Department of Zoology

Course Outcomes

I Semester /Zoology Core Course - 1
Animal Diversity – Biology Of Nonchordates

On successful completion of this course, the students will be able to;

- Describe general taxonomic rules on animal classification
- Classify Protozoa to Coelenterata with taxonomic keys
- Classify Phylum Platy Helminthes to Annelida phylum using examples from parasitic adaptation and vermin composting
- Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Molluscans
- Describe Echinodermata to Hemi chordata with suitable examples and larval stages in relation to the phylogeny

II Semester ZoologyCoreCourse – 2
Animal Diversity – Biology Of Chordates

On successful completion of this course,the students will be able to;

- Describe general taxonomic rules on animal classification of chordates
- Classify Protochordata to Mammalia 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 Mammalia.

III Semester /Zoology CoreCourse – 3
Cellbiology, Genetics, Molecular Biology And Evolution

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 Evolutionand by the successful completion of this course, thestudents will be able to;

- 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 understandthe 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 of 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

IV Semester/ ZoologyCore Course – 4
Animal Physiology, Cellular Metabolism and Embryology

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, cardio-respiratory 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 gastrulation and formation of primary germ layers.

IV Semester / ZoologyCoreCourse –5
Immunology and Animal Biotechnology

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.

Project work

- Skill in operating laboratory equipment, their upkeep, and adept at various biological techniques.
- Develop Ability to prepare solutions and prepare different dilutions.
- Interpreting scientific results, and ability to present results in a scientific way through graphs, photographs, poster presentations
- Develop ICT skills and Power point presentations.
- Develop the art of scientific writing and presentation of scientific matter.Scientific writing and ethics.Writing references