

PROGRAMME OUTCOMES (POs) - UG

BSc ZOOLOGY

Programme Outcomes (POs) for General Undergraduate Programme:

- PO1. Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organisational, and personal) from different perspectives.
- PO2. Problem Solving: Understand and solve the problems of relevance to society to meet the specified needs using the knowledge, skills and attitudes acquired from humanities/ sciences/mathematics/social sciences.
- PO3. Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
- PO4. Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
- PO5. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
- PO6. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context of socio-technological changes.

Programme Specific Outcomes (PSOs):

PSOs are specific to a programme and are to be attained at the time of graduation from the programme. They are to be identified by a committee with representation from all stakeholders.

- PSO1. Understand the biological diversity and grades of complexity of various animal forms through their systematic classification and process of organic evolution.
- PSO2. Understand the roles of plants, animals and microbes in the sustainability of the environment and their interaction among themselves and deterioration of the environment due to anthropogenic activities.
- PSO3. Understand the concepts and principles of biochemistry, immunology, physiology, ethology, endocrinology, developmental biology, cell biology, genetics, molecular biology and microbiology and develop technical skills in biotechnology, bioinformatics and biostatistics.

- PSO4. Perform laboratory procedures as per standard protocols in the areas of animal diversity, systematics, cell biology, genetics, biochemistry, molecular biology, microbiology, physiology, immunology, developmental biology, environmental biology, ethology, evolution and science methodology.

BSc PHYSICS

Programme Specific Outcomes

- PSO1: Understand the basic concepts of methodology of science and the fundamentals of mechanics, properties of matter and electrodynamics.
- PSO2: Understand the theoretical basis of Quantum mechanics, Relativistic physics, Nuclear physics, Optics, Spectroscopy, Solid state Physics, Astrophysics, Statistical Mechanics, Photonics and Thermodynamics.
- PSO3: Understand and apply the concepts of electronics in the designing of different analog and digital circuits
- PSO4: Understand the basics of computer programming and numerical analysis.
- PSO5: Apply and verify theoretical concepts through laboratory experiments.

BSc CHEMISTRY

After completing B.Sc. Chemistry programme, students will be able to:

- PO1: To understand basic facts and concepts in chemistry.
- PO2: To apply the principles of chemistry.
- PO3: To appreciate the achievements in chemistry and to know the role of chemistry in nature and in society. To familiarise with the emerging areas of chemistry and their applications in various spheres of chemical sciences and to apprise the students of its relevance in future studies.
- PO4: To develop skills in the proper handling of instruments and chemicals.
- PO5: To familiarise with the different processes used in industries and their applications.
- PO6: To develop an eco-friendly attitude by creating a sense of environmental awareness. To be conversant with the applications of chemistry in day-to-day life.

BSc MATHEMATICS

The programme outcome of the BSc Mathematics undergraduate course are the summation of the expected course learning outcomes given below.

- PO1 Disciplinary knowledge: Capability of demonstrating comprehensive knowledge of mathematics and understanding of one or more disciplines which form a part of an undergraduate programme of study.
- PO2 Communications skills:
 - (i) Ability to communicate various concepts of mathematics effectively using examples and their geometrical visualisations.
 - (ii) Ability to use mathematics as a precise language of communication in other branches of human knowledge.
 - (iii) Ability to show the importance of mathematics as precursor to various Scientific developments since the beginning of civilization.
- PO3 Critical thinking: Ability to employ critical thinking in understanding the concepts in every area of mathematics.
- PO4 Analytical reasoning: Ability to analyse the results and apply them in various problems appearing in different branches of mathematics.
- PO5 Problem solving:
 - (i) Capability to solve problems using concepts of linear algebra.
 - (ii) Capability to solve various models such as growth and decay models, radioactive decay model, LCR circuits and population models using techniques of differential equations.
 - (iii) Ability to solve linear system of equations, linear programming problems and network flow problems.
 - (iv) Ability to provide new solutions using the domain knowledge of mathematics acquired during this programme.
- PO6 Research-related skills:
 - (i) Capability for inquiring about appropriate questions relating to the concepts in various fields of mathematics.
 - (ii) To know about the advances in various branches of mathematics.
- PO7 Information/digital literacy: Capability to use appropriate software to solve systems of equations and differential equations.

- PO8 Self-directed learning: Ability to work independently and do in-depth study of various notions of mathematics.
- PO9 Lifelong learning: Ability to think, acquire knowledge and skills through logical reasoning and to inculcate the habit of self-learning.
- PO10 Application skills: Ability to apply the acquired knowledge in all aspects.
- PO11 Experimental skills
- PO12 Moral and ethical awareness/reasoning: Ability to identify unethical behaviour such as fabrication, falsification or misrepresentation of data and adopting objective, unbiased and truthful actions in all aspects

BA ECONOMICS

- PO1: Students understand the theoretical and practical knowledge that makes accurate analysis of the economic situation possible.
- PO2: Students understand and evaluate the interrelation between the economy and society.
- PO3: Students understand and evaluate the economic problems from a global perspective and take a local approach to solving them.
- PO4: Students understand different economic systems and analyse the implications of decisions related to economic policy.
- PO5: Students respond to the economic problems arising from society in general and the different units that interact therein (e.g. institutions, private companies and sectors of the economy).
- PO6: Students assimilate skills needed to carry a careers in government and private enterprise as well as those pursuing graduate degrees in professional schools or in the field of economics.
- PO7: Students develop the attitude to conduct research in the socio economic issues arising in their environment.
- PO8. Students assimilate the necessary skills for analyzing the data set related to socio economic issues.
- PO9: Students develop the capacity to analyze the socio-political and economic issues in the language of an economist.
- PO10: Students analyse economic data, interpret the economic events and visualise the economic future of the nation.

Above mentioned programme outcomes are more specifically split into Programme Specific Outcomes.

- PSO: 1. Students critically evaluate and apply the theories and techniques of economics.
- PSO: 2. Students demonstrate subject-specific “thinking” skills that are readily transferable to problem solving and decision making in a wider context.
- PSO: 3. Students develop interest for lifelong learning, employing a range of practical and professional skills.
- PSO: 4. Students find, evaluate, synthesize and use information from a variety of sources
- PSO: 5. Students articulate an awareness of the social and community contexts within their disciplinary field
- PSO: 6. Students assimilate knowledge of fundamental concepts and theoretical propositions
- PSO: 7. Students understand the methodology by which economic ideas are framed, tested and modified.
- PSO: 8. Students take up a career in economics and related areas.
- PSO: 9. Students analyse the economic issues of national and international importance and realize the dynamics behind them.
- PSO: 10. Students generalise how the economic policies of the government and governmental institutions affect the common people.
- PSO: 11. Students critically evaluate and apply the theories and techniques of economics.
- PSO: 12. Students demonstrate subject-specific “thinking” skills that are readily transferable to problem solving and decision making in a wider context.)

BA HISTORY

Programme Outcomes

The basic curricular requirement of a student in BA History programme is to study and to understand Core courses, open course, elective course along with language and complementary courses. The core courses are fashioned in such a way that the student will, at the end of the programme, would emerge a world citizen as s/he will familiarize the basic developments from global to regional perspectives. The student should learn from world history and to proceed to

Kerala history through Indian history. Each of the core courses is included in the syllabus with specific goals. Students will be able to understand the transitional process of present society and locate his/her place in emerging social situation. Programme is designed to develop the students as responsible citizens adapting to the environment, eco system and sustainable development.

Programme Specific Outcomes

After the completion of the programme, the student will:

- PSO 1. Able to select and interpret the sources and content for better understanding of the society.
- PSO 2. Equip with developing historical research, develop proper methodology, frame arguments and debate with regards to past and present.
- PSO3. Articulate factual and contextual knowledge of specific places and times to make careful comparisons
- PSO4. Advances and update the existing knowledge base and engage in critical evaluations and interpretations
- PSO 5. Practiced to construct historical narratives and formulate arguments based on historiographical engagement
- PSO 6. Engage with scholarly writings and presentations, participating in field trips, social interface and attain practical knowledge on various life situations.

BA ENGLISH

Programme Outcomes

By the study of English Language and Literature, a student will develop her intellectual skills like problem solving, concrete concept, defined concept, discrimination and rule. She will also develop cognitive strategies for learning, analysing, thinking and applying knowledge.

By the end of the programme, the students:

- will understand the history as well as the structure and function of English language and develop language skills for communication and for creative expression.
- will be able to collect, understand, process, evaluate and synthesize information from a variety of sources.
- will learn and differentiate concepts about representative literary and cultural texts of different genres within the historical, geographical, and cultural contexts.
- will be able to understand critical and theoretical approaches to literature and apply them to the reading and analysis of literary and cultural texts.

- will identify, analyse, interpret and describe the wide spectrum of critical ideas, values, and themes that appear in literary and cultural texts and understand how they inform and impact the world they live in.
- will attempt at writing analytically in a variety of formats, including different types of essays, research papers, reflective and critical writing.
- will understand and assimilate the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies
- will acquire such values and ideals that a citizen of a modern secular democratic state need to have

Programmes Specific Outcomes

- PSO1: Understand and differentiate between different types, canons, movements and contexts of literature
- PSO2: Develop and apply advance language skills both in and outside classroom.
- PSO3: Develop analytical ability and critical thinking
- PSO4: Assimilate literary theory and learn to connect text with its multiple contexts
- PSO5: Critically examine the wide range of perceptions that exist in society through literary texts and thus imbibe a sense of democratic co-existence.

BCOM PROGRAMME

Programme Outcomes

- PO1. The students will get new ideas, insights and thoughts. The mind-set of students will change. They get new ideas and practical experience. Such students can face challenges with confidence and succeed in life.
- PO2. The students will be thorough with the procedures and formalities of establishment and management of business units. As all aspects are well debated, it will be easy for them to establish and successfully run business units.
- PO3. The students will be conversant with the various accounting principles and practices. All will be capable of recording, generating financial reports and arriving at conclusions and predictions.
- PO4. The interdisciplinary approach will help students to solve business issues easily and will emerge as successful entrepreneurs in future.

- PO5. The multidisciplinary in-depth learning across all related topics of business and industry will definitely pave a strong foundation for higher learning in commerce and management.
- PO6. In depth understanding of management principles will help to create managerial aptitude and skills in students will foster successful managers for the future.
- PO7. In depth understanding of Accounting principles and practices coupled with interdisciplinary learning will help to create newer ideas in accounting and will bring in innovative and creative professionals in Finance, Cost and Management.
- PO8. The knowledge of direct and indirect taxation will open up a new area of living by students. Information on both direct and indirect taxation systems will cut open a wider area of employment and professionalism.
- PO9. The improved communication skills and basic understanding of laws in force of the country will definitely add to the content level and level of interaction by students.
- PO10. Students become more confident, self-reliant, competent and Competitive with practical insights and thorough learning.

