

Department of Zoology, NSCBM GOVT. College Hamirpur
Zoology Program Outcomes, Program Specific Outcomes and
Course Outcomes

Class : B.Sc. Zoology & M.Sc. Zoology

Zoology Program Outcomes:

PO1-

Students gain knowledge and skill in the fundamentals of animal sciences, understand the complex interactions among various living organisms.

PO2-

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

PO3-

Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.

PO4- Understand the complex evolutionary processes and behaviour of animals.

PO5- Correlate the physiological processes of animals and relationship of organ systems.

PO6-

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

PO7-

Gain knowledge of small scale industries like sericulture, fish farming, beekeeping, aquaculture, animal husbandry, poultry farm.

PO8- Understands about various concepts of genetics and its importance in human health.

PO9- Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties.

PO10 - Apply the knowledge and understanding of Zoology to one's own life and

work. PO11- Develops empathy and love towards the animals

Program Specific Outcomes:

PSO1. Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, biochemistry, ecology, evolutionary biology, developmental biology and applied and economic zoology.

PSO2. Analyse the relationships among animals, plants and microbes.

PSO3. Perform 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.

PSO4. Understand the applications of biological sciences in Apiculture, Aquaculture, Sericulture, Animal Husbandry, Poultry Farm.

PSO5.Gainsknowledgeabouteffectivecommunicationandskillsofproblemsolvingmethods.

PSO6.ContributestheknowledgeforNationbuilding.

Course Outcomes:

BSc. 1st year

Animal Diversity – Invertebrates & Vertebrates

CO1. Describe general taxonomic rules on animal classification.

CO2. Classify Phylum Protozoa to Echinodermata with taxonomic keys.

CO3. Impart conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment.

CO4. Classify phylum Protochordates to

Mammalia. CO5. Complex Vertebrate interactions.

Comparative Anatomy and Developmental Biology of Vertebrates:

CO1. Comparative knowledge of Integumentary, Digestive, Circulatory, Urinogenital, Nervous and Skeletal system of various classes of vertebrates.

CO2. Basic concepts of developmental biology.

CO3. Concept of hormonal regulation of reproduction.

BSc. 2nd year

Physiology and Biochemistry:

CO1. Students gain fundamental knowledge of animal physiology

CO2. Seek to understand the mechanisms that work to keep the animal body alive and functioning.

CO3. Interactions and interdependence of physiological and biochemical processes.

CO4. Students are taught the detailed concepts of digestion, respiration, excretion, the functioning of nerves and muscles, cardiovascular system, endocrine system and reproductive system.

CO5. Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of animals, their organs, and the cells of which they are composed.

CO6. Students learn the concepts of endocrine systems and homeostasis.

Genetics and Evolutionary Biology:

CO1. Division aspects of basic unit of life i.e.

cell. CO2. Mendelian and non-Mendelian inheritance.

CO3. Understanding of basic concepts of genetics and laws of inheritance.

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

CO4. Theories of evolution and knowledge of evolution of

species CO5. Knowledge about r and K selection and population genetics.

CO6. Understanding of genetic basis of evolution, human karyotyping and speciation

Apiculture:

CO1. Knowledge about honeybee and bee rearing.

CO2. Knowing beehives, beekeeping equipment, methods of extraction of honey and processing of honey.

CO3. Bee enemies and diseases.

CO4. Bee economy and entrepreneurship in apiculture

Medical diagnostics:

CO1. Knowledge about improving patient care.

CO2. Knowledge about protecting consumer health.

CO3. Knowledge about positive impact on healthcare costs

BSc. 3rd year

Applied Zoology

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

CO2. Understands about parasites and epidemiology of parasites in human and animals.

CO3. Use of recombinant DNA technology in genetic manipulations and in a variety of industrial processes.

CO4. Understanding of in vitro culturing of organisms and production of transgenic animals. CO5.

Types of breeds in animal farming and poultry farming along with their

management. CO6. Aquaculture systems, induced breeding techniques and postharvesting techniques.

Insect Vectors and Diseases

CO1. Imparts knowledge of non-beneficial insects.

CO2. Interaction of insect vectors with humans and spread of diseases. CO3. Management and control of vector and vector

borne diseases.

Sericulture:

CO1. Gives knowledge of silk worm rearing. CO2. Mulberry cultivation.

CO3. Pests and diseases associated with silk worm and mulberry. CO4. Various processes involved in silk production

Aquarium Fish Keeping:

CO1. Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth.

CO2. Aquarium fish keeping, aquarium setup and accessories.CO3.Aquariumfishes, theirfood andfeeding.

CO4. Fish transportation and management.CO5.Maintenance of fish culture