

Zoology department

Course outcomes

Semester I

CO 1: Describe the distinguishing characteristics of the major taxa Explain the basic aspects of classification details of invertebrates Understand biodiversity, habitat, adaptation organization and taxonomic status of invertebrates

CO 2: Recall certain morphological attributes and physiological processes that are distinct and significant to each Phyla

CO 3: Understand the systemic and functional morphology of various groups of invertebrates Explain the basic aspects of structural and functional details of Invertebrates

CO 4: To compare and understand the general and specific characteristics within each Phyla

CO 5: Interpret the affinities, evolutionary relationships and adaptation of the major taxa and to explain their economic importance with respect to Non-Chordates

Semester II

CO 1: Identify the general and specific characteristics of the different classes and the organization of the representative types.

CO 2 : Recognize and describe the major groups of chordates

CO 3: Understand the diversity of Chordates and its outline systematic. Discuss their Affinities and adaptations to different modes of life.

CO 4: Understand the unique features, taxonomy and functional morphology of different classes of chordates

CO 5 : To infer the affinities, evolutionary relationships and adaptation of the major taxa and to explain their economic importance with respect to Chordates.

Semester III

- CO 1:** Describe the distinguishing characteristics of the major taxa Explain the basic aspects of classification details of ecology Understand biodiversity, habitat, adaptation organization and flora & fauna of soil & water. effect of light and temperature on living things
- CO 2:** Recall certain morphological attributes and physiological processes that are distinct and significant to each chapter
- CO 3:** Understand the systemic and functional morphology of various concepts of ecology And embryology Explain the basic aspects of structural and functional details of environments and embryo & its stages.
- CO 4:** To compare and understand the general and specific characteristics within and other environments in relation to abiotic & biotic factors and stages and development of an embryo
- CO 5:** Interpret the affinities, evolutionary relationships and adaptation of the major environments and to explain their ecological importance with respect to abiotic & biotic, with animal relationships and different changes in stages of embryo in its development.

Semester IV

- CO 1:** To impart knowledge about the prokaryotic and eukaryotic cell, its complex organization, biosynthesis of cellular membranes and organelles and the unified role it plays for the ultimate sustainability of the organisms K1 , K2, K3, K4
- CO 2:** Rigorous foundation in the principles of molecular and cellular biology give insights into the mechanisms involved in the synthesis and function of macromolecules such as DNA, RNA, and proteins K1 , K2, K3, K4
- CO 3:** Ability to make connections between the molecular mechanisms, holistic Understanding of biological organisation and function from the molecules to cells, tissues, organs and entire organism K1 , K2, K3, K4
- CO 4:** Studying biochemistry and molecular cell biology trains the students to think

logically, critically and quantitatively K1 , K2, K3, K4

CO 5: Learn to interpret statements made in the scientific literature, as well as in non-Science areas, based on evidence, not anecdotes

Semester V

CO 1: To impart knowledge about the prokaryotic and eukaryotic cell, its complex organization, biosynthesis of cellular membranes and organelles and the unified role it plays for the ultimate sustainability of the organisms

CO 2: Rigorous foundation in the principles of molecular and cellular biology give insights into the mechanisms involved in the synthesis and function of macromolecules such as DNA, RNA, and proteins

CO 3: Ability to make connections between the molecular mechanisms, holistic understanding of biological organisation and function from the molecules to cells, tissues, organs and entire organism CO4 Studying biochemistry and molecular cell biology trains the students to think logically, critically and quantitatively

CO 4: Learn to interpret statements made in the scientific literature, as well as in non-science areas, based on evidence, not anecdotes

Semester V

CO 1: Understand the core principles of genetics, the historical background, genetic crosses, basic laws governing the pattern of qualitative characters, linkage and crossing over.

CO 2: Apply knowledge about transcription, translation and the genetic code to understand The flow of genetic information from DNA to proteins

CO 3: Understanding the applications of genetics for the welfare of health and treatment of disease, and the impact of selective advantage and natural selection on human genetic disorders.

CO 4: To understand the evolutionary events those has occurred throughout Earth's geological history starting with the hypotheses on the origin of life and identify the key events in human evolution. Know how to obtain current information about scientific and

clinical applications of genetics, particularly from specialized genetics services.

CO 5: Analyze the processes in population genetics and describe how they affect the genetic diversity within a species Compare and contrast the various theories on formation of new species and identify the factors that play a role in the process of evolution and understand the genetic basis of evolutionary change.

Semester VI

CO 1: To determine the physical phenomena which influence living organisms. Fundamental statistical concepts and some of their basic applications in science and society Develop a fundamental understanding of basic concepts of biophysics and bioinformatics

CO 2: Develop a thorough grounding in fundamental analytical approaches for quantitative study of living systems and life processes. Shall know how to organize, manage, and present data. Describe the contents and properties of the most important bioinformatics databases, perform text- and sequence-based searches

CO 3: Application of physics to the study of biological molecules, living systems and life processes Carrying out exercises or small projects that incorporate data presentation.

CO 4: Obtain and analyse information and data relating to specific genes using a number of specific databases, bioinformatics principles and tools

CO 5: To educate the interdisciplinary nature of advances in biophysics, bioinformatics and computational biology

Cluster I

CO 1: The mechanisms and differences between primary and secondary responses and their relevance to immunizations

CO 2 : Comprehensive and practical understanding of basic immunological principles and techniques involved in research/clinical/applied science

CO 3: Identify the role of antigen presenting cells, lymphocytes, and phagocytic cells in immune responses

CO 4: Role of immunology in protection against disease and autoimmune disorders

CO 5: Advanced knowledge of the underlying principles of immunology and its application

in biological systems.

Cluster II

CO 1: To study, explore various techniques used in fishery and polyculture practices.

Understanding the scientific terms, concepts, facts, phenomenon & their interrelationship of fish.

CO 2: To provide an overview of the application of biotechnological tools in fish breeding, feed, health, processing and other issues in fisheries. Application of knowledge in Fisheries for nutrition, agriculture & live stock

CO 3: To gain in depth knowledge and field exposure on sustainable pisciculture practices

CO 4: To impart understanding of the nutritional requirements of fish and knowledge on Mass culture and enrichment of live food organisms

CO 5: To comprehend the taxonomy, morphology, pathology and host-parasite relation of common parasites of aquatic organisms and to understand the significance of parasites in fish health