

# KHALISANI MAHAVIDYALAYA

AISHE CODE - C44706

Khalisani, Chandannagar, Hooghly, Pin-712138 Ph. No. (033)-2682-5530/9517/8856 Email- <u>khalisanimahavidyalaya@gmail.com</u> Website: www.khalisanicollege.ac.in

### Enlightenment through Education

#### PROGRAMME OUTCOME (PO) of the department of Zoology

- Students gain a comprehensive knowledge of animal diversity, taxonomy, and classification of non-chordates and chordates with their structural organization, adaptive features, and evolutionary relationships.
- Solution Gain knowledge of embryonic development of life and the role of fundamental processes in controlling the development.
- > Students will correlate the different physiological processes of animals and the relationship between organ systems.
- Gain knowledge of Agro-based industries in India like Apiary, production of silk (Sericulture), Poultry farming, and Induce breeding in fish farming technology.
- Apply scientific knowledge in the epidemiology of several diseases caused by various bacteria, viruses, protozoa, and helminths in day-to-day life.
- Students will have a concept of the different evolutionary processes, extinction, and speciation.
- Students will gain knowledge of the body's defense mechanism against foreign antigens, the immune system in detail, and also its key role in various types of hypersensitivities, autoimmunity, and immunodeficiency diseases.
- Students develop various practical knowledge both in the laboratory and also in the field in several domains like taxonomic identification and characterization of animals, identification of poisonous and non-poisonous snakes, comparative anatomy, developmental biology and histological study skills in vertebrates, qualitative physio-chemical analysis of bio-molecules especially carbohydrates and proteins, analyze data using appropriate statistical methods,
- > Students will develop empathy and love for animals and the environment.

#### PROGRAMME SPECIFIC OUTCOME (PSO) of the department of Zoology

- Understand the nature and basic concepts of taxonomy, comparative vertebrate anatomy, physiology, cell biology, genetics, evolutionary biology, applied zoology, developmental biology, immunology, apiculture, and sericulture.
- > Develop a basic understanding of research, handling equipment, and experiments in a biological laboratory.
- Apply the skills and practical knowledge of zoology as per laboratory standards in the fields of taxonomy, cell biology, physiology, genetics, applied zoology, clinical science, apiculture, sericulture, biochemistry, fish biology, immunology and research methodology in future studies.
- > Contribute scientific knowledge to improve the quality of life and human welfare.



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#### **<u>COURSE OUTCOME (CO) of the department of Zoology</u>**

PROGRAM	SEMESTER	COURSE NAME	COURSE	CREDIT	COURSE OUTCOME
			DETAIL		
B.Sc.(Gen eral)	I	CC–I	Animal Diversity	4	<ul> <li>Studentswill understand and learn about the taxonomy and the biology of non-chordates and chordates with their structural organization, adaptive features, and evolutionary relationships.</li> <li>Able tolearn about the diversity of chordates and non-chordates groups and also can identify the animals in this regard.</li> </ul>
	II	CC–II	Comparative Anatomy & Development al Biology of Vertebrates	4	<ul> <li>Students will learn about the anatomy of different organ systems in vertebrates and the process of how they evolved in the course of evolution.</li> <li>Gain a comprehensive knowledgeof early and late embryonic development of life and the role of fundamental processes in controlling the development.</li> </ul>
	III	CC–III	Physiology and Biochemistry	4	<ul> <li>Students will understand the details of the physiology of digestion, respiration, excretion, blood circulatory system, reproduction and various endocrine glands with their functions in the human body.</li> <li>Students will be able to explain biomolecules like carbohydrates, lipids, and proteins addressing their synthesis, structure, functions, and metabolism in the human body.</li> </ul>
	III	Skill Enhancement Course–I	Apiculture	2	<ul> <li>Learners will have an understanding of honey bees, biology and social organization of Bee colonies.</li> <li>Learning the process of Beekeeping,honey extraction methods, and management of bee enemies and diseases for farming.</li> <li>Able to learn the economic importance of Apiculture and the Modern Methods of implementing cross-pollination in horticulturalgardens.</li> </ul>



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IV	CC–IV	Genetics and Evolutionary Biology	4	<ul> <li>Understanding Mendelian Genetics and its Extension, Chromosomal Mapping and the role of genetic mechanisms in evolution.</li> <li>Acquire a comprehensive knowledge of the different processes of evolution and the mode of speciation.</li> </ul>
V	Skill Enhancement Course- III	Sericulture	2	<ul> <li>Students will be able to gain comprehensive knowledge on Sericulture about the variety of silkworms, cultivation of mulberry plants, maintenance of the farm, silkworm rearing and silk reeling technology.</li> <li>Identifying various diseases and pests of the mulberry plant with the control measuresnecessary for self-employment in mulberry and silk production.</li> </ul>
V	Discipline Specific Elective–I	Applied Zoology	4	<ul> <li>Students gain several knowledge on hosts, parasites, and different types of host-parasite interactions.</li> <li>Understandthe Epidemiology of several diseases, life history, and pathogenicity of various protozoa, and helminths.</li> <li>Acquire a comprehensive idea about the biology of various Insects that haveeconomic and medical importance.</li> </ul>
V	Discipline Specific Elective–2	Immunology	4	<ul> <li>Students will have an understandingof basic concepts in immunology comprisingthe components of immune system, innate and adaptive immunity, lymphoidorgans, antigens and antibodies in elaboration.</li> <li>Learning how the immune system defends against foreign antigens by processing and presenting antigens to immune cells for destruction and also in a couple of ways.</li> <li>Gain knowledge of how the immune system plays a key role in various types of hypersensitivities, autoimmunity and immunodeficiency diseases.</li> <li>Acquire a preliminary concept of how the different vaccines are developed.</li> </ul>