**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. |
| **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. |
| 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. |
| 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. |
| 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. |
| 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. |
| 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 |
| 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. |
| Developmental Biology | * Understand the terms: gametogenesis, fertilization and early development. * Understand the morphogenesis and organogenesis in animals. * Understand the aging and regeneration. |
| 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. |
| 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. |