SENGUNTHAR ARTS AND SCIENCE COLLEGE

(Affiliated to Periyar University, Salem and Approved by AICTE, NewDelhi)

An ISO 9001:2008 Certified Institution

Recognised Under Section 2(f) and 12(B) of UGC Act 1956 and Accredited by NAAC

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Program Outcomes

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Program specific outcomes

Bachelor of Commerce

Upon the successful completion of three year degree program in commerce a student should able to;

Programme Outcomes

PO – 1. After completing three years for Bachelors in Commerce (B.Com) program, students would gain a thorough grounding in the fundamentals of Commerce and Finance.

PO – 2. The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.

PO - 3. This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.

PO – 4. After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.

PO – 5. Capability of the students to make decisions at personal & professional level will increase after completion of this course.

PO – 6. Students can independently start up their own Business.

PO – 7. Students can get thorough knowledge of finance and commerce.

PO – 8. The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization

PO – 9. To develop numerical abilities of students

PO – 10. To inculcate writing skills and Business correspondence.

PO – 11. To create awareness of Law and Legislations related to commerce and business.

PO – 12. To introduce recent Trends in Business, Organizations and Industries.

Programme Specific Outcomes (PSO)

PSO – 1: Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals. Students will be able to demonstrate knowledge in setting up a computerized set of accounting books

PSO – 2: Students will demonstrate progressive affective domain development of values, the role of accounting in society and business.

B.A English

Upon the successful completion of three year degree program in B.A. English a student should able to;

Programme Outcomes

PO – 1 Students should be familiar with representative literary and cultural texts within a significant number of historical, geographical, and cultural contexts.

PO – 2 Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.

PO – 3 to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.

PO – 4 Students should be able to write analytically in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources.

PO – 5 to ethically gather, understand, evaluate and synthesize information from a variety of written and electronic sources.

PO – 6 Students should be able to understand the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies

PO – 7 know the use of language at semantic and syntactic levels. The students could improve vocabulary.

PO – 8 to understand the structure and function of grammatical units.

PO – 9 Know phonological and morphological aspects of English.

PO – 10 know various genres in English literature like Indian English literature, British literature and American literature.

PO – 11 have enriched confidence to appear for competitive examinations.

PO-12 They will be familiar with the conventions of diverse textual genres including fiction, nonfiction, poetry, autobiography, biography, Journal, film, plays, editorials etc.

Program Specific Outcomes:

PSO – 1 On successful completion of the Programme, the students will be accurate both in oral and written communication as they will be strong in Grammar and its usage..

PSO – 2 To enhance employability of the students by developing their linguistic competence and communicative skills.

B.Sc.Microbiology

Upon the successful completion of three year degree program in Microbiology a student should able to;

Programme Outcomes:

PO-1. The students will be able to acquire, retain and apply specialized concept and knowledge relevant to plethora of microbiological field.

PO-2. They will also acquire knowledge in laboratory safety and in routine and specialized microbiological skills applicable to clinical research, including accurately reporting observations and analysis.

PO-3. The course will help them to impart the knowledge of the basic principles of bacteriology, virology, mycology, immunology and parasitology including the nature of pathogenic microorganisms, pathogenesis, laboratory diagnosis, transmission, prevention and control of diseases common in the country.

PO-4. They will acquire the ability to function effectively on teams to accomplish a common goal.

PO-5. The students will be able to communicate scientific concepts, experimental results and analytical arguments clearly and concisely, both verbally and in writing.

PO-6. The course is reasoning and application based, making the students eligible for higher studies, jobs in various sectors and entrepreneurship abilities.

PO-7. Acquired knowledge and understanding of the microbiology concepts as applicable to diverse areas such as medical, industrial, environment, genetics, agriculture, food and others.

PO-8. Demonstrate key practical skills/competencies in working with microbes for study

PO-9. Use in the laboratory as well as outside, including the use of good microbiological practices.

PO-10. Acquire skills specific to microbiology and allied fields for converting information to knowledge through hypothesis, design, execution and analysis

PO-11. Develop inclination towards own professional goals over a wide range of career options expanding from R&D, Industrial or Govt. sector or as an Entrepreneur

PO-12. Competent enough to use microbiology knowledge and skills to analyze problems involving microbes, articulate these with peers/ team members/ other stake holders, and undertake remedial measures/ studies etc.

Programme Specific Outcomes (PSO)

PSO-1. The core course is emphasized on morphology, physiology and function of microorganisms in addition to several subjects including biochemistry, cell biology, immunology, virology, molecular biology and recombinant DNA technology.

PSO-2. On successful completion of graduation, the students will gain insight of microbiology starting from history, basic laboratory techniques and fundamental knowledge about the microorganisms.

B.Sc Botany

Upon the successful completion of three year degree program in Botany a student should able to;

Programme Outcomes (PO)

PO-1. The range of plant diversity in terms of structure, function and environmental relationships.

PO-2. The evaluation of plant diversity.

PO-3. The role of plants in the functioning of the global ecosystem.

PO-4. Assimilate knowedge and ideas based on wide reading and through the internet.

PO-5. Plan , conduct and write a report on an independent term project.

PO-6. Students learn to carryout practical work, in the field and in the laboratoty, without risk .

PO-7. Plant pathology to be added for sharing of field and lab data abtained.

PO-8. Apply the knowledge of the basic science, life science and fundamental process of plants to study and analyse any plant form.

PO-9. Students will be able to compare and contrast the characteristics of plants, algae, and fungi that differentiate them from each other and from other forms of life.

PO-10.Apply ethical principles and commit to environmental ethics and responsibilities and norms of the biodiversity conservation.

PO-11Analyze data using appropriate statistical methods and computer packages.

PO-12.Understand the diversity among algae.

Programme Specific Outcomes (PSO)

PSO-1. Know the systematic, morphology and structure of Algae

PSO-2.Understand the life cycle pattern of Algae.

Bachelor of Business Administration

Upon the successful completion of three year degree program in BBA a student should able to;

Programme Outcomes (PO)

PO-1.	To Understanding the Business Functions
PO-2.	To Provide Global Perspectives, Understand the corporate world
PO-3.	Developing Critical and Analytical Thinking Abilities
PO-4.	Interpersonal Skill Development
PO-5.	Creating Social Sensitivity and Understanding CSR
PO-6.	To learn Ethical and Sustainable
PO-7.	To Develop young Entrepreneur
PO-8.	Effectively Oral and Written Communication
PO-9.	Ability to work in Groups
PO-10.	Ability to create business plans
PO-11.	Analyze Global Environment and its Impact on Business
PO-12.	To develop Decision Making skills

Programme Specific Outcomes (PSO)

PSO1	Become employable in various companies and government jobs
PSO2	To identify and define problems and opportunities

B. Sc MATHAMETICS

Upon the successful completion of three year degree program in MATHAMETICS a student should able to;

Programme Outcomes (PO)

PO-1. Define arithmetic, algebraic, geometric, spatial, and statistical concepts

PO-2. Calculate arithmetic, algebraic, geometric, spatial, and statistical quantities using appropriate technology.

PO-3. Estimate arithmetic, algebraic, geometric, spatial, and statistical solutions

PO-4. Solve arithmetic, algebraic, geometric, spatial, and statistical expressions, equations, functions, and problems using appropriate technology.

PO-5. Represent mathematical information numerically, symbolically, graphically, verbally, and visually using appropriate technology.

PO-6. Develop mathematical and statistical models such as formulas, functions, graphs, tables, and schematics using appropriate technology.

PO-7. Interpret mathematical and statistical models such as formulas, functions, graphs, tables, and schematics, drawing conclusions and making inferences based on those models.

PO-8. Explore mathematical systems utilizing rich experiences that encourage independent, nontrivial, constructive exploration in mathematics.

PO-9. Communicate mathematical thoughts and ideas clearly and concisely to others in the oral and written form.

PO-10. Inculcate critical thinking to carry out scientific investigation objectively without being biased with preconceived notions

PO-11. Equip the student with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.

PO-12. Prepare students for pursuing research or careers in industry in mathematical sciences and allied fields

Programme Specific Outcomes (PSO)

PSO-1 Imbibe effective scientific and/or technical communication in both oral and writing

PSO-2 Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences

B.COM CA

Upon the successful completion of three year degree program in B.COM CA a student should able to;

Program Outcome (PO)

PO-1. Accounting knowledge: Apply the knowledge of mathematics, Social science, accounting fundamentals, and computer specialization to the solution of complex accounting & management Problem analysis: Identify, formulate, research literature, and analyses socio – economic problems to arrive at substantiated conclusions using first principles of statistics, natural and social sciences.

PO-2. Design/development of solutions: Design solutions for economic problems and design software, processes to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO-3. Conduct investigations of complex problems: Use research – based knowledge including design of tools, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-4. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern statistical tools & software.

PO-5. The accountant and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional accounting practice.

PO-6. Environment and sustainability: Understand the impact of the professional accounting solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO-7. Environment and sustainability: Understand the impact of the professional accounting solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO-8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the accounting practices.

PO-9. Individual and team work: Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

PO-10. Communications: Communicate effectively with the accounting professional & IT community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.

PO-11. Project management and finance: Demonstrate knowledge and understanding of management & software engineering principles and apply these to one's own work, as a member and leader in a team. Manage project in multidisciplinary environments.

PO-12. Life – long learning: Recognize the need for and have the preparation and ability to engage in independent and life long learning in the broadest context of technological change.

Program Specific Outcome (PSO)

PSO-1 Students will demonstrate that they can present the results of their observations and research in a way that is objective, technically accurate, and legally acceptable.

PSO-2 Students will use effective technology appropriately, such as PowerPoint, slides, posters, handouts, and transparencies in oral presentations

B.SC., BIOTECHNOLOGY

Upon the successful completion of three year degree program in B.Sc., Biotechnology a student should able to;

PROGRAMME OUTCOMES:

PO-1. Students will able to apply the knowledge and principles of basic sciences and biological sciences to address problems and find solution to the complex issues through biotechnological tools and techniques.

PO-2. To provide education that leads to comprehensive understanding of the principles and practices of biotechnology.

PO-3. Students will exhibit contemporary knowledge in Biotechnology and will be eligible for doing jobs in pharmaceutical and biotechnological Industry.

PO-4. Students will be able to understand the potentials, and impact of biotechnological innovations on environment and their implementation for finding sustainable solution to issues pertaining to environment, health sector, agriculture, etc.

PO-5. Students will be able to work individually as well as in team to survive in multidisciplinary environment.

PO-6. Provides broad based training in technical skills in methods of biotechnology, also possess oral and written communication skills

PO-7. Apply ethical principles and commit to follow professional ethics and norms and guidelines in the practice of biotechnology responsibly.

PO-8. Understanding the dynamism of biological sciences, technological changing needs are to be felt, positive attitude are to develop so as to prepare and engage in adapting to such changes through the process of life-long learning.

PO-9. Utilize technical skills acquired through lab experience and apply these skills in formulating solutions to life science questions.

PO-10. To educate and make them up to date with the current scientific literature, computer programs and web information.

PO-11. To produce responsible biotechnologists that can work within the interdisciplinary framework of biotechnology and related fields.

PO-12. An ability to recognize the ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.

PROGRAMME SPECIFIC OUTCOMES (PSO)

PO-1. The Biotechnology course educates the students to Understand and apply the principles and techniques of cell and molecular interactions which prepares students for further education and/or employment in teaching.

PO-2. Creates the Knowledge of Basic research or the health professions, Research Development and Practice, Effective Communication, Pertaining with solutions to certain difficult environmental problems such as gene-environment interaction, detection of pollutants, elimination and treatment of toxic wastes, development of environment friendly products and improved energy sources.

Bachelor of Chemistry

Upon the successful completion of one year degree program in chemistry a student should able to;

Programme Outcomes

PO – 1. The students can acquire basic knowledge in organic chemistry inorganic chemistry physical chemistry etc

PO – 2. The students can learn the structure of organic compounds and nature of bonds in three dimension.

PO - 3. They will also familiar with bonding and structure of inorganic compounds in three dimension.

PO – 4. The chemistry of inorganic compounds are also provided.

PO – 5. The students can learn the method of preparation physical properties chemical properties and uses of organic compounds.

PO – 6. Through this programme the students can learn the behaviour of ideal gases and real gases.

PO – 7. This programme offers a basic knowledge in the liquid state and liquid crystal.

PO – 8. In addition to experimental chemistry the students can learn the simple and basic ideas in mathematical chemistry like thermodynamics.

PO – 9. The students can acquire knowledge on food adulteration food preservation and food processing.

PO – 10. Through this programme the students can learn the chemistry of polymers.

PO – 11. This programme offers a basic knowledge in agricultural chemistry and dye chemistry.

PO – 12. Through this programme the students can get knowledge on pharmaceutical chemistry and industrial chemistry.

Programme Specific Outcomes (PSO)

PSO – 1: This programme impart knowledge in fundamental aspects of all branches of chemistry.

PSO – 2: The students can survey in any industries like polymer dairy paint pharmaceutical agrochemical food industries etc.

Bachelor of Computer Application

Upon successful completion of three year degree program in Computer Applications a student should be able to;

Program Outcomes (PO)

PO-1. To develop abilities for data analysis and interpretation Using ICT.
PO-2. To develop the basic programming skills to enable students to build Utility programs.
PO-3. To develop the foundation for higher studies in the field of Computer Application.
PO-4. To provide specialization in Management with technical, professional and communications skills.
PO-5. To train future industry professionals.
PO-6. To impart comprehensive knowledge with equal emphasis on theory and practice.
PO-7. To keep the students up-to-speed on all the latest and cutting edge technologies.

PO-8. Students will able to understand, analyze and develop computer programs in the areas related to algorithm, system software, web design and networking for efficient design of computer based system.

PO-9. Apply standard software engineering practices and strategies in software project development using open source programming environment to deliver a quality of product for business sucess.

PO-10. Student will able to know various issues, latest trends in technology development and thereby innovate new ideas and solutions to existing problems.

PO-11. Modern Tool Usage: Ability to select modern computing tools, skills and techniques necessary for innovative software solutions

PO-12. Professional Ethics: Ability to apply and commit professional ethics and cyber regulations in a global economic environment.

Program Specific Outcomes (PSO)

PSO-1. Ability to pursue careers in IT industry/ consultancy/ researchand development, teaching and allied areas related to computer science.

PSO-2. Comprehend, explore and build up computer programs in the areas allied to Algorithms, System Software, Multimedia, Web Design and Big Data Analytics for efficient design of computerbased systems of varying complexity.

BSC. Computer Science

Upon successful completion of three year degree program in Computer Science a student should be able to;

PO-1. To develop problem solving abilities using a computer

PO-2. To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.

PO-3. To imbibe quality software development practices.

PO-4. To create awareness about process and product standards

PO-5. To train students in professional skills related to Software Industry.

PO-6. To prepare necessary knowledge base for research and development in Computer Science

PO-7. To help students build-up a successful career in Computer Science

PO-8. Apply fundamental principles and methods of Computer Science to a wide range of applications.

PO-9. Design, correctly implement and document solutions to significant computational problems.

PO-10. Impart an understanding of the basics of our discipline.

PO-11. Prepare for continued professional development.

PO-12. Develop proficiency in the practice of computing.

Program Specific Outcomes (PSO)

PSO1 Students understand all dimensions of the concepts of software application and projects.

PSO2 Learn new technology, grasping the concepts and issues behind its use and the use of computers.

B.Sc Biochemistry

Upon Successful completion of three year degree program in biochemistry a student should able to

Programme Outcomes:

PO – 1.The course regarded as Mother of all Biological Sciences disciplines because it unveils the chemical basis of life in all living organisms including plants, animals and microorganisms.

PO-2. The students to understand the basic concepts of chemical reactions that occur in living systems.

PO-3. The course will be provide the students with some work experience, for example a summer internship or a research project in a research laboratory to further boost the career prospects.

PO – 4. Demonstrate an understanding of the principles, and have practical experience of, a wide range of biochemical techniques (e.g. basic molecular biology, cell biology and microbiology methods, spectrophotometry, the use of standards for quantification, enzyme kinetics; macromolecular purification, chromatography electrophoresis, etc.).

PO – 5. Analyse biochemical data (e.g. in enzyme kinetics, molecular structure analysis and biological databases.

PO- 6. The students will be understanding the principles of Electrophoresis, Spectrophotometre, PCR and ELISA and their applications in biological investigations/experiments.

PO-7. Acquire practical training for qualitative and quantitative analysis of biological materials/molecules such as RBC, WBC, hemoglobin, protein, uric acid, creatinine, urea, phosphorus,etc. and their estimation using multiple methods.

PO-8. Students to learn qualitative and quantitative analysis of constituents of biological fluids such as urine, blood and their estimation using standard methods.

PO -9. Acquire learning to isolate RNA, DNA, total nucleic acids and total RNA from bacteria, yeast and plant tissues and to characterize them.

PO-10. Use in the laboratory as well as outside, including the use of good biochemical practices.

PO -11 Students will acquire hands-on practical training to plan biological experiments with requisite sample size.

PO – 12.The students will learn the different areas of bioinformatics related to various biological databases such as protein databases, nucleic acid databases, metabolic pathway databases, etc.

Programme Specific Outcomes (PSO)

PSO -1. Biochemistry has applications in clinical diagnosis, understanding pathology of diseases, treatment of diseases, designing of drugs and understanding their metabolism and manufacture of various biological products like amino acids, proteins, antibiotics, hormones, enzymes, nutrients, etc.

PSO -2. On successful completion of graduation, the students to equip themselves with the basic practical training in different areas of Biochemistry ranging from Metabolism, Nutrition, Plant Biochemistry, Enzymology, Clinical Biochemistry,Molecular Biology to Genetic Engineering, Biotechnology, etc. to take up further specialized Master level courses in these areas or to take up suitable assignments/jobs in Biotech/Biochemical industries.

DEPARTMENT OF ELECTRONICS & COMMUNICATION

Upon Successful completion of three year degree program in Electronics & Communication a student should able to

PROGRAMME OUTCOMES (PO)

PO-1. The ability to apply knowledge of mathematics,physics ,chemistry specialization to the electronics circuits, communication system and computer applications.

PO-2. The ability to design and conduct experiments as well as to analyze and interpt data.

PO-3. The ability to design system, component or process to meet desired needs within realistic constraint such as economic, environmental , social, ethical health and safety ability and sustainability.

PO-4. The ability to function in team and multidisciplinary setting.

PO-5. The ability to identify, formulate and solve complex problems.

PO-6. The understanding of professional and ethical responsibility.

PO-7. The ability to communicate effectively.

PO-8. The broad education necessary to understand the impact of electronic solution in global economic societal context.

PO-9. A recognition of the need for and an ability to engage in lifelong learning.

PO-10. An ability to use the technical skills in modern electrical and communication system practise.

PO-11. A knowledge of contemporary issuses.

PO-12. An ability to manage projects by own work or as a member or leader in team.

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO-1. Employ critical thinking and the scientific knowledge carryout record and analyze the results of electronics equipments.

PSO-2. Develop research oriented skills

DEPARTMENT OF PHYSICS

Upon successful completion of three year degree programme in physics a student should be able to ;

PROGRAMME OUTCOMES (PO)

PO-1. Demonstrate , solve and an understanding of major concepts in all disciplines of physics.

PO-2. Solve the problem and also think methodically, independenly and draw a logical conclusion.

PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyse the results of physics experiments.

PO-4. Create an awareness of the impact of physics on the society, and development outside scientific community.

PO-5. To inculcate the scientific temperament in the students and outside the scientific community .

PO-6. Use modern techniques, decent equipments and phonics software.

PO-7. Analyze physical problems and develop correct solutions using natural laws.

PO-8. Describe the methodology of science the relationship between observation and theory.

PO-9. Gain the knowledge of physics through theory and practicals.

PO-10. Understand good laboratory practises and safety.

PO-11. Develop research oriented skills.

PO-12. Make aware and handle the sophisticated and instruments/equipments.

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO-1. Students are expected to acquire acore knowledge in physics including the major premises of classical mechanics , quqntum mechanics , electro magnet theory , electronics , optics, special theory of relativity and modern physics.

PSO-2. Students should learn how to design and conduct an experiment demonstrating their understanding of the scientific method and process .Not only that they are expected to have an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.

Master of Computer Applications

Upon the successful completion of three year degree program in Master of Computer Applications (Lateral)a student should be able to

Programme Outcomes

PO-1. Computational Knowledge: Understand and applymathematical foundation, computing and domain knowledge for the conceptualization of computing models from defined problems.

PO-2. Problem Analysis: Ability to identify, critically analyze and formulate complex computing problems using fundamentals of computer science and application domains.

PO-3. Design / Development of Solutions: Ability to transform complex business scenarios and contemporary issues into problems, investigate, understand and propose integrated solutions using emerging technologies

PO-4. Conduct Investigations of Complex Computing Problems: Ability to devise and conduct experiments, interpret data and provide well informed conclusions.

PO-5. Modern Tool Usage: Ability to select modern computing tools, skills and techniques necessary for innovative software solutions

PO-6. Professional Ethics: Ability to apply and commit professional ethics and cyber regulations in a global economic environment.

PO-7. Life-long Learning: Recognize the need for and develop the ability to engage in continuous learning as a Computing professional.

PO-8. Project Management and Finance: Ability to understand, management and computing principles with computing knowledge to manage projects in multidisciplinary environments.

PO-9. Communication Efficacy: Communicate effectively with the computing community as well as society by being able to comprehend effective documentations and presentations.

PO-10. Societal & Environmental Concern: Ability to recognize economic, environmental, social, health, legal, ethical issues involved in the use of computer technology and other consequential responsibilities relevant to professional practice.

PO-11. Individual & Team Work: Ability to work as a member or leader in diverse teams in multidisciplinary environment.

PO-12. Innovation and Entrepreneurship: Identify opportunities, entrepreneurship vision and use of innovative ideas to create value and wealth for the betterment of the individual and society

Program Specific Outcomes

PSO-1. Ability to pursue careers in IT industry/ consultancy/ researchand development, teaching and allied areas related to computer science.

PSO-2. Comprehend, explore and build up computer programs in the areas allied to Algorithms, System Software, Multimedia, Web Design and Big Data Analytics for efficient design of computerbased systems of varying complexity.

M.Sc. Applied Microbiology

Upon the successful completion of two year degree program in Microbiology a student should able to;

Programme Outcomes:

PO-1. The Master program builds consecutively on biological education and focus on research especially dedicated to the integration and consolidation of knowledge in microbiology.

PO-2. The course focuses on interaction between microbes, human disease and immunology that results in infectious disease and also dealt with the role of microbes in environment and ecology.

PO-3. To develop the technological advancement for current problem and to obtain reliable solutions through research activities.

PO-4. At the time of completion of the programme the student will have developed extensive knowledge in various areas of Microbiology.

PO-5. Through the stimulus of scholarly progression and intellectual development the programme aims to equip students with excellence in education and skills, thus enabling the student to pursue a career of his/her choice.

PO-6. By cultivating talents and promoting all round personality development through multi-dimensional education a spirit of self-confidence and self-reliance will be infused in the student.

PO-7. The student will be instilled with values of professional ethics and be made ready to contribute to society as responsible individuals

PO-8. On completion of the program the graduates will have applied knowledge in microbiology and the subdivision of microbiology, Microbial Biochemistry, Physiology and Molecular Biology will give basic understanding of the microbiology.

PO-9. Individual sections like bacteriology, virology, mycology give will give knowledge detailed information on economic importance of microbiology

PO-10. Advanced sections of microbiology like Immunology, Microbial genetics, food microbiology, medical microbiology, Environmental microbiology, industrial microbiology and bioinformatics will give broad information on microbiological applications and opportunities in the field of microbiology.

PO-11. Identify research and solve microbiology related problems related to the different types of microbial derived diseases.

PO-12. Ability to communicate and function effectively in multi-disciplinary team related to the microbiology.

Programme Specific Outcomes (PSO)

PSO-1. To make the students to learn the in depth concepts of microbiology to understand to complexity of microbiology and other biological system.

PSO-2. To explore the technique with laboratory components to obtain hands on experience to understand the application.

M.A ENGLISH

Upon completion of English degree programme, the graduates will be able to:

Program outcome (PO)

PO-1 Accurately and precisely communicate– both in speaking and writing – in a variety of contexts and genres.

PO-2 Demonstrate a thorough command of English and its linguistic structures.

PO-3 Recognize and comprehend different varieties of English.

PO-4 Equip student with analytical skills in linguistics, communications and literary criticism.

PO-5 Analyze oral and written discourse of various genres with regard to social, cultural, political, andhistorical contexts.

PO-6 Analyze the structure and evolution of English words and texts from the point of view of morphology, phonology, grammar, syntax and semantics.

PO-7 Apply theoretical frameworks to analyze media and other forms of public discourse.

PO-8 Identify and describe the nature and function of language as a human attribute, including language

PO-9 Acquisition, language and society, language and culture, language and thought.

PO-10 Produce and edit high quality, technical oral and written English communication and translation

PO-11 Apply theoretical frameworks for literary criticism, linguistic analysis, and communication theory.

PO-12 The ability to complete cooperative projects with other students in discussion groups, writing activities, and study sessions.

Program Specific Outcome(PSO)

PSO-1 The ability to explicate texts written in a wide variety of forms, styles, structures, and modes.

PSO-2 The ability to respond imaginatively to the content and style of texts.

M. Sc. (Computer Science)

Upon the successful completion of two year degree program in M.Sc. Computer Science a student should be able to

Program Outcomes (PO)

PO-1. Be technology-oriented with the knowledge and ability to develop creative solutions, and better understand the effects of future developments of computer systems and technology on people and society.

PO-2. Get some development experience within a specific field of Computer Science, through project work.

PO-3. Get ability to apply knowledge of Computer Science to the real-world issues.

PO-4. Be familiar with current research within various fields of Computer Science.

PO-5. Use creativity, critical thinking, analysis and research skill.

PO-6. Learn new technology, grasping the concepts and issues behind its use and the use of computers.

PO-7. Get prepared for placement by developing personality & soft skills.

PO-8. Communicate scientific information in a clear and concise manner.

PO-9. Build up programming, analytical and logical thinking abilities.

PO-10. Be able to understand the role of Computer Science in solving real time problems in society.

PO-11. Know the recent developments IT, future possibilities and limitations, and understand the value of lifelong learning.

PO-12. Get an ability to participate in debates, discussions in the society constructively.

Program Specific Outcomes (PSO)

PSO-1. Enrich the knowledge in the areas like Artificial Intelligence, Web Services, Cloud Computing, Paradigm of Programming language, Design and Analysis of Algorithms, Database Technologies Advanced Operating System, Mobile Technologies, Software Project Management and core computing subjects. Choose to study any one subject among recent trends in IT provided in the optional subjects.

PSO-2. Students understand all dimensions of the concepts of software application and projects.

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M.Sc. Mathematics

Upon the successful completion of two year degree program in MATHAMETICS a student should able to;

Program outcome (PO)

PO-1. Able to apply the knowledge of mathematical science to solve real life problems.

PO-2. Able to design the methodology suitable to the problem encountered.

PO-3. Able to analyse and interpret outputs and generate new ideas based on the outputs.

PO-4. Able to utilize, gather and generate information.

PO-5. Able to lead, work in team and give priority to the success of team.

PO-6. Able to recognize and learn the importance of life-long learning

PO-7. Apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.

PO-8. Innovate, invent and solve complex mathematical problems using the knowledge of pure and applied mathematics.

PO-9. To solve one dimensional Wave and Heat equations employing the methods in Partial Differential equations.

PO-10. Utilize Number Theory in the field of Cryptography that helps in hiding information and maintaining secrecy in Military information transmission, computer password and electronic commerce.

PO-11. Facilitate in the study of crystallographic groups in chemistry and Lie symmetry groups in physics.

PO-12. Demonstrate risk assessment in Financial markets, Disease spread in Biology and Punnett squares in Ecology.

Program Specific Outcome (PSO)

PSO-1 Identify Simulation of ground freezing and water evaporation, Heat transfer analysis due to solar radiation, Calculation of temperatures and heat flow under steady-state or transient boundary conditions.

PSO-2 Explain the knowledge of contemporary issues in the field of Mathematics and applied sciences.

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M.COM CS

Upon the successful completion of three year degree program in M.COM CS a student should able to;

Program Outcome (PO)

PO-1. The students will be ready for employment in functional areas like accounting, taxation, banking, insurance and corporate law, economics, finance, auditing and marketing.

PO-2. After completing two years for Master in Commerce (M.Com) program, students would gain a thorough grounding in the fundamentals of Commerce and Finance.

PO-3. The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.

PO-4. The all-inclusive outlook of the course offer a number of values based and job oriented courses ensures that students are trained into up-to-date. In advanced accounting courses beyond the introductory level, affective development will also progress to the valuing and organization levels.

PO-5. This program could provide Industries, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.

PO-6. After completing post graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company. Capability of the students to make decisions at personal & professional level will increase after completion of this course.

PO-7. Students can independently start up their own Business.

PO-8. The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

PO-9. Ability to identify problems and collect relevant data.

PO-10. Understanding the impact of commercial activities on environment and sustainability.

PO-11. Apply ethical principles in business and commerce.

PO-12. Ability to perform effectively as a leader as well as a member of a team

Program Specific Outcome (PSO)

PSO-1 Students also acquire skills to work as tax consultant, audit assistant and other financial supporting services. Students have choices to pursue professional courses such as CA, M.COM, MBA, CMA, ICWA, CS, etc.

PSO-2 Students are able to play roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.

M..COM CA

Upon the successful completion of two year degree program in M.COM CA

a student should able to;

Program Outcome (PO)

PO-1. Accounting knowledge: Apply the knowledge of mathematics, Social science, accounting fundamentals, and computer specialization to the solution of complex accounting & management Problem analysis: Identify, formulate, research literature, and analyses socio – economic problems to arrive at substantiated conclusions using first principles of statistics, natural and social sciences.

PO-2. Design/development of solutions: Design solutions for economic problems and design software, processes to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO-3. Conduct investigations of complex problems: Use research – based knowledge including design of tools, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-4. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern statistical tools & software.

PO-5. The accountant and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional accounting practice.

PO-6. Environment and sustainability: Understand the impact of the professional accounting solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO-7. Environment and sustainability: Understand the impact of the professional accounting solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO-8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the accounting practices.

PO-9. Individual and team work: Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

PO-10. Communications: Communicate effectively with the accounting professional & IT community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.

PO-11. Project management and finance: Demonstrate knowledge and understanding of management & software engineering principles and apply these to one's own work, as a member and leader in a team. Manage project in multidisciplinary environments.

PO-12. Life – long learning: Recognize the need for and have the preparation and ability to engage in independent and life long learning in the broadest context of technological change.

Program Specific Outcome (PSO)

PSO-1 Students will demonstrate that they can present the results of their observations and research in a way that is objective, technically accurate, and legally acceptable.

PSO-2 Students will use effective technology appropriately, such as PowerPoint, slides, posters, handouts, and transparencies

M.SC., BIOTECHNOLOGY

Upon successful completion of two year degree program in M.Sc., Biotechnology a student should able to,

PROGRAMME OUTCOMES:

PO-1. Students will be able design, conduct experiments, analyze and interpret data for investigating problems in Biotechnology and allied fields.

PO-2. Students will be able to analyze, interpret and study biological data (sequence, structure, etc) stored in various databases available on internet.

PO-3. Higher studies (M.Phil, Ph.D) can be pursued in order to attain research positions.

PO-4. Various examinations such as CSIR-NET, ARS-NET GATE, ICMR, DBT and many other opens channels for promising career in research.

PO-5. Students can become Junior Production Officer and Technical Assistant in biotechnology, pharmaceutical Companies, bio fertilizer industry, aquaculture industries, environmental units, crop production units, food processing industries, national bio-resource development firms etc.,

PO-6. Entrepreneurship ventures such as consultancy and training centres can be opened.

PO-7. Some of the major pharmaceutical and drug companies' highering biotechnological professionals include Dabur, Ranbaxy, Hindustan Lever and Dr Reddy's Labs, food processing industries, chemical industry and textile industry as well.

PO-8. Beside this industries also employ bio-technological professionals in their marketing divisions to boost up business in sectors where their products would be required.

PO-9. Beside industrial sector there are ample opportunities in academics as well.

PO-10. Students will be able to understand the potentials, and impact of biotechnological innovations on environment

PO-11. Implementation for finding sustainable solution to issues pertaining to environment, health sector, agriculture, etc.

PO-12. Several career opportunities are available for students with biotechnology background abroad especially in countries like Germany, Australia, Canada, USA and many more where biotechnology is a rapidly developing field.

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO-1 Makes students to understand the basic knowledge and concepts of biotechnology and other related areas. Understand the ability to apply their knowledge for practical which they can conduct independently.

PSO-2 Apply their knowledge in other advanced subject area like nanobiotechnology, immunotechnology, and animal and plant biotechnology for the betterment and advancement of their professional career. Learn the theoretical and practical exposure to the basic and the advanced fields of biotechnology.

M.Sc., Biochemistry

Upon Successful completion of two year degree program in biochemistry a student should able to

PROGRAMME OUTCOME

PO-1. Good experimental and quantitative skills encompassing preparation of laboratory reagents, conducting experiments, satisfactory analyses of data and interpretation of results.

PO -2. To get knowledge and skill base that would enable them to undertake further studies in biochemistry and related areas or in multidisciplinary areas

PO -3. To help and develop a range of generic skills that are relevant to wage employment, self-employment and entrepreneurship.

PO-4. To overall knowledge of the avenues for research and higher academic achievements in the field of biochemistry and allied subjects.

PO-5. To ability to work independently in terms of organizing laboratory, and critically analyzing research literature.

PO-6. Students to get the ability to plan and write a research paper.

PO – 7. To recognize the scope of biochemistry in terms of career opportunities, employment and lifelong engagement in teaching, publishing, communication, media, soft skills and other allied fields.

PO-8.To develops competence in handing various chromatographic techniques and applies them in isolating and characterizing different biological molecules.

PO-9. Students will be exposed with the fact that perturbations in the carbon metabolism can lead to various disorders such as diabetes and cancer.

PO-10. Students will acquire the knowledge to isolate bacteria from water/sewage samples, to stain bacteria, fungi, acid fast bacilli and to perform important diagnostic tests for infectious diseases such as WIDAL test in microbiology.

PO-11. Students will be exposed to permanent slides of pathogens in order to get hands-on training to know nature of various pathogens causing diseases.

PO-12.Students will develop laboratory/practical skills to perform various experiments related to purification of enzymes, analysis of proteins, nucleic acids, etc.

Programme Specific Outcomes (PSO)

PSO-1 To make the students to learn the depth concepts of biochemistry and other life science courses.

PSO-2. The students research projects, workshops, field/laboratory training/experiential exercises and simulations utilizing currently available knowledge systems and technological facilities. Care has been taken to bring in the elements of skill to enhance employment opportunities.

M.PHIL., BIOTECHNOLOGY

Upon the successful completion of one year degree program in M.Phil., Biotechnology a student should able to,

PROGRAMME OUTCOME

PO-1. Pursue Ph.D programme with norms of scholarly research that chip into the augmentation of students personal and professional development.

PO-2. Acquire in-depth knowledge of the process of developing new materials as well as gain expertised of well defined area of research in physics.

PO-3. Develop innovative methodologies to tackle issues identified

PO-4. Contributing to the development of technological knowledge and intellectual property.

PO-5. Evolve as excellent professionals in the public sector units BARC/ISRO/DRDO/CSIR laboratories and contribute towards the scientific growth of the country.

PO-6. Analyze the impact of new emerging areas of physics in the global, economic, environmental and societal context.

PO-7. Adopt Blooms Taxonomy in educational objectives.

PO-8. Optimize counseling and guidance skills both for themselves and society.

PO-9. Develop and enhance leadership and teaching skills

PO-10. Adopt changes in the environment with high integrity and transpire ethical professionals.

PO-11. Recognize and integrate life-long learning skills to become pro-active in personal and professional live.

PO-12. Opt for careers demanding writing and communicative skills locally and globally.

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO-1 The Master of philosophy in Biotechnology motivates students to develop an interest in planning and implementation of research. Recognize and think critically towards the science curricula with sound knowledge and theoretical skills by questioning and plausible explanations. Handle equipments needed for material preparation, characterization and to analyze and interpret the data with theoretical background and software. Practice the teaching-learning process by being the proponent in classroom and laboratory experience.

PSO-2 Helps to apply the scientific context to develop innovative ideas, products and methods for the benefits of biosphere.

M.Phil Microbiology

Upon completion of M.Phil degree programme, the graduates will be able to:

PROGRAME OUTCOME (PO)

PO-1. Recognize and think critically towards the science curricula with sound knowledge and theoretical skills by questioning and plausible explanations.

PO-2. Motivate themselves and develop an interest in planning and implementation of research

PO-3. Handle equipments needed for material preparation, characterization and to analyze and interpret the data with theoretical background and software.

PO-4. Practice the teaching-learning process by being the proponent in classroom and laboratory experience

PO-5. Apply the scientific context to develop innovative ideas, products and methods for the benefits of biosphere

PO-6. Adopt changes in the environment with high integrity and transpire ethical professionals

PO-7. Recognize and integrate life-long learning skills to become pro-active in personal and professional live

PO-8. Opt for careers demanding writing and communicative skills locally and globally

PO-9. Pursue Ph.D programme with norms of scholarly research that chip into the augmentation of students personal and professional development.

PO-10. Acquire in-depth knowledge of the process of developing new materials as well as gain expertised of well defined area of research in physics.

PO-11. Develop innovative methodologies to tackle issues identified

PO-12. Contributing to the development of technological knowledge and intellectual property.

PROGRAME SPECIFIC OUTCOME (PSO)

PSO-1 The Master of philosophy in Microbiology motivates students to develop an interest in planning and implementation of research. Recognize and think critically towards the science curricula with sound knowledge and theoretical skills by questioning and plausible explanations.

PSO-2 Handle equipments needed for material preparation, characterization and to analyze and interpret the data with theoretical background and software. Practice the teaching-learning process by being the proponent in classroom and laboratory experience.

Ph.D MICROBIOLOGY

Upon completion of Ph.D degree programme, the graduates will be able to:

PROGRAME OUTCOME (PO)

PO-1. Graduates will be able to summarize major themes and current research problems in their area of specialization.

PO-2. Graduates will be able to communicate the major tenets of their field and their work orally and in writing for students, peers and the lay public.

PO-3. Graduates will be able to identify areas where ethical issues may arise in their work or discipline, and articulate strategies for dealing with ethical issues in the profession.

PO-4. Graduates will be able to explain and identify open problems and areas needing development in their fields.

PO-5. Graduates will have carried out and presented an original work of research in their discipline.

PO-6. Have a thorough knowledge of the literature and a comprehensive understanding of scientific methods and techniques applicable to their own research;

PO-7. Able to demonstrate originality in the application of knowledge, together with a practical

PO-8. Understanding of how research and enquiry are used to create and interpret knowledge in their field

PO-9. The ability to critically evaluate current research and research techniques and methodologies;

PO-10. Self-direction and originality in tackling and solving problems;

PO-11. Be able to act autonomously in the planning and implementation of research; and

PO-12. Have gained oral presentation and scientific writing skills.

PROGRAME SPECIFIC OUTCOME (PSO)

PSO-1 Recognize and think critically towards the science curricula with sound knowledge and theoretical skills by questioning and plausible explanations.

PSO-2 Practice the teaching-learning process by being the proponent in classroom and laboratory experience.