

The B.Sc. Programme of Carmel College of Arts, Science and Commerce for Women, Nuvem, Goa endeavours to achieve the following outcomes:

- PO1. Attribute: KNOWLEDGE.** Inculcate in our learners a quest for knowledge and an understanding of fundamental concepts and scientific principles related to various phenomena in daily life.
- PO2. Attribute: CRITICAL THINKING.** Acquire practical skills in handling scientific instruments and other experimental analysis, observational and problem-solving skills and draw logical inferences from scientific experiments.
- PO3. Attribute: RESEARCH.** Encourage student engagement for research skill development.
- PO4. Attribute: SUSTAINABLE DEVELOPMENT.** Have an interdisciplinary approach and provide solutions for sustainable development.
- PO5. Attribute: COMMUNICATION SKILLS.** Have good communication skills which help in expressing ideas and views clearly and effectively.
- PO6. Attribute: LIFE LONG LEARNING.** Encourage a receptive mindset for lifelong learning.
- PO7. Attribute: SOCIETY.** To groom an eco-conscious and ethical society.
-

The Department of Zoology, Carmel College of Arts, Science and Commerce for Women, Nuvem, Goa, aims to achieve the following Programme Specific Outcomes (PSOs).

- PSO1: Attribute: KNOWLEDGE and SCIENTIFIC PRINCIPLES:** The department aims to introduce the learners to scientific principles of taxonomy of animal kingdom – non chordates and chordates, understand the architecture of cells, animal body systems and metabolic processes of the body.
- PSO2: Attribute: CRITICAL THINKING and RESEARCH:** To inculcate among learners the ability to observe the natural world around them and draw logical inferences from scientific experiments using laboratory equipment, thereby arousing in the learners a spirit of curiosity and encouraging research temperament.
- PSO3: Attribute: SUSTAINABLE DEVELOPMENT, LIFE LONG LEARNING and SOCIETY:** To groom an eco-conscious feminist society working towards developing a

generation that has an understanding of natural resources, conservation and sustainable development.

PO4: Attribute: COMMUNICATION SKILLS and VALUES: To foster confidence among learners to express ideas and views clearly and effectively in all aspects of the programme, and develop empathy and respect towards all life forms through capacity building activities conducted by the department

BSC Programme Course Outcome

At the end of Semester, I – course ZOC 101: Diversity of non-chordates and cell biology, the student will

1. Know the general organization of non-chordates as a group
2. Understand the taxonomy and characteristic features of the various non-chordate phyla.
3. Describe the general organization, architecture and functions of a cell and its organelles (Prokaryotic and Eukaryotic).
4. Characterise the types of cancer cells.

At the end of Semester, I Course ZOG 101: Food, Nutrition and Health, the Student will

1. Know the concept of balanced diet,
2. Identify special nutritional requirements in various age groups
3. Describe the diet related disorders in humans
4. Examine the concepts relating to food hygiene

At the end of Semester II Course ZOG 101: Diversity of Chordates & Genetics, the Student will

1. Identify and classify the Chordates
2. Characterize the abnormalities of the chromosomes
3. Differentiate the different types of gene mutations
4. Explain pattern of inheritance of genetic traits

At the end of Semester II Course ZOG 102: Animal Behaviour, the Student will

1. Understand of history of Ethology.
2. Differentiate between stereotyped, social and sexual behaviours of animals.
3. Know about the biological rhythms governing the behaviour of animals.

4. Detail the relevance of biological clocks.

At the end of Semester III Course ZOC 103: Anatomy of Animal Body Systems, the Student will

1. Know the general plan of the animal body systems.
2. Identify the various systems and their components in the animal body.
3. Compare the anatomy of different animal systems.
4. Describe the functions of different components of the systems in the body.

At the end of Semester III Course ZOS 101: Aquarium Fish Keeping, the Student will

1. Know the biology of aquarium fishes,
2. Identify nutritional requirements and care aquarium fishes.
3. Formulate the fish feed of aquarium fishes.
4. Meet the requirements for setting up an aquarium.

At the end of Semester IV Course ZOC 104: Animal Physiology & Biochemistry, the Student will

1. Know mechanism of body functions.
2. Describe the physiology of the animal body
3. Understand the chemistry of biomolecules.
4. Elaborate on the importance on the biomolecules in life.

At the end of Semester IV Course ZOS 102: Wildlife and Ecotourism, the Student will

1. Know the current status of threats to wildlife.
2. Examine conservation strategies for wildlife conservation and management.
3. Identify different types of tourism.
4. Facilitate sustainable tourism opportunities.

At the end of Semester V Course ZOC 105: Endocrinology, the Student will

1. Know the aspects of endocrinology
2. Interpret the concept of homeostasis in Endocrinology.
3. Summarise the hormonal regulation of different endocrine glands.
4. Describe the disorders caused by imbalance in hormonal levels.

At the end of Semester V Course ZOC 106: Biochemistry and metabolic processes, the student will

1. Describe process of metabolism of major biomolecules.
2. Discuss the importance and formation of ATP.
3. Solve problems of bioenergetics.
4. Describe various metabolic disorders.

At the end of Semester V Course ZOC 107: Molecular Biology and Evolution, the Student will

1. Explain the scope of molecular biology in terms of evolution in terms of major animal groups.
2. Elaborate on the various processes of molecular biology.
3. Review the various concepts in evolutionary biology
4. Compare evolutionary mechanisms of different animal groups.

At the end of Semester V Course ZOD 102: Applied Zoology, the Student will

1. Know the scope of different branches of applied zoology.
2. Describe the biology of livestock animals such poultry, piggery, dairy.
3. Review various management techniques used to maintain livestock, honey bees, earthworms, and silkworms.
4. Explore the commercial application of animal products.

At the end of Semester V Course ZOD 103: Fish and Fisheries, the Student will

1. Provide theoretical and practical knowledge of fisheries
2. Describe the biology of fishes
3. Elaborate on the role of fisheries in improving human welfare.
4. Examine the practices of sustainable aquaculture and post-harvest processing of fisheries.

At the end of Semester VI Course ZOC 108: Developmental Biology, the Student will

1. Describe the science of developmental Biology.
2. Summarise the major concepts of developmental biology.
3. Employ the role of developmental concepts in advancement of research.
4. Discuss the recent advancements in the field of development biology.

At the end of Semester VI Course ZOC 109: Environmental Biology and Toxicology, the Student will

1. Discuss natural resources, population dynamics and associated problems.
2. Define terms used in environmental toxicology.
3. Outline root causes of biodiversity loss and conservation concerns.
4. Describe the effects of toxicants and radiation on environment and public health.

At the end of Semester VI Course ZOC 110: Parasitology, the Student will

1. Know the scope of parasitology and host-parasite relationship.
2. Elaborate on prevalence, epidemiology of the various parasites under the study.
3. Describe the biology and pathogenicity of the various parasites under the study.
4. Detail the diagnosis and treatment of various parasites under the study.

At the end of Semester VI Course ZOD 104: Animal Biotechnology, the Student will

1. Know the scope and history of biotechnology.
2. Describe the science of biotechnology.
3. Use of biotechnology methods to conduct experiments.
4. Discuss methods to develop products for bioethical use.

At the end of Semester VI Course ZOD 105: Environment Impact Assessment, the Student will

1. Know the scope of EIA and EIA notification of 2006.
2. Understand Environmental Impact Assessment (EIA) as an Environmental Management Tool.
3. Discuss the EIA as a statutory requirement in India.
4. Ensure competence for employment in EIA sector.