**Department of Zoology**

**Course outcomes**

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| General outcome | After successful completion of three year degree program in Zoology a student should be able to:* Demonstrate, solve and an understanding of major concepts in all disciplines of Zoology.
* Solve the problem and also think methodically, independently and draw a logical conclusion.
* Understand the evolution, history of phylum.
* Create an awareness of the impact of Zoology on the environment, society, and development outside the scientific community.
* To study and understand the classification of whole phyla includes in Non chordates with the help of charts/models/pictures.
* To inculcate the scientific temperament in the students and outside the scientific community.
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| **Subjects studied** | **Specific Outcomes** |
| Invertebrate zoology | * Understand the evolution, history of Non Chordates.
* To study the external as well as internal characters of non chordates.
* To study the distinguishing characters of non chordates.
* Understand the economical importance of invertebrates
* Understand the various internal systems like Digestive system, nervous system with the help of charts.
* Understand the functions of gemmules and spicules.
* Understand the economical importance of molluscan shells.
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| Cell biology | * Understand the scope of cell biology, because cell is the basic unit of life.
* Understand the main distinguishing characters between plant cell and animal cell.
* To study and understand the whole cell organelles with their structure and function.
* Understand the cell cycle and know the importance of various cells in body of organisms.
* Understand the various applications of cells by using cell biology like study of various types of tumour.
* Understand the Animal cells and various cell organelles by using microphotographs.
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| Genetics | * The students will come to know about the concepts of Mendelian and non mendielian inheritance
* The role of genes in genetic disorder, gene mutations- various causes associated with inborn errors of metabolism.
* The course will also provide an insight into the cell cycle, linkage analysis, chromosomal maps and theories of Evolution along with the knowledge of population genetics and species concept.
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| Vertebrate Zoology | * Understand the evolution, history of phylum.
* Understand about the Chordate animals.
* To study the external as well as internal characters of chordates.
* To study the distinguishing characters of chordates.
* Understand the economical importance of Fishes, amphibians, reptiles and birds.
* Understand the various internal systems like Digestive system, nervous system with the help of charts.
* Understand the functions of Scale and feathers.
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| Physiology and Biochemistry | * understand digestion and absorption of proteins,carbohydrates and lipids
* Respiratory mechanisms and their control.
* Haemolymph: Physico-chemical characteristics of plasma: types and structure of haemocytes, functions.
* Muscle: structure, physiology and biochemistry of flight muscles.
* Excretion and water balance: Structure and function of malphigian tubules. Water balance and nitrogen excretion.
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| Evolution | * To understand origin of life with respect to prokyariotic and eukaryotic cells.
* Understand the evidences of organic evolution by anatomical embryological list, paleontological, physiological, genetics and molecular biology evidences.
* Understand theories of organic evolution, isolation, and speciation.
* Understand geological time scale
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| Enviornment | * Know the biotic and abiotic components of ecosystem. Food chain & food web in ecosystem.
* Understand diversity among various groups of animal kingdom.
* Understand Animal community & ecological adaptation in animals.
* To understand Scope , importance and management of biodiversity
* Understand the Population and community ecology, wetland forest and their conservation.
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| Developmental Biology | * Understand the terms: gametogenesis, fertilization and early development.
* Understand the morphogenesis and organogenesis in animals.
* Understand the aging and regeneration.
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| Insect Pest Management | * Understand, morphology and anatomy of Insects.
* Understand intra specific and inter specific relationships among insects.
* To understand significance of beneficial and harmful insects with reference to their habit and habitat, life cycle, diseases caused by them and their control measures.
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| Aquaculture | * To understand the aquaculture concept, culture systems:
* Freshwater aquaculture systems: freshwater prawn culture, fish culture in paddy fields, brackish water culture, mariculture: Oyster culture, crab culture, lobster culture, culture of aquatic weeds.
* To understand the Composite fish culture and Preparation and
* Management of fish culture ponds.
* Transport of fish seed and brood fish and harvesting: Fishing
* Techniques, preservation & processing of fish and fish pathology.
* To understand fresh water prawn culture and pearl culture, pearl producing molluscs, pearl formation, collection of oysters, rearing of oysters, insertion of nucleus, harvesting of pearls, composition & quality of pearl.
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