



BISHOP COTTON WOMEN'S CHRISTIAN COLLEGE

C.S.I Karnataka Central Diocese

#19,3rd Cross, C.S.I Compound, Mission Road, Bengaluru – 560027

Affiliated to Bengaluru City University

Contact No: 080 – 22212933/22129880

Email: principal@bcwcc.edu.in

Website: www.bcwcc.edu.in

DEPARTMENT OF ZOOLOGY

PROGRAM OUTCOMES

AIMS AND OBJECTIVES OF UG PROGRAM IN ZOOLOGY

- The Programme offers both classical as well as modern concepts of Zoology in higher education.
- It enables the students to study animal diversity in both local and global environments.
- 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.
- More of upcoming areas in cell biology, genetics, molecular biology, biochemistry, genetic engineering and bioinformatics have also been included.
- Equal importance is given to practical learning and presentation skills of students.
- The lab courses provide the students necessary skills required for their employability.
- Skill enhancement courses in classical and applied branches of Zoology enhance enterprising skills of students.
- The global practices in terms of academic standards and evaluation strategies.
- Provides opportunity for the mobility of the student both within and across the world.
- The uniform grading system will benefit the students to move across institutions within India to begin with and across countries.
- It will also enable potential employers in assessing the performance of the candidates across the world.



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COURSE OUTCOMES

I SEM: CYTOLOGY, GENETICE AND INFECTIOUS DISEASE

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 divides 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 principles of inheritance, Mendel 's laws and the deviations.
 6. How environment plays an important role by interacting with genetic factors.
 7. Detect chromosomal aberrations in humans and study of pedigree analysis.
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I SEM: ECONOMIC ZOOLOGY

1. Gain knowledge about silkworms rearing and their products.
 2. Gain knowledge in Bee keeping equipment and apiary management.
 3. Acquaint knowledge on dairy animal management, the breeds and diseases of cattle and learn the testing of egg and milk quality.
 4. Acquaint knowledge about the culture techniques of fish and poultry.
 5. Acquaint the knowledge about basic procedure and methodology of Vermiculture.
 6. Learn various concepts of lac cultivation.
 7. Students can start their own business i.e. self-employments.
 8. Get employment in different applied sectors
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I SEM: VERMICULTURE

1. Understands the importance of earthworms in maintaining soil quality.
 2. Learns that the vermicomposting is an effective organic solid waste management method.
 3. Gets acquainted with the importance of earthworms in agro-based economic activity.
 4. Vermicomposting leads to organic farming and healthy food production.
 5. Vermicomposting may be taken up as a small scale industry by the farmers and unemployed youth.
 6. Get jobs in teaching institutions or Vermiculture units as technicians.
 7. Learn the concept of vermicomposting as bio fertilizers thus student can become an entrepreneur after completion of the course.
 8. Best opportunity for self-employment and lifelong learning with farmers.
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II SEM: BIOCHEMISTRY AND PHYSIOLOGY

1. To develop a deep understanding of structure of biomolecules like proteins, lipids and carbohydrates.
 2. How simple molecules together form complex macromolecules.
 3. To understand the thermodynamics of enzyme catalyzed reactions.
 4. Mechanisms of energy production at cellular and molecular levels.
 5. To understand various functional components of an organism.
 6. To explore the complex network of these functional components.
 7. To comprehend the regulatory mechanisms for maintenance of function in the body.
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II SEM: PARASITOLOGY

- Know the stages of the life cycles of the parasites and infective stages.
 - Develop ecological model to know population dynamics of parasite, establishment of parasite population in host body, adaptive radiations and methods adopted by parasite to combat with the host immun system.
 - Develop skills and realize significance of diagnosis of parasitic infection and treatment.
 - Understand about diseases caused by Protozoa, Helminthes, Nematodes and Arthropods at molecular level.
 - Develop their future career in medical sciences and related administrative services.
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II SEM: SERICULTURE

1. Sericulture is an agro-based industry which gives economic empowerment to the students.
 2. Sericulture may be taken up as a small scale industry by the small farmers and unemployed youth.
 3. Get jobs in teaching profession, silk board and other Govt. institutions as technicians.
 4. Student can be self-employed after successful completion of the course.
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III SEM: MOLECULAR BIOLOGY, BIOINSTRUMENTATION

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.
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III SEM: GENE TECHNOLOGY IMMUNOLOGY AND COMPUTATIONAL BIOLOGY



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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.
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SEM IV: ANIMAL BEHAVIOUR

1. Examine and critically to evaluate the emergence of ideas that have shaped how we observe and collect data on animal behaviour.
2. Understand the main historical ideas that underpin animal behaviour theory
3. Critically review hypotheses to explain animal behaviour
4. Understand different methods for collecting data on animal behaviour
5. Have advanced their written and oral presentation skills.

SEM V: NON-CHORDATES AND ECONOMIC ZOOLOGY

- CO1. Group animals on the basis of their morphological characteristics/structures.
- CO2. Demonstrate comprehensive identification abilities of Non-Chordate diversity
- CO3. Explain structural and functional diversity of Non-Chordates
- CO4. Develop the knowledge of economic animals.

SEM V: CHORDATES AND COMPARATIVE ANATOMY

- CO1. Demonstrate comprehensive identification abilities of chordate diversity
- CO2. Explain structural and functional diversity of chordate diversity
- CO3. Understand evolutionary relationship amongst chordates
- CO4. Take up research in biological sciences.
- CO5. Realize that very similar physiological mechanisms are used in very diverse organisms.
- CO6. Get a flavor of research by working on project besides improving their writing skills. It will further enable the students to think and interpret individually.



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SEM VI: EVOLUTIONARY & DEVELOPMENTAL BIOLOGY

- 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.
- Understand that natural selection is one of several processes that can bring about evolution, although it can also promote stability rather than change.
- Understand how the single cell formed at fertilization forms an embryo and then a full adult organism.
- Integrate genetics, molecular biology, biochemistry, cell biology, anatomy and physiology during embryonic development.
- Understand a variety of interacting processes, which generate an organism's heterogeneous shapes, size, and structural features.
- Understand how a cell behaves in response to an autonomous determinant or an external signal, and the scientific reasoning exhibited in experimental life science.

VI SEM: ENVIRONMENTAL BIOLOGY, WILDLIFE MANAGEMENT & CONSERVATIONS

CO1. Develop an understanding of how animals interact with each other and their natural environment.

CO2. Develop the ability to use the fundamental principles of wildlife ecology to solve local, regional and national conservation and management issues.

CO3. Develop the ability to work collaborative team-based projects.

CO4. Gain an appreciation for the modern scope of scientific inquiry in the field of wildlife conservation management.

CO5. Develop an ability to analyze, present and interpret wildlife conservation Management in formation.