



JSS MAHAVIDYAPEETHA

JSS COLLEGE FOR WOMEN

Affiliated to the University of Mysore & Re-Accredited by NAAC with 'A' Grade
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DEPARTMENT OF ZOOLOGY

2023-24

NEP:

Program objectives:

Pos1: the programme offers both classical as well as modern concepts of zoology in higher education .

Pos2: it enables the students to study animal diversity in both local and global environment.

Pos3: to make the study of animals more interesting and relevant to human studies more emphasis is given to branches like behavioural biology, evolutionary biology and economic zoology.

Pos4: more of upcoming areas in cell biology, genetics, molecular biology, biochemistry, genetics engineering and bio informatics have been also included.

Pos5: equal importance is given to practical learning and presentation skills of students.

Pos6: the lab courses provide the students necessary skills required for their employability.

Pos7: skill enhancement courses in classical and applied branches of zoology enhance enterprising skills of students.

Pos8: the global practices in term of academic standard and evaluation strategies.

Pos9: provides opportunity for the mobility of the student both within and across the world.

Pos10: the uniform grading system will benefit the students to move across institution within Indian to begin with and across countries.

NEP: I sem-CO

PAPER NAME : cytology, genetics and infectious diseases

1. The structure and function of the cell organelles.
2. The chromatin structure and its location.
3. The basic principle of life, how a cell divided leading to the growth of an organism and also reproduces to form a new organism.
4. How a cell communicates with its neighboring cells.
5. The principle of inheritance, Mendel's laws and the deviations.

NEP:II SEM

NEP: II sem-CO

Paper name: biochemistry and physiology

1. To develop a deep understating of structure of bimolecular like protein, lipid and carbohydrates.
2. How simple molecule together form complex macromolecules.
3. To understand the thermodynamics of enzyme catalyzed reaction.
4. Mechanisms to energy production at cellular and molecular levels.
5. To understand various functional components of an organism.

NEP: III SEM

Paper name: Molecular Biology, Bioinstrumentation & Techniques in Biology

1. After successful accomplishment of the course, the learners will be able to acquire better understanding and comprehensive knowledge regarding most of the essential aspects of Molecular Biology subject which in turn will provide a fantastic opportunity to develop professional skill related to the field of molecular biology.
2. The course will mainly focus on the study of principal molecular events of cell incorporating DNA Replication, Transcription and Translation in prokaryotic as well as eukaryotic organisms.
3. Acquiring knowledge on instrumentation and techniques in biology.

NEP: IV SEM

Paper name: Gene Technology, Immunology and computational Biology.

1. Acquaint Knowledge on versatile tools and techniques in genetic engineering and recombinant DNA Technology.
2. An understanding on application of genetic Engineering techniques in basic and applied experimental biology.
3. To acquire a fundamental working knowledge of the basic principles of immunology.
4. To understand how these principles, apply to the process of immune function.
5. Use and interpret results of the principal methods of statistical inference and design, helps to communicate the results of statistical analyses accurately and effectively, helps in usage of appropriate tool of statistical software.

NEP :V

Paper -5: Non-Chordates and Economic Zoology

1. Group animals on the basis of their morphological characteristics/structures.
2. Demonstrate comprehensive identification abilities of Non-Chordate diversity
3. Explain structural and functional diversity of Non-Chordates
4. Develop understanding on the diversity of life with regard to protists, non chordates and chordates.
5. Examine the diversity and evolutionary history of a taxon through the construction of a basic phylogenetic/cladistics tree.

Paper -6: Chordates and Comparative Anatomy

1. Understand basics of classification of non-chordates.
2. Learn the diversity of habit and habitat of these species.
3. Develop the skills to identify different classes and species of animals.
4. Know uniqueness of a particular animal and its importance.

NEP :VI

Paper-7 : Evolutionary & Developmental Biology

1. Understand that by biological evolution we mean that many of the organisms that inhabit the earth today are different from those that inhabited it in the past.
2. Understand that natural selection is one of several processes that can bring about evolution, although it can also promote stability rather than change.
3. Understand how the single cell formed at fertilization forms an embryo and then a full adult organism.
4. Integrate genetics, molecular biology, biochemistry, cell biology, anatomy and physiology during embryonic development.
5. Understand a variety of interacting processes, which generate an organism's heterogeneous shapes, size, and structural features.
6. Understand how a cell behaves in response to an autonomous determinant or an external signal, and the scientific reasoning exhibited in experimental life science.

Paper – 8: Environmental Biology, Wildlife Management &Conservations

1. Develop an understanding of how animals interact with each other and their natural environment.
2. Develop the ability to use the fundamental principles of wildlife ecology to solve local, regional and national conservation and management issues.
3. Develop the ability to work collaborative team-based projects.
4. Gain an appreciation for the modern scope of scientific inquiry in the field of wildlife conservation management.
5. Develop an ability to analyze, present and interpret wildlife conservation Management information.