



DEPARTMENT OF ZOOLOGY

Program Outcome (PO)

The Department of Zoology aims to provide students with a comprehensive understanding of animal biology, including their structure, function, behavior, ecology, and evolution. Some general course outcomes that might expect from a Zoology program are:

- A. Understanding of Animal Biology:** To gain a thorough understanding of the biological processes in animals, including physiology, genetics, and biochemistry. Learn about the diversity of animal life, including the classification, evolution, and ecological roles of various species.
- B. Field and Laboratory Skills:** To develop practical skills in conducting field research, including data collection and analysis. Students learn laboratory techniques for studying animal anatomy, physiology, genetics, and other biological aspects.
- C. Ecological and Environmental Awareness:** Students will understand the ecological interactions between animals and their environments, including the impact of human activities on wildlife and ecosystems. They will learn about conservation biology and strategies for protecting endangered species and habitats. Foster a sense of responsibility towards the environment and wildlife conservation.
- D. Research and Analytical Skills:** Develop the ability to design, conduct, and analyze scientific experiments related to animal biology. Learn to interpret scientific data and present findings in written and oral formats.
- E. Communication Skills:** Develop strong communication skills for presenting scientific information to both specialist and non-specialist audiences and learn to write clear, concise scientific reports and research papers.
- F. Preparation for Advanced Studies or Careers:** Be well-prepared for advanced studies in fields such as zoology, wildlife biology, ecology, or related disciplines. Acquire the knowledge and skills needed for careers in environmental consulting, conservation, wildlife management, research, education, and more.
- G. Interdisciplinary Knowledge:** Understand the connections between zoology and other scientific disciplines, such as chemistry, physics, and environmental science. Appreciate the role of zoology in addressing global challenges, such as biodiversity loss, climate change, and sustainable development.



COURSE OUTCOME

COURSE/SEM ESTER	PAPER CODE	NAME OF THE PAPER	OUTCOME
SEMESTER-I	ZOO-HC-1016	Non-chordates 1:Protista to Pseudocoelomates	1. Learn about the non-chordates 2. Learn about the classification of the invertebrate phyla 3. Learn about the structures of the invertebrate animals 4. Learn about the life cycles of various invertebrate animals with their parasitic activities
	ZOO-HC-1012	Non-chordates 1:Protista to Pseudocoelomates	1. Will be introduced to various invertebrate animals with their classification and characteristics 2. Will be introduced with histological structures of various body parts of invertebrate animals 3. Learn how to prepare microscopic slides of whole mounts of animals 4. Learn how to prepare project reports 5. Will study the diversity of protista in pond water
	ZOO-HC-1026	Principles of Ecology	1. Will be introduced to ecology and its structure 2. Learn about the population, its structure, density and various curves 3. Learn about the community characteristics and various theories 4. Learn about the ecosystem, types, food chain, food web, energy flow 5. Learn about the ecological pyramids, various biochemical cycles 6. Will be acquainted with wildlife and their conservation
	ZOO-HC-1012	Principles of Ecology	Will be introduced to various practicals related to ecology. Students will learn how to prepare a report on field visit. They will learn various biochemical parameters related to ecology



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SEMESTER-II	ZOO-HC-2014	Non-chordates II: Coelomates	Will learn about the invertebrate coelomates. Learn about the life cycles of coelomates. Will be acquainted with various body structures and systems of these animals
	ZOO-HC-2012	Non-chordates II: Coelomates	1 Will be introduced to various invertebrate coelomates with their classification and Characteristics 2 Will be introduced with histological structures of various body parts of invertebrate animals 3 Learn how to prepare microscopic slides of whole mounts of animals 5. Learn how to prepare project reports
	ZOO-HC-2026:	Cell Biology	Learn about the structure of cell Will learn about various cellular organelles and their functions Will learn about the cell divisions
	ZOO-HC-2022	Cell Biology	Will learn how to prepare temporary slides Will learn staining Techniques
SEMESTER- III	ZOO-HC-3016	DIVERSITY OF CHORDATES	Learn about the chordates learn about various systems in chordates Will learn about various mechanisms of chordate life Will learn Zoogeography
	ZOO-HC-3012	DIVERSITY OF CHORDATES	Will learn various animals with their classification and characters Will learn how to prepare slides Will learn how to prepare power point presentation
	ZOO-HC-3026	Physiology: Controlling and Coordinating Systems	Will learn about the tissues, bone, cartilage, nervous system, muscles, reproductive system and endocrine system
	ZOO-HC-3022	Physiology: Controlling and Coordinating Systems	Will learn how to prepare permanent slides by microtomy Will learn about the histological structures of various tissue systems



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	ZOO-HC-3036	FUNDAMENTALS OF BIOCHEMISTRY	Students will learn about the various biomolecules Will learn about the structure and functions of biomolecules
	ZOO-HC-3032	FUNDAMENTALS OF BIOCHEMISTRY	Learn about qualitative tests of bio molecules, paper chromatography, salivary amylase, SDS PAGE
SEMESTER- IV	ZOO-HC-4016	COMPARATIVE ANATOMY OF VERTEBRATE	Learn about the comparative anatomy of various systems of vertebrates
	ZOO-HC-4012	COMPARATIVE ANATOMY OF VERTEBRATE	Learn about various types of scales Learn about various organs, skeletons of various animals
	ZOO-HC-4026	PHYSIOLOGY: LIFE SUSTAINING	Learn about physiology of various processes- digestion, respiration, excretion, blood and heart
	ZOO-HC-4022	PHYSIOLOGY: LIFE SUSTAINING	Learn about blood cells, blood group, blood pressure Learn about histological structure of various mammalian organs
	ZOO-HC-4036	BIOCHEMISTRY OF METABOLIC PROCESS	Learn about various metabolism processes in cells
	ZOO-HC-4032	BIOCHEMISTRY OF METABOLIC PROCESS	Learn about the estimation of proteins and various enzymes
Semester V	ZOO-HC-5016	MOLECULAR BIOLOGY	Learn about various biomolecular processes in cell
	ZOO-HC-5012	MOLECULAR BIOLOGY	Learn about chromosomal study, culture of E-coli and estimation of DNA and RNA
	ZOO-HC-5026	PRINCIPLES OF GENETICS	Learn about Mendelian Genetics, mutations and genetical processes
	ZOO-HC-5022	PRINCIPLES OF GENETICS	Learn about Mendelian genetics and human genetics



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	ZOO-HE-5016	COMPUTATIONAL BIOLOGY AND BIOSTATISTICS	Acquainted with bioinformatic tools and techniques, biological databases and biostatistics
	ZOO-HE-5012	COMPUTATIONAL BIOLOGY AND BIOSTATISTICS	Learn about biological databases, sequencing and computer applications
	ZOO-HE-5036	ENDOCRINOLOGY	Learn about endocrinology and various endocrine glands and regulation of hormone action
	ZOO-HE-5032	ENDOCRINOLOGY	Learn about endocrine glands, process of oviectomy and designing of Primers
Semester VI	ZOO-HC-6016	DEVELOPMENTAL BIOLOGY	Learn about cells, embryonic development and their various processes
	ZOO-HC-6012	DEVELOPMENTAL BIOLOGY	Learn about various developmental stages through permanent slides, life cycle of Drosophila and report on Drosophila culture
	ZOO-HC-6026	EVOLUTIONARY BIOLOGY	Learn about evolution, evidences, variation, extinction and evolution of horse and human
	ZOO-HC-6022	EVOLUTIONARY BIOLOGY	Acquainted with fossil models, phylogenetic trees with the help of bioinformatics
	ZOO-HE-6026	FISH AND FISHERIES	Learn about fishes, their morphology and physiology Learn about various types of fisheries, aquaculture and fish research
	ZOO-HE-6026	FISH AND FISHERIES	Learn about morphometric and meristic character of fishes, scales of fishes, induce breeding and parental care of fishes



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	ZOO-HE-6036	REPRODUCTIVE BIOLOGY	Learn about reproductive endocrinology, male and female reproductive system with their processes and reproductive health
	ZOO-HE-6036	REPRODUCTIVE BIOLOGY	Acquainted with animal house, histological sections of male and female reproductive organs and reproductive devices