**Course Outcomes of Different papers studied by undergraduates of Dept. of Zoology in Silapathar College,787059.**

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| Sl. No. | Semester/ Paper | Course objective | Course Outcome |
| 1. | **B.Sc. 1st Semester:** **ZC101T****(Non-Chordates I: Protista to Pseudocoelomates)****ZC102T****(Principles of Ecology)****GE II****(Animal Diversity)** | The objective of the course is to expose the students to various forms of protozoa and worms; their classification and structural anatomy.The objective of the course is to familiarize the students with fundamentals of Ecology and impacts of ecological factors on living organisms.The objective of the course is to familiarize with different groups of animals, their organ systems and characters. | Student will gain and understanding of 1. Explore the diversity of invertebrate
2. Characteristics, life cycles and adaptation of various organisms.
3. Concept of species, population, community and their attributes.
4. Ecosystem functioning, conservation and management strategies.
5. Sampling methods.
6. Concept on lower invertebrates and their general characters and functions.
7. Characteristics and specific systems of lower vertebrates.
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| 2. | **B.Sc. 2nd semester** **ZC203T****(Non-Chordates II: Coelomates)****ZC204T****(Cell Biology)****GE VIII****(Insect vectors and diseases)** | The objective of the course is to expose the students to various forms of coelomates, their classification and structural anatomy.The objective of the course is to expose the students to structure and function of a cell as the fundamental unit of life.The objective of the course is to expose to various insects and the diseases associated with them. | 1. General characters, organ system, evolutionary significance and their affinities with other groups.
2. Overview of a typical cell and its organelles.
3. Comparison of different types of cells.
4. Communication between cells and their division.
5. Understanding general features of insects and their morphological characters.
6. Insects as vectors in spreading various diseases.
7. Insects belonging to different orders and their specific characters.
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| 3. | **B.Sc. 3rd Semester** **ZC305T****(Diversity of Chordates)****ZC306T****(Physiology: Controlling and Coordinating System)** **ZC307T****(Fundamentals of Biochemistry)****SEC III****(Sericulture)****GE VII****(Human Physiology)** | The objective of the course is to expose students to various forms of chordate, their classification and structural anatomy.The objective of the course is to provide a foundation for understanding the complexities of the coordination system of animal body.The objective of the course is to expose the students to biomolecules of living organisms, their interactions for perpetuation of life.The objective of the course is to expose to silkworm, its pests and rearing processes.The objective of the course is to expose to various organ systems of human and their life sustaining mechanisms. | 1. Students will gain knowledge on the diversity of higher animal classes.
2. Further, detailed explanations of all the classes will help the students to bring out comparative relations with the evolutionary aspects.
3. This paper will guide the students to understand various systems of human body that help in daily functioning of human life.
4. Co-ordination system of animal body by conceptualizing the process of endocrine system and the disorders related with the imbalance of hormones.
5. Integrating factors that generate the formation of biomolecules.
6. Significance of reactions, metabolism and mechanisms that are functioning in maintaining animal organization.
7. Structural organisation, building blocks and micro molecule constituting the overall living organisms.
8. Understanding the types of silkworms, biology of silkworm with its life cycle.
9. Rearing of silkworms, controlling the pests and diseases.
10. Developing entrepreneurship prospects.
11. Structure and functions of organ systems in controlling various mechanism such as digestion.
12. Physiology of Respiration, heart and reproduction. And functioning of skeletal system in locomotion.
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| 4. | **B.Sc. 4th Semester****ZC408T****(Comparative anatomy of vertebrates)****ZC409T****(Animal Physiology: Life sustaining systems)****ZC410T****(Biochemistry of metabolic processes)****SEC IV****(Aquarium Fish keeping)** | The objective of the course is to expose to the students to different anatomical structures related to organ systems of animals.The objective of the course is to expose to students to the physiological organization of animals with various systems required for the survival.The objective of the course is to expose to various metabolic processes present in animal body.The objective of the course is to expose to aquarium maintenance, biology of aquarium fishes and feeding of ornamental fishes. | 1. The course will generate valuable information regarding the structural organization of various systems in animals.
2. Significance on the functions of the systems in relation to evolutionary linkage during its embryological formation are studied detailed in this course.
3. Life sustaining systems are studied in detail to understand the in-depth concept of physiology of animals.
4. Explanation of organ systems, correlation between different systems to maintain the feasibility of animal body.
5. Significant studies on various metabolic pathways and energy generation in our daily life.
6. Biochemical mechanism of different molecules in cellular level.
7. Understanding the industry of aquarium fish with exotic and endemic species.
8. Studying and identification of different aquarium fish species.
9. Feed preparation and maintenance of aquarium along with entrepreneurship prospects in future.
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| 5. | **B.Sc. 5th Semester** **ZC511T****(Molecular Biology)****ZC512T****(Principles of Genetics)****ZD503T****DSE Course III****(Endocrinology)****ZD504T****DSE Course IV****(Biology of insecta)** | The objective of the course is to expose to cellular organization, its regulations and functional characters.The objective of the course is to expose to genetical organization, linkage, mapping, crossing over and recombination processes of bacteria and viruses.The objective of the course is to expose to endocrine system and regulation of hormones.The objective of the course is to expose to general features of insects, their morphology and interaction of vectors. | 1. The course deciphers molecular and cellular organization, mechanism involved in building each and every molecule.
2. Understanding the transcriptional modifications and processes of regulatory mechanisms of gene.
3. Understanding the mendelian genetics and utilization of the mapping knowledge in visualizing genetical/ chromosomal disorders.
4. Detailed explanation on the recombination technology of microorganisms, research oriented knowledge on laboratory species to study transposable genetic elements.
5. The course will help the students to understand the endocrine system in our body which is the main coordinating system in regulating the secretion of hormones.
6. Detailed explanation on different types of endocrine glands and their associated functions in maintaining homeostasis.
7. The course will decipher the distribution of insects, their identification, documentation and classification using proper taxonomical methods.
8. Detailed study on the morphological and physiological characters of insect diversity, their interaction with plants and vectors.
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| 6. | **B.Ss. 6th semester****ZC613T****(Developmental Biology)****ZC614T****(Evolutionary Biology)****ZD607T****DSE Course-VII****(Fish and Fisheries)****ZD608T****DSE Course VIII****(Immunology)** | The objective of the course is to expose to historical perspective and basic concept of gene expression, embryological development and its ongoing aspects.The objective of the course is to expose to the history of evolution, origin of life and aspects that are associated with the evolutionary biology of earth and life.The objective of the course is to expose to world of fishes, their general characters, classification and sustainable maintenance.The objective of the course is to expose to immune systems of our body and various aspects related with our body defence mechanism. | 1. To acquire knowledge on the intrigued developmental process, early embryonic development including fertilization and cleavage.
2. Lucid concept on post embryonic development, modes of regeneration, ageing, implications of developmental biology such as teratogenic agents.
3. The course will bring out the proper understanding on life’s beginning, evidences related to evolution and historical theories associated with evolution.
4. It will also help the students to understand and input their knowledge on the various aspects of evolutionary processes and identifying the animals and reasons of extinction based on evolutionary theories.
5. Correlation of phylogenetic tree in studying species concept and construction and interpretation of the phylogenetic trees.
6. The course will help in understanding of various types of fish species, their classification and breeding.
7. Morphological and physiological differences of different species and their types of mechanisms.
8. Developing aquaculture technology for future entrepreneurship minds by building composite culture and integrated fish farming. Using proper agenda for research on Zebra fish.
9. The course will help the students to identify the aspects of immune systems in our body. Diseases related with immune systems and factors associated with immune system.
10. To understand complex term such as Major Histocompatibility Complex, Complement systems, cytokines and therapeutic measures to solve issues related to dreadful diseases such as cancer, AIDS etc.
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