



Tamralipta Mahavidyalaya
PG Department of Zoology
Programme: B.Sc. Zoology
Programme Specific Outcomes (PSOs) for
B.Sc. Zoology Honours 2023-2024

| Sl. No. | On Completing B.Sc. Zoology, the student will be able to : |
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| PSO 1 | This program is one of the most fundamental unit of basic sciences studied at undergraduate level. The program helps to understand the vastness of the diversity of animals. |
| PSO 2 | They will be able to understand the origin & evolution of life and can identify and classify different chordate and non-chordate animals. |
| PSO 3 | After studying this program, students will be more equipped to learn and know about different biological systems, their coordination and control as well as evolution, behavior and biological roles of the animals in the ecosystem. |
| PSO 4 | After the completion of this course, students have the option to go for higher studies, i.e., M. Sc. / Integrated MS Ph.D. and then do research work for the welfare of mankind. After higher studies, students can join as scientist or assistant professor or assistant teacher and can even look for professional job oriented courses, such as Indian Civil Services, Indian Forest Service, Indian Police Service etc. Science graduates can go to serve in industries or may opt for establishing their own industrial unit. |
| PSO 5 | Practical and theoretical skills gained in this program will be helpful in designing different public health strategies for social welfare. |
| PSO 6 | After the completion of the B.Sc degree there are various other options available for the science students. |

**Course Outcomes (COs) for
B.Sc. Zoology Honours 2023-2024**

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| Semester -I | Course Title: Systematics and Diversity of Life - Protists to Chordates Code: MJ1(T&P) Credit: 4 | On Completing the course the learners will be able to : | |
| | | CO 1 | Develop understanding on the diversity of life with regard to protists, non-chordates and chordates. |
| | | CO 2 | Grouping of animals on the basis of their morphological characteristics/ structures and develop critical understanding how animals changed from a primitive cell to a collection of simple cells to form a complex body plan. |
| | | CO 3 | Examine the diversity and evolutionary history of a taxon through the construction of a basic phylogenetic/ cladistics tree. |
| | | CO 4 | Understand how morphological change due to change in environment helps drive evolution over a long period of time. |
| | | CO 5 | The course compares various non-chordate taxa in great detail. It also highlights how the complexity of structure and function increases along the taxonomic hierarchy. Thus, the course provides an overview of the complex life processes and adaptive radiations of non-chordates. |
| | | CO 6 | Identify Annelids, Arthropods, Molluscs, Echinodermata and also their general characteristics, classification and distribution. Develop the concept about evolution of coelom and metamerism. After completing this unit students will achieved deep conceptual and practical knowledge about classical zoology. |
| | Diversity of Life- Protists to Chordates Code : MI 1 (T&P) Credit : 4 | CO 1 | Recognize the life functions and the ecological role of the animals belonging to different phylum. |
| | | CO 2 | Set information regarding the diversity of animals belonging to different phylum. On the basis of their habit, habitat and body organization. |
| | | CO 3 | Identify Annelids, Arthropods, Molluscs, Echinodermata and also their general characteristics, classification and distribution. |
| | | CO 4 | Develop the concept about evolution of coelom and metamerism. |
| | | CO 5 | Learn about the social life of termites and metamorphosis of lepidiptoran concept. |
| | | CO 6 | Understand how Insect metamorphosis is regulated by several neuroendocrine glands and neurosecretory cells. |
| | | CO 7 | Examine the diversity and evolutionary history of a taxon through the construction of a basic phylogenetic/ cladistics tree. |
| CO 8 | After completing this unit students will achieved deep conceptual and practical knowledge about classical zoology. | | |

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| Semester –II | Apiculture SEC - 1 | On Completing the course the learners will be able to : | |
| | | CO 1 | Knowledge about the cultivation of mulberry, maintenance of the farm, seed technology, silkworm rearing and silk reeling. |
| | | CO 2 | Learn about the quality of various things like leaf, seed cocoon, commercial cocoon and fiber so that they can get maximum return when actually practiced. |
| | | CO 3 | Learn about the various skills that are necessary for self employment in the mulberry and seed production. |
| | | CO 4 | Train the students in identifying the diseases and pests of the mulberry plant. |
| | Course Title: Cell Biology Code: MJ 2 (T&P) Credit: 4 | CO 1 | Developed concept about basic structure of prokaryotic and eukaryotic cells as well as viruses, virion, prion. |
| | | CO 2 | Learn about the ultra structure, functions of plasma membrane as well as different types of membrane transport and various types of cell junctions. |
| | | CO 3 | Explain the role of Golgi in relation to protein sorting and mechanism of vesicular transport inside and outside of the living cells. |
| | | CO 4 | Understand how mitochondria evolved as well as its structure and molecular mechanism of ATP synthesis in aerobic respiration. |
| | | CO 5 | Explain the role of compartmentalization & signaling in cellular biology. |
| | | CO 6 | Interpret & explain key experiments in history of cell biology. |
| | | CO 7 | Evaluate and apply knowledge of modern techniques of cell biology. |
| | | CO 8 | Interpret, analyze, describe and proper new experiment data. |
| Course Title : Insect vector & disease. Code : MI 2(T&P) Credit : 4 | CO 1 | Develop awareness about the causative agents and control measures of many commonly occurring diseases. | |
| | CO 2 | Destruction of breeding spots in the vicinity of houses and cattle shed by public health education campaign. | |
| | CO 3 | Develop understanding about the favourable breeding conditions for the vectors. | |
| | CO 4 | Devise strategies to manage the vectors population below threshold levels, public health importance. | |
| | CO 5 | Undertake measures or start awareness programmes for maintenance of hygienic conditions, avoidance of contact from vector. | |
| | CO 6 | The course provides an insight into the common vector-borne diseases, their etiology, role of vectors in their spread, host-parasite relationship and finally the strategies to manage these vectors. | |
| | Course Title : | CO 1 | Provide knowledge about indigenous and exotic ornamental fishes. |
| CO 2 | | Explain the prerequisite in aquarium keeping. | |

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| | Aquarium fish keeping. Code : SEC 2 | CO 3 | Describe the laws around aquarium keeping. |
| | | CO 4 | Provide knowledge regarding ornamental fish health management practice. |
| | | CO 5 | Provide field exposure and Develop entrepreneurship in aquarium keeping. |
| | | CO 6 | The course provides practical knowledge for sustainable ornamental fish farming and will guide them to establish a large-scale aquarium fish farm as a cottage industry and to develop entrepreneurship in fish sector. |