

COURSE OFFERED
B.Sc. Zoology- Model I

PROGRAMME OUTCOMES

PO1	Apply domain based knowledge to real life situations.
PO2	Acquire strong communication skills to function effectively in diverse social atmosphere.
PO3	Adopt environmental values to enable sustainable living in the world.

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understanding basic concepts in Biology.
PSO2	Acquire skills in biological instrumentation for research and applied science.
PSO3	Incorporate environmental and ethical practices in scientific study.

COURSE OUTCOMES

Course Name and Code	Course Outcome Statements
SEMESTER 1. <i>ZY1CRT01</i> GENERAL PERSPECTIVES IN SCIENCE & PROTISTAN DIVERSITY	CO1 : To create an awareness on the basic philosophy of science, concepts and scope CO2 : To understand different levels of biological diversity through the systematic classification CO3 :To impart knowledge on Protistan diversity and parasitic protists.
SEMESTER 11. <i>ZY2CRT02</i> ANIMAL DIVERSITY - NON CHORDATA	CO1 : To understand the evolutionary significance of invertebrate fauna CO2 : To understand different levels of biological diversity through the systematic classification of invertebrate fauna CO3 : To familiarize taxa level identification of animals
SEMESTER 1 & 11 COMBINED PRACTICALS <i>ZY2CRPT01</i>	CO1: To enable students to identify insects, fishes and snakes using keys. CO2: To make students able to draw scientific images of fauna. CO3: To develop dissection skills and understand ethical practices.
SEMESTER 111. <i>ZY3CRT03</i> ANIMAL DIVERSITY -CHORDATA	CO1 :To acquire knowledge on the diversity of chordates and their systematic position CO2 : To make them aware of the economic importance of some classes. CO3 :To understand the evolutionary importance of selected chordate groups
SEMESTER IV. <i>ZY4CRT04</i> RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS	CO1 : To familiarise the learner the basic concepts of animal collection, rearing/ preservation methods, scientific research and its ethical practices. CO2. To develop statistical and analytical skills. research communication and scientific documentation.

	CO3. To create awareness about the various instruments used in studies and their principle of action.
SEMESTER 1 & 11 COMBINED PRACTICALS ZY2CRP02	CO1: To enhance the scientific drawing skill. CO2: To familiarize students with the sample collection techniques and apply biodiversity estimation tools. CO3: To practice and develop problem solving skills in connection with biostatistics.
SEMESTER V. ZY5CRT05 ENVIRONMENTAL BIOLOGY AND HUMAN RIGHTS	CO1: To create a consciousness regarding Biodiversity, environmental issues & conservation strategies CO2 : To develop the real sense of Human rights – its concepts & manifestations CO3 : To teach the basic concepts of toxicology, their impact on human health and remedial measures
SEMESTER V. ZY5CRT06 CELL BIOLOGY AND GENETICS	CO1 : To understand the structure and function of the cell and organelles as the fundamentals for understanding the functioning of all living organisms. CO2 : To emphasize the central role of genes and their inheritance in the life of all organisms CO3 : To develop critical thinking, skill and research aptitudes in basic and applied biology.
SEMESTER V. ZY5CRT07 EVOLUTION, ETHOLOGY & ZOOGEOGRAPHY	CO1 : To acquire knowledge about the evolutionary history of Life. CO2 : To study the distribution of animals on earth, its pattern, evolution and causative factors. CO3 : To impart basic knowledge on animal behavioural patterns and their role.
SEMESTER V. ZY5CRT08 HUMAN PHYSIOLOGY, BIOCHEMISTRY, AND ENDOCRINOLOGY	CO1 : To explain the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function and metabolism. CO2 : To explain various aspects of physiological activities of animals and their hormonal control with special reference to humans CO3 :To know about the different experimental methods and designs that can be used for further study and research
SEMESTER V ZY5OPT02 PUBLIC HEALTH AND NUTRITION (OPEN COURSE)	CO1 : To inculcate a general awareness among the students regarding the real sense of health. CO2 : To understand the role of balanced diet in maintaining health. CO3 : To motivate them to practice yoga and meditation in day-to-day life.
SEMESTER V ZY6CBT04 NUTRITION, HEALTH AND LIFESTYLE MANAGEMENT (ELECTIVE)	CO1 : To develop an understanding about health and life style management and diseases. CO2 : To understand principles of nutrition and its role in health. CO3 : To familiarize the students regarding food safety, food laws & regulations.
SEMESTER VI. ZY6CRT09	CO1 : To identify the various developmental stages and the possible defects in growth

DEVELOPMENTAL BIOLOGY	CO2: To understand the process of reproduction in man. CO3 : To develop an understanding about scientific developments in the field of Developmental biology.
SEMESTER VI. <i>ZY6CRT10</i> MICROBIOLOGY AND IMMUNOLOGY	CO 1: To explain the mechanism of immunity and the role of hormones CO2 :To describe microbial types, contamination sites, sterilization techniques and the ecological significance of microbes. CO3: Enumerate autoimmune and immunodeficiency diseases and immunology of tumor and organ transplantation
SEMESTER VI. <i>ZY6CRT11</i> BIOTECHNOLOGY, BIOINFORMATICS AND MOLECULAR BIOLOGY	CO1 : To explain the steps in genetic engineering and animal cell culture and ethical issues of transgenic animals. CO2 : To enumerate the applications of biotechnology CO3 : To gain understanding about the biological databases and molecular visualization softwares.
SEMESTER VI. <i>ZY6CRT12</i> OCCUPATIONAL ZOOLOGY	CO1 : To understand the scope of occupational zoology and the process involved. CO2 : Give awareness to society about need for waste management and organic farming. CO3 :To learn the different resources available and to develop an attitude towards sustainability.
SEMESTER V& V1 COMBINED PRACTICALS <i>ZY6CRP03</i> ENVIRONMENTAL BIOLOGY AND HUMAN RIGHTS and CELL BIOLOGY AND GENETICS	CO1: To gain expertise in the basic water quality analysis techniques. CO2: To experientially learn about mitosis and various blood cells. CO3: To identify the sexual dimorphisms of Drosophila and to identify presence of barr body experimentally.
SEMESTER V& V1 COMBINED PRACTICALS <i>ZY6CRP04</i> EVOLUTION, ETHOLOGY & ZOOGEOGRAPHY; HUMAN PHYSIOLOGY, BIOCHEMISTRY, AND ENDOCRINOLOGY	CO1: Identify zoogeography realms and endemic organisms, as well as connecting links. CO2: To understand about different animal behaviours and ethological techniques. CO3: To be able to perform basic hematological tests and qualitative analysis of proteins, starch, lipids and glucose.
SEMESTER V& V1 COMBINED PRACTICALS <i>ZY6CRP05</i> DEVELOPMENTAL BIOLOGY AND MICROBIOLOGY AND IMMUNOLOGY	CO1: To be able to perform candling experiment, gram staining and blood grouping. CO2: To familiarize students with the techniques and tools in microbiology, reproductive biology and embryology. CO3: To dissect and identify anatomical differences between male and female cockroach.
SEMESTER V& V1 COMBINED PRACTICALS <i>ZY6CRP06</i> BIOTECHNOLOGY, BIOINFORMATICS AND MOLECULAR BIOLOGY; OCCUPATIONAL ZOOLOGY	CO1: To test adulteration in honey. CO2: To download and come protein sequence and genome sequences of given organism from NCBI database and analyse data. CO3: To identify economically important species of fishes, earthworms, honey bees, shell fishes.
PROJECT	CO1: To enhance observation skills, reading and writing skills.

ZY6PRP01	CO2: To enable students to compile, sort and analyse data. CO3: To arrive at meaningful conclusion and develop rational thinking
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Course- B. Sc Botany Model 1 (Complementary)

PROGRAMME SPECIFIC OUTCOMES

PSO1	Understanding basic concepts in Biology.
PSO2	Acquire skills in biological instrumentation for research and applied science.
PSO3	Incorporate environmental and ethical practices in scientific study.

COURSE OUTCOMES

Course Name and Code	Course Outcome Statements
SEMESTER 1. <i>B01CMT01- Cryptogams, Gymnosperms, and Plant Pathology</i>	CO1 : To describe the common algae, fungi, lichen, Bryophytes, pteridophytes, Gymnosperms. CO2 : To classify flora on the basis of their origin. CO3 : To identify and understand the Common plant diseases to and solve problems concerned with common crop plants.
SEMESTER 11. <i>B02CMT02- Plant Physiology</i>	CO1 : To describe seed germination, mineral nutrition and vernalization CO2 : To illustrate the process of photosynthesis, water absorption, mineral nutrition, seed germination etc. CO3: To understand the role of plant hormones.
SEMESTER 1 & 11 COMBINED PRACTICALS <i>B02CMP02- Cryptogams, Gymnosperms, and Plant Pathology and Plant physiology</i>	CO1: To understand the vegetative reproductive life cycle of microsporic plants. CO2: To get familiarized with common crop plant diseases in nature and recognize its causative organisms (microscopic). CO3: To create an awareness about plant physiological process as a part of our life existence.
SEMESTER 111. <i>B03CMT03 Angiosperm taxonomy and Economic Botany</i>	CO1 : To recognize the plants seen in our vicinity through morphological observation. CO2 : To tell the economic importance of some classes of plants and plant products. CO3: To familiarize with angiosperm families.
SEMESTER IV. <i>B04CMT04 Anatomy and Applied Botany</i>	CO1 : To describe the internal structure of plants. CO2. To develop practitioner skills in plant propagation. CO3: To enable students to achieve plant improvement techniques.
SEMESTER 111 & 1V COMBINED PRACTICALS <i>B04CMP04</i>	CO1: To enable students to easily identify plants through their morphological characters. CO2: To do plant propagation using artificial propagation techniques.

	CO3: To understand and observe the leaf and stem anatomy.
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