

Department of Zoology.

Programme outcome under graduation

Class.	Paper	Programme outcome
B.Sc.T	P-1	Apply the knowledge of internal structure of cell, and its functions classification & Identification of the invertebrate Animals,
	P-2	students gain knowledge Identification, classification & special character of Vertebrate Animals,
B.Sc II nd	P-1	To study the comparative anatomy of various organ system and girdles higher vertebrate groups,
	P-2	understand the basic concept of Endocrine gland and their secretion and Reproductive Behaviour of Animals,
B.Sc. III rd	P-1	To get the basic concept of Environment, food Poisoning and Pathogenic Protozoans and helminthes

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class	Paper
	P2. Core Knowledge Genetics and Metabolism of Carbohydrate and Tools of Biotechnology and Principles & Techniques about Apparatus

class	cl. Code	Name of Paper	Course outcomes
B.Sc-I year	cc Zoo 01	Cell biology and Non chordata	<ol style="list-style-type: none"> 1. students understand eukaryotic cell and cell organells, 2. students learn cell division 3. To study immune system and Cancer Cell, 4. learn by Creneral character and classification of Phylum Protozoa, Porifera, Coelenterata, Platyhelminthes, nematelmintes, Annelida, Arthropoda, mollusca, Echinodermata, 5. Creneral character type study and Vario- -us. system in Paramecium, Sycon, obelia, Jasciola, Ascaris, Palaemon, Pila, Astarias
	cc Zoo 02	Chordata and Embryology	<ol style="list-style-type: none"> 1. Creneral character and classification of class and up to order 2. understand type study in Balaroglosses. Amphioxus. 3 students gain

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knowledge of migration
fishes and Birds, and
flight adaptation in Birds,
and biting mechanism of
snakes,

4. learn by comparative
account of Prototheria,
Eutheria and Aquatic
mammals,

5. students understand
Differentiation & Regeneration
fertilization and develop-
ment of chick & Placenta
in mammals,

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class	class code	Name of Paper	outcomes
B.Sc. II nd year	CC 700 01	Comparative Anatomy of and Physiology	<p>1. Gain Knowledge about scale, hair, feathers, and study of digestive glands and Respiratory organs in Vertebrates,</p> <p>2. students understand comparative study of skull, vertebrae, limbs, girdles and circulatory & urogenital system,</p> <p>3. students learn about brain, spinal cord and structure & functions of ear, eye, and cranial nerves,</p> <p>4. student gain knowledge about Physiology of Digestion, Heart and structure and functions of blood.</p> <p>5. students understand Physiology of Excretion & Nerve impulse and osmoregulation.</p>
	CC 700 02	vertebrate Endocrinology Reproductive Biology, Behaviour Evolution and Applied	<p>1. Discuss the role of endocrine glands, Hormones and their effect structure function and Biosynthesis,</p>

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2. Gain Knowledge about Reproductive Cycle in vertebrate Hormonal Regulation of menstruation, Parturition, lactation and Pregnancy,
3. To understand mutation, variation isolation and theories of organic evolution.
4. learn about ethology and Pattern of behaviour.
5. students understand concepts of Pisciculture, Sericulture, Apiculture, Prawn & Poultry keeping.

class.	class. code	Name of Paper	outcomes
B.se. IIIrd Year	CC Zoo 01	ecology Environmental biology, Toxi- -cology, microbiology and medical Zoology	1. students understand in ecosystem, densities and Communities, Biogeochemical cycle and Pollution of air & water 2..students gain knowledge about food chain, energy flow in ecosystem, environmental impact and conservation of Natural resources 3. student learn about food Poisoning, Toxic Agent and Animal Poisons and classification of toxicology 4. student gain knowledge Microbiology of Domestic water and sewage, milk Products and Industrial microbiology, 5. students understand Pathogenic micro organism, and their effect of man,
	CC Zoo 02	Genetics, cell Physiology Biochemistry Biotechnology and Biotechniques	1. Knowledge about genetics linkage gene, Expression interaction and sex deter- -mination and Human genetics,

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Program Outcome
 Post-graduation

Class	Paper	Programme outcome
M.Sc. Ist Sem.	P-1	Gain Knowledge of Various system of invertebrate Animals and General character of minor phyla,
	P-2	student will know in details about Pattern of behaviours,
	P-3	Demonstrate accurate and efficient use of specific mathematical tools in the analysis of biological data,
	P-4	understanding of Environmental physiology and Pollution effect, and stress tolerance mechanism,
M.Sc. IInd Sem.	P-1	Gain Knowledge of endocrine glands, Hormones and effect or side effect,
	P-2	students will study the Reproduction and effect of male & female hormones,
	P-3	students will acquire knowledge about DNA, RNA, cells junctions & Communications,
	P-4	students will understand the

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various tools and techniques
of biology.

Class	Course Code	Name of Paper	Outcome
M.Sc. Sem. Ist	C.C. Zoo 01	Invertebrate structure and functions minor Phyla	<ol style="list-style-type: none"> 1. students gain knowledge of unicellular and multi-cellular organism and mechanism of locomotion Pattern in invertebrate Animals, 2. students understand feeding, digestion in invertebrate Animals and mechanism of Respiration in invertebrate Animals, 3. To learn the mechanism of excretion and Primitive & Advanced Nervous system in invertebrate Animals, 4. To study various larval forms of invertebrates and general structure, character of animals of minor phyla.
	CC Zoo 02	Animal Behaviour	<ol style="list-style-type: none"> 1. students learn about various method of studying in Animal Behaviour feeding, Aggression, innate Anti-predator defences etc 2. Basic knowledge of communication skill of Animals,

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Class.	Course Code	Name of Paper.	out come
			3. Students learn various method of behaviour Pattern in social, Reproductive, Group selection etc, 4. Basic Knowledge of learning and memory, Biological rhythms.
	03	Quantitative Biology	1. To learn about basic knowledge of Biostatistics, and various Pattern of Presentation of data, 2. Student gain knowledge the measures of central tendencies and Hypothesis testing, 3. students learn by correlation, regressions and Probability, 4. To understand the types of models,
	04	ecology and environmental Physiology	1. Basic Knowledge of biogeochemical cycle, as known community ecology and

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Class	Course code	Name of Paper	out come
			Brief Knowledge of Adaptation Adaptation 2. student understand the Population Ecology, Demography and Models of Prey Predator dynamics, 3. To understand the Pollution ecology, Toxicology and their effect and environmental effect, 4. students learn Yoga and stress tolerance and Homeostatis & osmoregulation,
M.Sc Sem. IInd.	cc Zoo 01	General and comparative endocrinology of vertebrates	1. students understand the endocrine glands and his Secretions. 2. students gain knowledge of Biosynthesis of Hormones, 3. Explain functions and disorder of various endocrine gland hormone 4. students understand the Hormonal regulation and its metabolic activity

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Class	Course Code.	Name of Paper	out come
	cc Zoo 02	Cremete Biology & Reproductive Physiology in Humen Beings	<ol style="list-style-type: none"> 1. To understand Proccers of sex differentiation and Reproductive cycle, 2. students understand Reproductive system and endocrine Physiology of male hormone, 3. To understand female Reproductive system and junctions of ovarian Hormones, 4. Process of fertilization and its events,
	cc Zoo 03	molecular Cell Biology	<ol style="list-style-type: none"> 1. Explain the structure and junctions of Bio-membranes, 2. students gain knowledge of cytoskeleton and structure of Cilia & flagella, 3. Explain the structure and junctions of cell organelles and cell communication and cell matrix 4. students gain knowledge of morphology & junctions of chromosomes and

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Class	Course Code	Name of Paper	out come
			DNA, RNA and Apoptosis.
	CC Zoo 04	Tools and Techniques for Biology	1. students learn the use of various tools & techniques of instruments, 2. students understand the microbiological and cell culture technique, 3. To understand cryopreservation technique and immunological techniques 4. students learn various separation techniques in Biology.

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Programme outcome

class	Paper	Programme outcome
M.Sc. IIIrd Sem.	P-1.	students will understand different system skeletal & Integumentary system and comparative anatomy of Vertebrate animals,
	P-2	students understand about Procedure of taxonomy and knowledge of Systematic collection of Animals,
	P-3.	students gain knowledge about structure and functions of immune cells, Immunoglobulins, and interaction of antibodies,
	P-4	students understand about theories of molecular evolutions and genetic structure of population ecology,
M.Sc. IV Sem.	P-1.	students will learn the Physiology of Nervous system, Respiration, and regulation in body temperature,
	P-2	students will understand the structure, functions, classification and metabolism of Carbohydrate lipid, Amino Acid, vitamins and Nucleic Acids,

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P-3 Gain knowledge of structure characters and classification of fishes,

P-4 students will understand care and cure of fishes and knowledge of fish farming.

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Class	Course Code	Name of Paper	Outcome
M.Sc. IIIrd Sem.	CC Zoo 01	Comparative anatomy of Vertebrates	1. To classify vertebrates up to orders and know the examples and origin of chordates, 2. Students understand vertebrate Integument and its derivatives, and Evolution of Hearts, 3. To study comparatively Digestive system, Respiratory system skeletal system and Vertebra, limbs & girdles, 4. To study comparatively Urogenital system, Brain and Nervous system.
	CC Zoo 02	Biosystematics and Taxonomy	1. Students gain knowledge basic concepts of biosystematics and taxonomy. 2. Students understand the taxonomic characters and biological classification, 3. To study of Procedure of Taxonomic Keys and Collections, Preservation, Curating and ICZN, 4. Students learn of Biodiversity.

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Class	Course Code.	Name of Paper.	out come
	cc Zoo 03	immunology and developmental Biology.	<ol style="list-style-type: none"> 1. students understand innate and Acquired immunity and Lymphoid organs and Nature of immune response, 2. To study of Antigen Antibodie interactions and structure junction of immunoglobulins, 3. students gain knowledge of major and minor Histo compatibility complex and structure junctions of MHC molecules, 4. The Process of Vertebral morphogenesis and morphogenesis of organ system.
	cc Zoo 04	Population Genetics and Evolution	<ol style="list-style-type: none"> 1. students of knowledge of theories of evolution 2. To study of genetics of speciation and Quantitative traits in Populations, 3. student learn molecular evolution and molecular Phylogenetics, 4. To understand of

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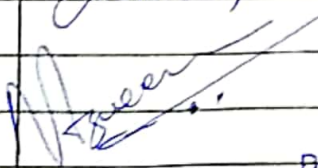
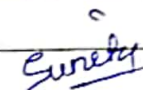
class.	Paper code	Name of Paper	out come
			Genetic structure of Natural Population, and Population Genetics, Ecology.
M.Sc. IV Sem.	CE Zoo 01	Neuro Physiology and General Physiology	<p>1. students understand of central Nervous system and cerebro spinal fluid and Electrical activity of brain,</p> <p>2 To study of Neuro-transmitters and Cranial Nerves and Autonomic Nervous System.</p> <p>3. student learn about feeding mechanism and Physiology of Digestion and Physiology of Respiration and Circulation of Body fluids,</p> <p>4. student understand Physiology of muscles and mechanism of Nitrogen Excretion and Regulation of body temperature,</p>

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class	Paper Code	Name of Paper	out come.
	CC Zoo 02	Biochemistry metabolic regulation and cell junctions	1. students understand the fine structure, junction, classification and metabolism of Carbohydrate, lipid, and regulation of water balance, 2. students knowledge of Properties, structure and Biosynthesis of Amino Acid, Protein & macro, micro minerals, 3. Explain the fine structure of Nucleic Acid and Vitamins. 4. student understand on the detail of Enzymes and Biologic oxidations,
	CC Zoo 03	Tethyology structure and junctions	1. students knowledge the origin, evolution and classification of fishes, 2. students understand Physiology of various organ system in fishes 3. students study Adaptation of fishes,

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class	Paper Code	Name of Paper	outcome.
			colouration and Sound Producing organs, 4. student learn about migration, Parental care, Reproductive Process and Identification of Poisonous fishes,
	CC 200 04	APPLIED fisheries	1. student understand common disease of fishes and their care and Economic value of fishes, 2. To study of method in fish culture and Identification of fresh water fishes of Chattisgarh, 3. students Knowledge of fish farming, 4. To understand the Preparation and maintenance of Aquarium and identify the larvivorous fishes,



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