



VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY

JnanaSagara Campus, Vinayakanagara, Cantonment,
BALLARI - 583 105.

Department of Studies in Zoology

Programme Outcomes (POs): Master of Science in Zoology

At the end of the programme students will be able to:

PO1: Undertake classes on biology to undergraduate and post graduate students.

PO2: Carry out laboratory related experiments or analysis.

PO3: Will be able to frame statements related to assessment of biological diversity.

PO4: Will be able to identify and classify animal organisms for documentations.

PO5: Qualify competitive examinations effectively

PO6: Assist as junior supervisors at industrial set up

Course Outcomes (COs):

I Semester

Title of the Course with Code: ZOT-HCT.1.1 Animal Systematics

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none">Understand about the non-chordate animals, evolution, history of phylum |
| CO2 | <ul style="list-style-type: none">Study the external as well as internal characters of animals |
| CO3 | <ul style="list-style-type: none">Describe unique characters of animals |
| CO4 | <ul style="list-style-type: none">Recognize the ecological role of animals |

Title of the Course with Code: ZOT: HCT-1.2 Biology of Non-Chordates

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none">To understand about the non-chordate animals |
| CO2 | <ul style="list-style-type: none">To recognize the ecological role of animals |
| CO3 | <ul style="list-style-type: none">Students should be able to describe unique characters of animals |
| CO4 | <ul style="list-style-type: none">To understand evolution, history of phylum |

Title of the Course with Code: ZOT HCT-1.3 Molecular Cell Biology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> Understand of chemical and molecular processes that occurs in and between cells and will be able to describe and explain processes and their meaning for the characteristics of living organisms. |
| CO2 | <ul style="list-style-type: none"> Understand and apply the principles and techniques of molecular biology which prepares students for further education and/or employment in teaching, basic research or the health professions. |
| CO3 | <ul style="list-style-type: none"> Gain insight into the most significant molecular and cell-based methods used today to expand our understanding of biology. |
| CO4 | <ul style="list-style-type: none"> To understand safe laboratory practices and perform basic molecular biology techniques. |

Title of the Course with Code: ZOT: SCT-1.4 (II) Aquatic Biology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To undertake studies relating to aquatic biology in both laboratory and field contexts. |
| CO2 | <ul style="list-style-type: none"> To understand the dynamics of aquatic ecosystems and their potential responses to changes. |

II Semester

Title of the Course with Code: ZOT HCT-2.1- (I) Biology of Chordates

After completion of this course students will be able to

| CO | Statement |
|-----|---|
| CO1 | <ul style="list-style-type: none"> To understand the basic concepts about chordates |
| CO2 | <ul style="list-style-type: none"> To understand unique characters of amphibians, reptiles, aves and mammals |
| CO3 | <ul style="list-style-type: none"> To understand the ecological roles of different classes of vertebrates |
| CO4 | <ul style="list-style-type: none"> To understand the diversity of vertebrates |

Title of the Course with Code: ZOT: HCT-2.2- Developmental Biology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To understand the basic concept of the development and main anatomical changes that occurs during development. |
| CO2 | <ul style="list-style-type: none"> Describe the hierarchy of gene activation that occurs in early drosophila development. |
| CO3 | <ul style="list-style-type: none"> Explain how embryonic stem cells and their alternatives can be used in medical treatments. |

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| CO4 | <ul style="list-style-type: none"> To understand how gene activation plays a role in differentiation and development and Understand how errors in development lead to congenital defects and spontaneous abortion. |
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Title of the Course with Code: ZOT: HCT-2.3 (I) - Molecular Genetics

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> Study the structure of nucleic acids, gene expression and regulation in prokaryotes and eukaryotes |
| CO2 | <ul style="list-style-type: none"> Comprehensive and detailed analysis of fine structure of the gene. |
| CO3 | <ul style="list-style-type: none"> Insight into the manipulation of genetic material for a wide variety of purposes and products via recombinant DNA technology. |
| CO4 | <ul style="list-style-type: none"> To explore the applications of gene mutation and repair. |

Title of the Course with Code: ZOT: OET-2.1 - Human Physiology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> Explain the role of body systems and mechanisms in maintaining homeostasis. |
| CO2 | <ul style="list-style-type: none"> To understand the impact of nutrients on human physiology |
| CO3 | <ul style="list-style-type: none"> To understand the interactions of exercise and human physiology |
| CO4 | <ul style="list-style-type: none"> Students will critically read and interpret original research pertaining to physiology |

III Semester

Title of the Course with Code: ZOT: HCT-3.1- Biology of Reproduction

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To understand the biological processes of reproduction, including the endocrinology and physiology of male and female reproduction, puberty, lactation and menopause. |
| CO2 | <ul style="list-style-type: none"> To understand the fertility and infertility and how reproductive biotechnology is used to overcome poor fertility. |
| CO3 | <ul style="list-style-type: none"> To understand how reproductive biology impacts other aspects of health, exploring implications of early life exposures for later health and biology of reproductive cancers. |
| CO4 | <ul style="list-style-type: none"> To understand the process the sexual differentiation and explain the some of the disorders that occurs in the process. |
| CO5 | <ul style="list-style-type: none"> To understand the hormonal, tissue and behavioral changes those occurs |

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| | across the menstrual cycle and explain how these are regulated. |
| CO6 | <ul style="list-style-type: none"> To understand sexually transmitted diseases may contribute to altered neonatal or reproductive function. |
| CO7 | <ul style="list-style-type: none"> Explain of how to apply reproductive information to strategies for the management of reproduction and fertility in animals. |

Title of the Course with Code: ZOT: HCT-3.2- Animal Physiology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To understand the entire animal's function of the body like nutrition, respiration, heart, excretion, nerve physiology etc. in which all structure, function, process and control are to be studied. |
| CO2 | <ul style="list-style-type: none"> To understand how different group of animals have different physiological adaptations appropriate to carry out the required functions to the fullest. |

Title of the Course with Code: ZOT: SCT-3.1- (I) Environmental Biology

After completion of this course students will be able to

| CO | Statement |
|-----|---|
| CO1 | <ul style="list-style-type: none"> To understand the critical issues facing the environment at local, regional, national and global scales |
| CO2 | <ul style="list-style-type: none"> Environmental biology prepares students as professional biologists with strong environment emphasis. |
| CO3 | <ul style="list-style-type: none"> To gain the scientific perspective of the issues confronting our present day environment. |
| CO4 | <ul style="list-style-type: none"> Able to analyze the national and global environment issues relating to atmosphere, water, soil and land use, biodiversity and natural resources (global warming, climate change, mineral extraction, and energy resources, environmental impact assessment) |

Title of the Course with Code: ZOT: OET-3.1- Applied Zoology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To understand the concept of fisheries, fishing tools and site selection, aqua culture system, induced breeding techniques. |
| CO2 | <ul style="list-style-type: none"> To understand the basic lifecycle of honeybee and to manage bee hives for honey production, harvest and marketing and pollination. |
| CO3 | <ul style="list-style-type: none"> To understand the silkworm rearing, mulberry cultivation, pests, and diseases associated with silkworm, mulberry and various processes involved in silk |

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| | production. |
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IV Semester

Title of the Course with Code: ZOT: HCT-4.1- Biodiversity

After completion of this course student should be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To study and understand the animals around us and their significance. |

Title of the Course with Code: ZOT: HCT-4.2- Animal Behaviour

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> Designing and implementing experiments to test hypothesis relating to animal behavior |
| CO2 | <ul style="list-style-type: none"> Understanding and identify behaviors in a variety of taxa |

Title of the Course with Code: ZOT: SCT-4.1 (I) – Endocrinology

After completion of this course students will be able to

| CO | Statement |
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| CO1 | <ul style="list-style-type: none"> To understand the structure and function of mammalian endocrine tissues |
| CO2 | <ul style="list-style-type: none"> To understand the regulatory control and actions of individual endocrine tissues are integrated to maintain appropriate physiological and metabolic responses to changes in the internal and external environment |