology Practicals	<p>Study all the Basic tools.</p> <p>Practice the usage of web page creation and useable objects.</p> <p>Apply various effects on webpage.</p> <p>Analysis the use of java script and html code.</p>

Core - IX	Linux and Shell Programming	<p>Understand the structure and functions of Linux Operating System.</p> <p>Understand the basic commands of Shell.</p> <p>Implement text processing and arrays.</p> <p>Evaluate shell scripting.</p> <p>Analyze decision making and scripting in Linux.</p>
Core - IX	Shell Programming	<p>Study all the Basic commands.</p> <p>Practice the usage of shell script for system configuration.</p> <p>Apply various effects piping and redirection process.</p>

		Analysis the use of shell script for simple process.
Core - X	Programming in Python	<p>Understand the Basic Programming Logic.</p> <p>Understand the basic Statements.</p> <p>Implement Files and SQL.</p> <p>Evaluate Graphics in python.</p> <p>Analyze Version control system.</p>
Core - Y	Python Programming	<p>Study all the Basic commands.</p> <p>Practice the usage of control flow statements.</p>

Core - X	Practical	<p>Apply various commands in files and directories.</p> <p>Analysis the use of MYSQL to connect database.</p>
Core - XI	Mini Project	<p>Students will be able to practice acquired knowledge within the chosen area of technology for project development.</p> <p>Identify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematic approach.</p> <p>Reproduce, improve and refine technical aspects of projects.</p> <p>Work as an individual or in a team in development of technical projects.</p> <p>Communicate and report effectively project related activities and findings.</p>
		<p>Remember the basic concepts of data mining and data preprocessing.</p>

Elective - I	Date Mining and Warehousing	<p>Understanding the data mining primitives.</p> <p>Apply mining association rule.</p> <p>Evaluate classification and Prediction.</p> <p>Implement cluster analysis.</p>
Elective - II	Computer Graphics	<p>Remember the basic concepts of Graphics system.</p> <p>Understanding scans system and I/O Devices.</p> <p>Apply 2D Transformations.</p> <p>Evaluate 3D Transformations.</p>

		Implement visual surface techniques.
Elective - III	Internet of Things	Remember IOT and Web technology. Understanding M2M to IOT. Apply IoT Architecture. Evaluate IOT Applications. Implement IOT Privacy, Security and Governance.
		Remember the basics of computers. Understand MS word.

NMEC	Computer Application for Automation	<p>Demonstrate the functions of MS excel.</p> <p>Study the basics of MS power point.</p> <p>Analyze data processing with MS Access.</p>
NMEC	Basic of Internet	<p>Remember the basics of Internet.</p> <p>Understand internet technologies.</p> <p>Demonstrate tags in HTML.</p> <p>Study the basics of create list and tables.</p> <p>Analyze frames and forms.</p>

Allied - II	Computer Applications in Office	<p>Remember the basics of MS word.</p> <p>Understand MS word.</p> <p>Demonstrate the functions of MS excel.</p> <p>Study the basics of MS excel workbooks.</p> <p>Analyze of data processing with MS power point.</p>
Allied - II	Office Automation Lab	<p>Understand the features in MS Word.</p> <p>Select and apply worksheet and functions in MS EXCEL.</p> <p>Combine multiple features in MS POWER POINT to prepare presentations</p>

Name of the Programme: Bachelor of Science in Biochemistry

Programme Outcome(PO):

PO1	<i>Disciplinary knowledge:</i> Ability to understand fundamental concepts of Biochemistry; Ability to apply basic principles of chemistry to Biological Systems and Molecular Biology; Ability to relate various interrelated physiological and metabolic events; A general awareness of current developments at the forefront in Biochemistry and Allied subjects; Ability to critically evaluate a problem and resolve to challenge blindly accepted concepts; Zeal and ability to work safely and effectively in a laboratory; Good experimental and quantitative skills encompassing preparation of laboratory reagents, conducting experiments, satisfactory analyses of data and interpretation of results; Awareness of resources, and their conservation; Ability to think laterally and in an integrating manner and develop interdisciplinary approach; Overall knowledge of the avenues for research and higher academic achievements in the field of Biochemistry and allied subjects.
PO2	<i>Communication Skills:</i> Ability to speak and write clearly in English; Ability to listen to and follow scientific viewpoints and engage with them.
PO3	<i>Problem solving:</i> ability to closely observe the situation, and apply lateral thinking and analytical skills.
PO4	<i>Analytical reasoning :</i> Ability to evaluate the strengths and weaknesses in scholarly texts spotting flaws in their arguments; Ability to use critics and theorists to create a framework and to substantiate one's argument in one's reading of scientific texts.

PO5	Team work /Time Management : Ability to participate constructively in class room discussions; Ability to contribute to group work; Ability to meet a deadline.
PO6	Scientific reasoning : Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective. Ability to formulate logical and convincing arguments.
PO7	Self-directed learning : Ability to work independently in terms of organizing laboratory, and critically analyzing research literature; Ability to postulate hypothesis, questions and search for answers.
PO8	Digital literacy : Ability to use digital sources, and apply various platforms to convey and explain concepts of Biochemistry
PO9	Moral and ethical awareness/reasoning : Ability to interrogate one's own ethical values and to be aware of ethical and environmental issues; Ability to read values inherited in society and criticism vis a vis, the environment, religion and spirituality as also structures of power
PO10	Leadership readiness : Ability to lead group discussions, to formulate questions related to scientific and social issues.

Programme Specific Outcome(PSO):

PO1	To demonstrate comprehensive knowledge on various areas of Biochemistry
PO2	To acquire skills in areas related to the current and emerging developments.
PO3	To communicate the concepts, constructs and techniques of the subject learnt in a clear, concise and lucid manner.
PO4	To plan and execute the experiments to the relevant theories of Biochemistry.
PO5	To apply critical thinking, scientific reasoning and mathematical skills in studied areas of Biochemistry.
PO6	To train the students to acquire various relevant generic and competency skills in various aspects of biochemistry so as to be able to work independently in a group or individually
PO7	To make a student life long learner with moral and ethical values

SEMESTER	STUDY COMPONENTS	COURSES	COURSE OUTCOME
I	Core - I	Basics of Biochemistry	Summarize structures, isomerism and functions of different types of carbohydrates. Understand the nature of amino acids and proteins with their structure and their roles.
	Allied - I	Biochemistry - I	Describe structures, properties and functions of carbohydrates. Understand the structures, properties and role of amino acids and proteins.
II	Core - II	Tools of Biochemistry	Illustrate the cell fractionation techniques and clarify about the microscope handling. Disclose the chromatographic techniques for the separation components.
	Allied - II	Biochemistry - II	Understand the basics of acid - base balance of human body and gain Develop competence in handling various chromatographic techniques. Describe carbohydrate metabolism and
III	Core - III	Enzymes	Understand the basic features and classification of enzymes. Figure out the characteristics of active site and nature of enzyme catalysis. Understand the
	SBEC - I	Cell Biology	Understand the structure and function of different types of cell. Succeed in understanding structural organization and role different organelles.
IV	Core - IV	Intermediary Metabolism	Understand the basic principles of metabolic pathways. Comprehend carbohydrate metabolism and its regulation.

IV	SBEC-II	Plant Biochemistry	Understand the plant cell physiology. Comprehend process of photosynthesis and photorespiration. Demonstrate nitrogen fixation in plants.
V	Core - V	Clinical Biochemistry	Understand clinical aspects of biochemistry. Describe about the blood components, blood coagulation system and Perform the hematology-based analysis.
	Core - VI	Molecular Biology	Understand the replication process. Comprehend basic principles and mechanism of transcription. Understand translation process and post
	Core - VII	Human Physiology	Illustrate about digestive secretions and absorptive mechanisms. Comprehend the process of gaseous exchange in tissues and lungs.
	Elective -I	Nutritional Biochemistry	Describe energy content of various foods and nutritional significance of different biomolecules. Understand nutritional requirements and techniques to measure energy expenditure.
	SBEC - III	Genetic Engineering	Get an idea about the role of DNA manipulative enzymes and restriction enzymes used in rDNA technology. Advance their knowledge about the vectors
	Core - VIII	Immunology	Understand basics of immune system and about the cells and organs of immune system. Describe the Antigen and Antibody structure and properties and obtain the knowledge about the
	Core - IX	Endocrinology	Gain knowledge about the basic terminologies, classification and mechanism of action of hormones and to demonstrate various types of second messengers and their action.

	Core - X	Pharmaceutical Biochemistry	Understand drug dosage, routes of administration and about bioavailability of drugs. Understand about basic principles involved in pharmacokinetics.
VI	Elective -II	Industrial Chemistry	Learn about the culture techniques for isolation of microbes from various sources and preserve the isolates. Gain basic knowledge about basic principles of
	SBEC - IV	Bioinformatics and Nanotechnology	Understand basic principles and applications of bioinformatics in lifescience and get trained in database searching. Acquire knowledge of biological databases for the

2.6.2 Pass percentage of students (2016)

Programme Code	Programme name	Number of students appeared in the final year examination	Number of students passed in final semester/year examination	Pass Percentage
BA	English	42	30	71
BCA	Computer Application	151	123	81
B.Com	Commerce	184	148	80
B.Com	Computer Application	147	115	78
BBA	Business Administration	117	69	59
B.Sc.	Biotechnology	71	68	95
B.Sc.	Biochemistry	38	33	86
B.Sc.	Chemistry	41	25	61
B.Sc.	Computer Science	143	125	87
B.Sc.	Mathematics	57	45	72
B.Sc.	Microbiology	36	31	86
B.Sc.	Hotel Management and Catering Science	28	24	85
B.Sc.	Physics	41	32	78
M.Com	Commerce	34	24	71
M.Sc	Biotechnology	15	15	100
M.Sc	Biochemistry	13	11	84
M.Sc	Computer Science	12	9	75
M.Sc	Microbiology	12	11	92
M.Phil.	Tamil	28	28	100
M.Phil.	Commerce	22	20	90
M.Phil.	Biotechnology	9	4	44.4
M.Phil.	Biochemistry	12	9	75
M.Phil.	Computer Science	22	21	95
M.Phil.	Microbiology	3	3	100
Ph.D.	Tamil	2	1	50

Figure – 1 - Program outcomes, program specific outcomes and course outcomes for all programs offered M.G.R College for the Academic year 2016 -2017

