

# ZOOLOGY COURSE OUTCOMES

<b>B. Sc</b>	<b>Semester I</b>	<b>Credits: 4</b>
<b>Course: 1</b>	Animal Diversity – Biology of Nonchordates	<b>Hrs/Wk: 4</b>

Outcomes:

- By the completion of the course the graduate should be able to – Describe general taxonomic rules on animal classification
- Classify Protozoa to Coelenterata with taxonomic keys
- Classify Phylum Platyhelminthes to Annelida phylum using examples from parasitic adaptation and vermin composting
- Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Mollusca. Describe Echinodermata to Hemichordate with suitable examples and larval stages in relation to the phylogeny

<b>B. Sc</b>	<b>Semester II</b>	<b>Credits: 4</b>
<b>Course: 2</b>	Animal Diversity – Biology of Chordates	<b>Hrs/Wk: 4</b>

Outcomes:

By the completion of the course the graduate should be able to - Describe general taxonomic rules on animal classification of chordates

- Classify Protochordata to Mammalian with taxonomic keys
- Understand Mammals with specific structural adaptations
- Understand the significance of dentition and evolutionary significance
- Understand the origin and evolutionary relationship of different phyla from Prochordata to mammalian.

<b>B. Sc</b>	<b>Semester III</b>	<b>Credits: 4</b>
<b>Course: 3</b>	Cell Biology, Genetics, Molecular Biology and Evolution	<b>Hrs/Wk: 4</b>

Outcomes:

- The overall course outcome is that the student shall develop deeper understanding of what life is and how it functions at cellular level.
- This course will provide students with a deep knowledge in Cell Biology, Animal Biotechnology and Evolution and by the completion of the course the graduate shall be able to understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.
- Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.
- To understand the history of origin of branch of genetics, gain knowledge on heredity, interaction of genes, various types of inheritance patterns existing in animals
- Acquiring in-depth knowledge on various aspects of genetics involved in sex determination, human karyotyping and mutations of chromosomes resulting in various disorders.
- Understand the central dogma of molecular biology and flow of genetic information from DNA to proteins.
- Understand the principles and forces of evolution of life on earth, the process of evolution of new species and apply the same to develop new and advanced varieties of animals for the benefit of the society

<b>B. Sc</b>	<b>Semester IV</b>	<b>Credits: 4</b>
<b>Course: 4</b>	Animal Physiology, Cellular Metabolism and Embryology	<b>Hrs/Wk: 4</b>

Outcomes:

- This course will provide students with a deep knowledge in Physiology, Cellular metabolism and Molecular Biology and by the completion of the course the graduate shall able to – Understand the functions of important animal physiological systems including digestion, cardiorespiratory and renal systems.
- Understand the muscular system and the neuro-endocrine regulation of animal growth, development and metabolism with a special knowledge of hormonal control of human reproduction.
- Describe the structure, classification and chemistry of Biomolecules and enzymes responsible for sustenance of life in living organisms
- Develop broad understanding the basic metabolic activities pertaining to the catabolism and anabolism of various Biomolecules
- Describe the key events in early embryonic development starting from the formation of gametes upto• gastrula ion and formation of primary germ layers.

<b>B. Sc</b>	<b>Semester IV</b>	<b>Credits: 4</b>
<b>Course: 5</b>	Immunology and Animal Biotechnology	<b>Hrs/Wk: 4</b>

Outcomes:

- This course will provide students with a deep knowledge in immunology, genetics, embryology and ecology and by the completion of the course the graduate shall able to – To get knowledge of the organs of Immune system, types of immunity, cells and organs of immunity.

- To describe immunological response as to how it is triggered (antigens) and regulated(antibodies)
- Understand the applications of Biotechnology in the fields of industry and agriculture including animal cell/tissue culture, stem cell technology and genetic engineering.
- Get familiar with the tools and techniques of animal biotechnology.

<b>B. Sc</b>	<b>Semester V</b>	<b>Credits: 4</b>
<b>Course: 6A</b>	<b>SUSTAINABLE AQUACULTURE MANAGEMENT</b>	<b>Hrs/Wk: 4</b>

Outcomes:

- Students at the successful completion of this course will be able to
- Evaluate the present status of aquaculture at the Global level and National level
- Classify different types of ponds used in aquaculture
- Demonstrate induced breeding of carps
- Acquire critical knowledge on commercial importance of shrimps
- Identify fin and shell fish diseases

<b>B. Sc</b>	<b>Semester V</b>	<b>Credits: 4</b>
<b>Course: 7A</b>	<b>POSTHARVEST TECHNOLOGY OF FISH AND FISHERIES</b>	<b>Hrs/Wk: 4</b>

Outcomes:

- Students at the successful completion of this course will be able to
- Identify the types of preservation methods employed in aquaculture
- Choose the suitable Processing methods in aquaculture
- Maintain the standard quality control protocols laid down