

COURSE OUTCOMES (COs)

SEMESTER 1

ZL010101: ANIMAL DIVERSITY: PHYLOGENETIC AND TAXONOMIC APPROACHES

1. Understand the phylogenetic relationships among the different groups of animals
2. To provide the latest trends in animal taxonomy and phylogenetic systematics
3. To impart the knowledge about the fauna on the verge of extinction, especially in the Indian sub-continent and how we can save them.
4. Getting chances to study the techniques in taxidermy.
5. Imparting the new trends in computer-aided taxonomic studies
6. Getting an awareness of the types of taxonomic publications.

ZL010102: EVOLUTIONARY BIOLOGY AND ETHOLOGY

1. To describe the concept of relatedness and its connection to biological evolution
2. To apply knowledge to new information and data, as well as the capacity to effectively communicate the principles of evolution and its application to human biology.
3. To expose students to the basics and advances in ethology.
4. To generate an interest in the subject in order to understand the complexities of studying animal behavior.
5. To study the origin of life on earth.
6. To study the process of extinction and extinct animals on earth, till date.

ZL010103: BIOCHEMISTRY

1. To provide the basic knowledge of the chemical nature of life and life processes and the structure and function of biologically important molecules
2. To generate an interest in the subject and help students to explore the new developments in Biochemistry.
3. Imparting the importance of metabolism of bio-molecules in normal physiology of man
4. Providing the basic knowledge of abnormal metabolism of biomolecules in man.
5. To get a basic knowledge of the diseases caused by errors in metabolism.

ZL010104: BIostatistics AND RESEARCH Methodology

1. To impart concepts of statistics and research methodology, and create awareness about the gadgets, tools and accessories of biological research
2. Providing materials to improve analytical and critical thinking , skills through problem solving
3. To enable learners to effectively apply suitable statistical tests in research
4. To sensitize students about the ethics involved in research and enable them to come up with innovative research designs
5. To equip learners to prepare research papers and project proposals

SEMESTER-II

ZL010201: FIELD ECOLOGY

1. To provide the knowledge of animal adaptations to a variety of environments
2. Develop knowledge about the ill effects of population explosion.
3. To understand the different aspects of population and its interactions
4. To understand the natural resources
5. To make an awareness of man made issues on environment
6. Giving the importance of wastes and waste management .
7. Imparting knowledge about sustainability., green technology and ecosystem monitoring.

ZL010202: DEVELOPMENTAL BIOLOGY

1. Imparting knowledge about the concepts and processes in developmental biology
2. Providing the students to understand and appreciate the genetic mechanisms and the unfolding of the same during development
3. To expose the learner to the new developments in embryology and its relevance to Man.

ZL010203: GENETICS AND BIOINFORMATICS

1. Imparting knowledge about the fine structure of genetic material and molecular basis of hereditary transmission

2. Imparting knowledge about the significances of Genetics in Principle in heritance of traits in Man
3. Providing knowledge about the role of genetics in evolution
4. Giving an opportunity to explore the emerging field of bioinformatics
5. To equip the students to take up bioinformatics studies ; as the basics of bioinformatics such as data mining, proteomics , Microarrays, Protein modeling , drug designing etc:
6. To equip the students , how to Identify of human genes and diagnosis of human diseases

ZL010204: MICROBIOLOGY AND BIOTECHNOLOGY

1. Providing a basic knowledge of the microbial world , its structure and function .
2. To give students an intensive and in-depth learning in the field of biotechnology
3. Imparting the students to familiarize with the emerging field of biotechnology - to understand the modern biotechnology practices and approaches , with an emphasis on its application in - medical, industrial, environmental , agricultural , nano medicine etc.
4. Providing the basics of Gene therapy, Cell and tissue engineering, Gene products in medicine etc.
5. Familiarizing the students with issues like - public policy, biosafety, and intellectual property rights , related to biotechnology
6. To explore the area of Fermentation technology ,Enzyme engineering and applications, Transgenic plants, Bio fertilizers ,Bio pesticides , gene technology etc

SEMESTER-III

ZL010301: ANIMAL PHYSIOLOGY

1. Providing the basic knowledge of the functioning of organ systems across the animal world
2. Providing an over view of the comparative functioning of different systems in animals
3. Chances to learn more about human physiology

ZL010202: CELL AND MOLECULAR BIOLOGY

1. Providing the students to understand the structural and functional details of the basic units of life at the molecular level
2. Imparting ways to refresh the basics of cell biology
3. Providing the students to understand the new developments in molecular biology and its implications in human Welfare

ZL010303: BIOPHYSICS, INSTRUMENTATION AND BIOLOGICAL TECHNIQUES

1. Providing a basic knowledge of the biological system and processes based on physical principles
2. Providing an insight on the tools and techniques of various instruments available for biochemical and biophysical studies
3. Training the learner the operational skills of different instruments required in Zoology.

ZL010304: IMMUNOLOGY

1. Providing an intensive and in-depth knowledge to the students in immunology
2. Imparting ways to help the learner to understand the role of immunology in human health and well-being
3. Familiarizing the students the new developments in immunology

SEMESTER-IV

ELECTIVE SUBJECT- FISHERIES

ZL800401: NUTRITION, GROWTH AND PHYSIOLOGY OF FISHES

1. Imparting knowledge about the various aspects of fish biology
2. Providing ways to understand the basic principles of fish nutrition and the functions of individual nutrients.
3. Providing the basic knowledge of the functional physiology of fishes.
4. Imparting a basic knowledge about various fish diseases.

ZL800402: FISHERY RESOURCES AND MANAGEMENT

1. Develop knowledge in inland and marine fishery resources of India
2. Understand latest electronic and computer devices used in fisheries, as remote sensing, GIS etc:
3. Able to analyze the ecological problems as riverine sand mining, dam construction, mangrove degradation, invasive species etc:
4. Develop knowledge on integrated fish culture, Composite fish culture, Integrated farming and aquaponics
5. Develop knowledge about the basics of ornamental fishery and its export from India, Aquarium fishes, Setting up and maintenance of an aquarium.
6. Providing knowledge on management of hatcheries and farms.
7. Develop a basic knowledge on control and management of aquatic weeds in the system

ZL800403: FISHERY SCIENCE AND TECHNOLOGY

1. Understand advances in aquaculture
2. Understand the various aspects of fish processing techniques.
3. Develop a basic knowledge on the techniques in fish feed technology
4. Differentiate quality assurance system, quality management and national / international certification system.
5. Understand factory sanitation and hygiene, water quality and standard
6. Develop knowledge about the crafts and gears used in inland and marine waters.
7. Apply fish breeding techniques as Induced breeding and hypophysation: synthetic and natural hormones, cryopreservation of gametes and artificial fertilization.