

## **B.Sc. with Zoology (Pass Course) Annual Pattern**

### Program Specific Outcomes

- The students shall be able to understand the physiology at cellular and system levels.
- The students shall be able to describe the role and functions of different biomolecules.
- To understand the ecological role and recognize life functions of different groups of chordates
- To acquaint the students a comprehensive and detailed understanding of the chemical basis of heredity.
- To understand the role of genetics in evolution and also the results of genetic experimentation in animals.
- To describe the stages and cellular mechanisms for gastrulation.
- To learn the relationships between morphological features and their functions within representative chordates.
- The student shall be able to compare and contrast the anatomical systems of different vertebrates and identify common traits across various species.
- The students shall be able to define scientific terminology used in the context of vertebrate anatomy.
- The students shall be able to describe the mechanisms by which evolution occurs by providing a detailed explanation of the processes of evolution by mutation, migration, genetic drift, non-random mating, and natural selection.
- The students shall be able to illustrate the history of life on earth by identifying major evolutionary transitions over time.
- To enable the students to understand the importance of mutations in day to day life.
- To acquaint the students about the structure, properties and function of fatty acid, triglycerides and steroids and to make the student understand the applications of lipids in our human body.
- To enable the student to develop an appreciation for the general properties of amino acids and bring to light that proteins are not to be stored in the human body.
- To enable the student to develop an appreciation for role of biotechnology in animal husbandry.
- To enable the student to develop scientific attitude where student shall have a desire to know and understand, questioning to all various statements, search for data and their meaning, search for verification, and consideration of consequences.
- To create a student-centred environment where students improve on their own ideas, raise questions, and undertake investigations. Studying Zoology starts with real life issues and various measures implemented to take care of our body and protect ourselves from various diseases.
- The student shall be able to describe the structure of the organs of the reproductive system in males and females and shall also be able explain and compare the processes of spermatogenesis, oogenesis and folliculogenesis.

**Course Outcomes- B.Sc. with Zoology Pass Course (Annual Pattern)**

**B.Sc. FIRST YEAR**

S.No.	Subject Code	Subject Name	Subject Category (DSC, DSE, SEC)	Course Outcomes
1.	ZOOL 101 TH	Animal Diversity	DSC IA	Student shall be able to describe unique characters, recognise the diversity and ecological role of protozoa, porifera, coelenterata, helminthes, annelids, arthropoda, mollusca, echinodermata, protochordates, chondrichthyes, osteichthyes, amphibians, reptiles, birds and mammals.
2.	ZOOL 102 TH	Comparative Anatomy and Developmental Biology of Vertebrates	DSC IB	To enhance the knowledge of various classes of vertebrates thus increasing their research ability and a state of inquiry among students. Developmental Biology shall make the students familiar with the different stages in embryo development and defects related to embryology
<b>B.Sc. SECOND YEAR</b>				
3.	ZOOL 201 TH	Physiology and Biochemistry	DSC IC	The students shall be able to demonstrate an understanding of fundamental biochemical principles, such as the structure/function of biomolecules, metabolic pathways, and the regulation of biological/biochemical processes.
4.	ZOOL 202 TH	Genetics and Evolutionary Biology	DSC ID	To educate the students about various aspects of genetics and also to develop an insight into evolution of genetic material, its functional aspects and changes in the environment that bring about evolution. After studying evolutionary biology the students shall be able to describe the history of life on earth and also identify major evolutionary transitions over time, explaining the tools and various evidences that support current

				hypotheses of the history of life.
5.	ZOOL 203 TH	Medical Diagnostics	SEC-I	To equip the students about various clinical processes for the diagnosis of a disease and to reach for a plan which will include a correct treatment and a regular follow-up.
6.	ZOOL 204 TH	Apiculture	SEC-II	To enable the student to get detailed information about skill development in hive management, bee life-cycle and behavior, thereby developing an interest and career in bee keeping sector.
<b>B.Sc. THIRD YEAR</b>				
7.	ZOOL 301 (A)	Applied Zoology	DSE IA	To educate the students about various aspects of human diseases also how human defense mechanism reacts for the same.
8.	ZOOL 302 (C)	Reproductive Biology	DSE IB	To educate the students about the life style and psychosocial factors related to fecundity and fertility in male and female reproductive systems
9.	ZOOL 303 TH	Sericulture	SEC-III	To familiarize the students about the technical and strategic knowledge of sericulture thereby improving the economy and entrepreneurship among students.
10.	ZOOL 304 (A)	Aquarium Fish Keeping	SEC- IV	Students shall learn about the importance of ornamental fish farming and protecting the marine environment thereby helping in the economy of country which can be a boon to the blue revolution.