

DEPARTMENT OF ZOOLOGY

B.Sc. Zoology

Programme Outcomes:

Knowledge outcomes:

After completing B.Sc. Zoology Programme students will be able to:

- PO1: Demonstrate and apply the fundamental knowledge of the basic principles of major fields of Zoology;
- PO2: Apply knowledge to solve the issues related to animal sciences
- PO3: Take appropriate steps towards conservation of endemic and endangered animal species

Skill outcomes:

After completing B.Sc. Zoology Programme students will be able to:

- PO4: To foster curiosity in the students for Zoology
- PO5: To create awareness amongst students for the basic and applied areas of Zoology
- PO6: To orient students about the importance of abiotic and biotic factors of environment and their conservation
- PO7: To provide an insight to the aspects of animal diversity.
- PO8: To inculcate good laboratory practices in students and to train them about proper handling of lab instruments.

Generic outcomes:

Students will

- PO10: Demonstrate knowledge and understanding of Zoology and management principles and apply these to one's own work, as a member and leader in a team.
- PO11: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change
- PO12: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.



Programme Specific Outcomes

- PSO1 - Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology
- PSO2 - Analyse the relationships among animals with their ecosystems
- PSO3 - Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology
- PSO4 - Understand the applications of Zoology in Agriculture, Medicine and daily life
- PSO5 - Gains knowledge about research methodologies, effective communication and skills of problem solving methods
- PSO6 - Contributes the knowledge for Nation building.



Zoology-Lab Course Content

Semester-I

Course Title: Cell Biology & Cytogenetics	Course Credits: 2
Course Code: 21BSC1C1ZOO1P	L-T-P per week: 0-0-4
Total Contact Hours: 56	Duration of ESA: 41 hours
Formative Assessment Marks: 25	Summative Assessment Marks: 25

Course Outcomes (COs):

At the end of the course the student should be able to:

1. To use simple and compound microscopes.
2. To prepare stained slides to observe the cell organelles.
3. To be familiar with the basic principle of life, how a cell divides leading to the growth of an organism and also reproduces to form new organisms.
4. The chromosomal aberrations by preparing karyotypes.
5. How chromosomal aberrations are inherited in humans by pedigree analysis in families The antigen- antibody reaction



Semester-II: Zoology Course Lab Content

Course Title/Code: Biochemistry and Physiology	Course Credits: 2
Course Code: 21BSC2C2Z0002P	L-T-P per week: 0-0-4
Total Contact Hours: 56	Duration of ESA: 4 Hours
Formative Assessment Marks : 25	Summative Assessment Marks: 25

Course Outcomes (COs):

- At the end of the course the student should be able to understand: Basic structure of biomolecules through model making.
- Develop the skills to identify different types of blood cells.
- Enhance basic laboratory skill like keen observation, analysis and discussion. Learn the functional attributes of biomolecules in animal body.
- Know uniqueness of enzymes in animal body and their importance through enzyme kinetics.



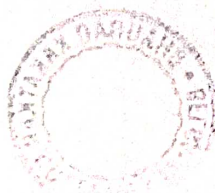
III Semester BSc Zoology Core Course Content

Course Title/Code: Molecular Biology, Bioinstrumentation & Techniques in Biology	Course Credits:4
Course Code: DSCC5ZOOT3	L-T-P per week:4-0-0
Total Contact Hours: 56	Duration of ESA: 21 hours
Formative Assessment Marks:40	Summative Assessment Marks: 60

Course Outcomes (COs):

At the end of the course the student should be able to understand:

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.



IV Semester, B.Sc, (Hons) Zoology

Course Title: Gene Technology Immunology and Computational Biology	Course Code:DSCC5ZOOT4
Course Type: Discipline Core Theory, L-T-P: 4-0-0	Course Credits: 4
Total Contact Hours: 56	Duration of ESA: 2Hrs.
Formative Assessment Marks:40	Summative Assessment Marks:60

At the end of the course the student should be able to:

1. Acquaint knowledge on versatile tools and techniques employed 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.



Course Outcomes (COs): At the end of the course, students will be able to:

CO 1: Develop an understanding of how animals interact with each other and their natural environment.

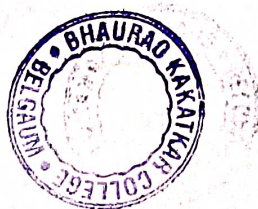
CO 2: Get knowledge about all types of ecosystems, food chains, webs and energy models.

CO 3: Study various types of environmental pollutions

CO 4: Develop the ability to use the fundamental principles of wildlife ecology to solve local, regional and national conservation and management issues.

CO 5: Gain an appreciation for the modern scope of scientific inquiry in the field of wildlife conservation management.

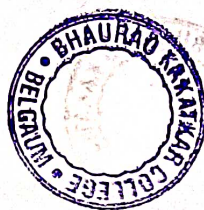
CO 6: Develop an ability to analyze, present and interpret wildlife conservation management information.

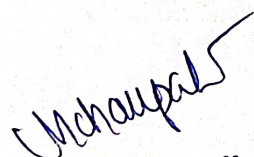



Signature
Principal
Bhauroo Karkar College
Belgaum


Course Outcomes (COs): At the end of the course students will be able to:

- CO 1: Explain what the prerequisite to get started in beekeeping
- CO 2: Discuss the responsibilities of urban beekeepers.
- CO 3: Identify where to purchase equipment and demonstrate how to assemble it.
- CO 4: Name and identify major parts of the honeybee such as mouth parts, sting apparatus and mandibular parts.
- CO5: Describe bee biology and anatomy from the perspective of managing bees.
- CO 6: Describe the importance and usage of honey and bee wax.




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