**SRI V.S.SIVALINGAM CHETTIAR GOVERNMENT DEGREE COLLEGE (A)**

**SULLURPETA-TIRUPATHI DISTRICT**

**DEPARTMENT OF ZOOLOGY- POs and Cos**

## PROGRAMME OUTCOMES OF B.SC.(B) ZOOLOGY (MINOR)

**PO 1: Knowledge of Animal Diversity**
Students gain a comprehensive understanding of the classification, structure, and functions of animals from simple to complex organisms.

**PO 2: Understanding of Biological Processes**
Students learn key concepts such as physiology, genetics, evolution, ecology, and behavior of animals.

**PO 3: Laboratory and Field Skills**
Ability to perform experiments, handle laboratory equipment, conduct dissections, and carry out field studies for data collection and analysis.

**PO 4: Environmental and Conservation Awareness**
Understanding of biodiversity, wildlife conservation, environmental protection, and sustainable use of natural resources.

**PO5 : Research and Analytical Skills**
Development of scientific thinking, problem-solving ability, data interpretation, and basic research skills useful for higher studies and careers in life sciences.

## PROGRAMME SPECIFIC OUTCOMES OF B.SC. (B) ZOOLOGY (MINOR)

**PSO1: Understanding Animal Diversity**
Students will gain comprehensive knowledge of the classification, morphology, and evolutionary relationships of animals from simple to complex forms.

**PSO2: Knowledge of Physiology and Biochemistry**
Students will understand the structure and function of animal systems, including digestion, respiration, circulation, and metabolism.

**PSO3: Application of Laboratory Techniques**
Students will develop practical skills in microscopy, dissection, specimen preservation, and basic laboratory techniques used in zoological studies.

**PSO4: Environmental and Ecological Awareness**
Students will understand ecological principles, biodiversity conservation, wildlife management, and the impact of human activities on ecosystems.

**PSO5: Research and Analytical Skills**
Students will be able to analyze biological data, conduct basic research, and apply scientific reasoning to solve problems related to animal sciences.

## SEMESTER-III

## COURSE 1: ANIMAL DIVERSITY-I BIOLOGY OF NON-CHORDATES

**CO1:** Describe concept of animal kingdom classification and general characters of Protozoa

**CO2:** Classify Porifera and Coelenterate with taxonomic keys

**CO3:** Classify Phylum Platy & Nemathelminths using examples, parasitic adaptation

**CO4:** Describe Phylum Ann elida & A r t h r o p o d a using examples and economic importance of vermicomposting & economic importance of insects.

**CO5:** Describe Mollusca, Echinodermata & Hemi chordata with suitable examples in relation to the Phylogeny

## SEMESTER-IV

## COURSE 2: ANIMAL DIVERISTY-II BIOLOGY OF CHORDATES

**CO1:** Describe general taxonomic rules on animal classification of chordates

**CO2:** Classify Protochordata to Mammalia with taxonomic keys

**CO3:** Understand Mammals with specific structural adaptations

**CO4:** Understand the significance of dentition and evolutionary significance

**CO5:** Understand the origin and evolutionary relationship of different phyla from Prochordata to Mammalia.

## SEMESTER-V

## COURSE 3: CELL & MOLECULAR BIOLOGY

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 and molecular biology by the completion of the course the graduate shall able to –

**CO1:** Understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.

**CO2:** Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.

**CO3:** Explain the cell cycle and bioenergetics of the cell

**CO4:** Understand the central dogma of molecular biology and flow of genetic information from DNA to proteins

**CO5:** Understand the gene expression phenomenon and biological importance of biomolecules

## SEMESTER-V

## COURSE 4: GENETICS

By the completion of the course the graduate should able to –

**CO1:** To understand the history of genetics, gain knowledge basic terminology of genetics

**CO2:** To acquire knowledge on interaction of genes, various types of inheritance patterns existing in animals with reference to non-Mendelian inheritance.

**CO3:** To acquire knowledge on chromosomal inheritance

**CO4:** Acquiring in-depth knowledge on various of aspects of genetics involved in sex determination,

**CO5:** Acquiring in-depth knowledge on human karyotyping, pedigree analysis and chromosomal disorders concepts of proteomics and genomics

## SEMESTER-VI

## COURSE 5: ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS

The overall course outcome is that the student shall develop deeper understanding of concepts of Physiology. This course will provide students with a deep knowledge in physiology by the completion of the course the graduate shall able to –

**CO1:** Understand the physiology of digestion and hormonal control of digestion

**CO2:** Develop a comprehensive picture of respiratory physiology

**CO3:** Acquire knowledge on the Renal physiology

**CO4:** Understand the physiology of Nerve and muscle

**CO5:** Understand the physiology of heart

## SEMESTER-VI

## COURSE 6: EVOLUTION AND ZOOGEOGRAPHY

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 Evolution and zoo geography, by the completion of the course the graduate shall able to –

**CO1:** 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

**CO2:** Explain the different evidences of evolution

**CO3:** Understand the theories of evolution

**CO4:** Explain the various tools for evolution

**CO5:** Map the distribution of animals according to zoological realms