Mahatma Gandhi Vidyamandir's

Arts, Commerce & Science College, Malegaon City.

ZOOLOGY

PO-PSO-CO

Programme Outcomes

PO1. To make the students aware of applications of Zoology subject in various industries

PO2. Students for taking up and shaping a successful career in Zoology

PO3. Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species

PO4. Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, butterfly farming and vermicomposting preparation.

PO5. Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment Program Specific Outcomes.

Program Specific Outcomes

PSO1. Understand various procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Entomology, Nematology Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology.

PSO2. To address the socio-economical challenges related to animal sciences

PSO3. Understand the importance of applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine.

PSO4. Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology.

PSO5. Analyze the relationships among animals, plants and microbes

Course Outcomes

Animal Systematics and Diversity I

CO1. Understand the Outline classification of Animals: Classification of animals.

CO2. To make the students aware about conservation and sustainable use of biodiversity.

CO3. To provide knowledge about various animal sciences from primitive to highly evolved animal groups.

CO4. .Understand the Levels of structural organization.

Fundamentals of Cell Biology

CO1. Understand the Scope of cell biology, because cell is the basic unit of life.

CO2. Analyze the relationships among animals, plants and microbes

CO3. Concept behind genetic disorder, gene mutations

CO4. Understand the cell cycle and know the importance of various cells in body of organisms.

CO5. Understand the Animal cells and various cell organelles by using microphotographs

Animal Systematics and Diversity II

CO1.Students gain knowledge in the fundamentals of animal sciences

CO2. To provide knowledge about various animal sciences from primitive to highly evolved animal groups

CO3. To make the students aware about conservation and sustainable use of biodiversity.

CO4. Understand about the Chordate and Non Chordate animals.

Genetics

CO1. To understand how nucleic acids transport genetic information

CO2. Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism

CO3. Understands about various concepts of genetics and its importance in human health

CO4. To understand mutations and its type.

S.Y. B.Sc.

Animal Systematics and Diversity III

CO1. Understand the principles and methods of taxonomy.

CO2. Understand Animal behavior and response of animals to different instincts

CO3. Student gain Idea about general taxonomic rules on animal classification.

CO4. To make the students aware about conservation and sustainable use of biodiversity.

Applied Zoology I

CO1. Imparts depth knowledge about Agricultural Pests and their control

CO2. Understands concepts of fisheries, fishing tools and site selection

CO3. Understands the complex evolutionary processes and behavior of animals

CO4. To study and understand the various species of Bees.

Animal Systematics and Diversity IV

CO1. Understands concepts of fisheries, fishing tools and site selection

CO2. Student gain Idea about general taxonomic rules on animal classification.

CO3. To make the students aware about conservation and sustainable use of biodiversity.

Applied Zoology II

CO1. Gain knowledge of Agro based Small Scale industries like sericulture, fish farming and apiculture etc.

CO2. Awareness about Pests and diseases associated with silk worm and mulberry

CO3. Students gain knowledge about various systems study of silkworms and cocoons, other defective cocoons

CO4. Student gain knowledge about Aqua culture systems, induced breeding techniques, post harvesting techniques

CO5. To aware the students and provides the economic importance of Apiculture.

T.Y. B.Sc.

Pest Management

CO1.Identify major weeds, insects, diseases, and other pest of agriculture and horticulture crops.

CO2.Determine appropriate prevention and integrated pest management techniques for major pests. CO3.Apply ecological principles to pest management decisions.

Histology

CO1. Imparts in depth knowledge of tissues, cells

CO2. Students gain skills in histological techniques

CO3. Understand the nature and basic concepts of cell biology

Biological Chemistry

CO1. Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of humans, their organs, and the cells of which they are composed

CO2. Interactions and interdependence of physiological and biochemical processes

CO3. Understand about the agencies responsible for Production of various products using biochemistry.

CO4. Understand the concept Enzymes and also Vitamins and minerals.

Genetics

CO1. Understands about various concepts of genetics and its importance in human health

CO2. Understanding of basic concepts of genetics, laws of inheritance and central dogma of biology

CO3. Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism

CO4. Understand the Origin and development of animals

Developmental Biology

CO1. To understand the basic concepts and theories related to developmental biology

CO2. Understand reproductive organs, gametogenesis and fertilization

CO3. Differentiate the embryology of chick, frog and humans

Parasitology

CO1. Aware about effect of parasite on health

CO2. Role of Parasite in spread of diseases

CO3. Knowledge of how Parasite interact with their environment

Aquarium Management

CO1. Basic understanding of agriculture, aquaculture and fisheries.

CO2. Aquaculture scenario in Indian and global context.

CO3. Types of aquaculture systems and criteria for selecting species for culture.

CO4. Ecological concepts like productivity, carrying capacity, food chain and food web.

Poultry Management

CO1. Develop and evaluate animal production and management systems by integrating Knowledge of animal genetics, nutrition, reproduction, and other relevant disciplines and applying scientific and quantitative reasoning to solve real-world challenges.

CO2. Locate, critically evaluate, and apply information from scholarly animal science literature and other sources to expand personal understanding and knowledge of animal sciences, providing a foundation for lifelong learning.

CO3. Create and interpret graphs, tables and diagrams illustrating scientific data and concepts, and understand basic concepts relating to the design and analysis of research in the animal sciences.

Medical & Forensic Zoology

CO1. Understand the basic and advanced techniques in various disciplines of forensic science.

CO2.Analyze the forensic samples using basic and state-of-the-art techniques of various disciplines of forensic science.

CO3. Evaluate the results of various techniques and make decisions on simple or complex forensic problems.

Animal Physiology

CO1. Develop understanding for the fundamental concepts of physiology of digestion
CO2. Develop understanding of blood vascular system
CO3. Develop the fundamental concepts of physiology of respiration

Molecular Biology

CO1. Learning structural levels of nucleic acids- DNA and RNA and genome organization in prokaryotes and eukaryotes.
CO2. Understanding the concept of Gene and the gene architecture.
CO3.Learning molecular events in the DNA replication and role of different enzymes.

Entomology

CO1. Gained the knowledge about the classification of arthropods and hierarchical classification.
CO2. Easily identify the different orders of insect.
CO3. Gained the knowledge about the external morphology of the insect body and their appendages and functions.

Techniques in Biology

CO1. Students gain skills in techniques of chromatography, electrophoresis, spectroscopy and radioisotopes
CO2. Understanding Techniques of microscopy, microtome, biopsy, autopsy and immunological techniques
CO3. Students gain knowledge about various tools & techniques used in biological systems
CO4. Understand the Electrophoresis and Radioactivity technique.

Evolutionary Biology

CO1. Students can understand and describe fundamental processes of evolutionary change, including genetic drift, natural selection, recombination (especially involving gene duplication), and mutation.
CO2. Students can understand how these processes interact and are modified by extrinsic factors, including mutagens and interactions among species.
CO3. Knowledge of eras and evolution of species
CO4. Understanding of genetic basis of evolution, and speciation

Environmental Impact Assessment

CO1. Understand the concept and basic process of environmental impact assessment
CO2. Familiarity with specific models and methodologies used for impact prediction on the physical-chemical (air, surface water, soil and ground water, noise), biological (habitat and non-habitat), cultural (historic, archaeological, visual), and socioeconomic (traffic, jobs, housing) components of the environment.