

PROGRAMME SPECIFIC OUTCOMES, PROGRAMME OUTCOMES AND COURSE OUTCOMES
PG & DEPARTMENT OF ZOOLOGY
B.SC., ZOOLOGY, M.Sc. ZOOLOGY.,

PSOs	PROGRAMME SPECIFIC OUTCOMES
PSO1	Placement: To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.
PSO2	Entrepreneur: To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations
PSO3	Research and Development: Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.
PSO4	Contribution to Business World: To produce employable, ethical and innovative professionals to sustain in the dynamic business world.
PSO5	Contribution to the Society: To contribute to the development of the society by collaborating with stakeholders for mutual benefit
B.SC., ZOOLOGY	
PROGRAMMES OUTCOMES	
POs	Description of POs
PO1	Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study
PO2	Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.
PO3	Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.
PO4	Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.
PO5	Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.
PO6	Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an

	experiment or investigation
PO7	Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team
PO8	Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.
PO9	Reflective thinking: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society.
PO10	Information/digital literacy: Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.
PO11	Self-directed learning: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.
PO 12	Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.
PO 13	Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issues related to one's work, avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.
PO 14	Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.
PO 15	Lifelong learning: Ability to acquire knowledge and skills, including „learning how to learn“, that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development /reskilling.

PSO, PO & CO STATEMENTS - 2022 - 2025

B.Sc ZOOLOGY

PROGRAMMES OUTCOMES

	Description of CO's	Bloom's Taxonomy / Cognitive Domain
CORE I: INVERTEBRATA – I		
CO1.	Describe common and distinctive features of invertebrate organisms including Protozoans, Porifera, coelenterates, Platyhelminthes, and Annelids.	Knowledge (Level K1)
CO2.	Explain Phylogenetic relationships between the phyla covered.	Comprehension (Level K2)
CO3.	Discuss important concepts in Invertebrate's organization including body symmetry, Body cavity and Segmentation.	Analysis (Level K3)
CO4.	Describe important biological processes in Invertebrates.	Synthesis (Level K6)
CO5.	Gain Knowledge about locomotion, body support, Feeding and Digestion, Excretion and Osmoregulation, Respiration, Circulation, Sensory perception and Behavior Reproduction and development.	Synthesis (Level K6)
CORE II: INVERTEBRATA – II		
CO1.	Understood the Classification and General characteristics Phylogeny of Invertebrates.	Knowledge (Level K1)
CO2.	To explain general characters of Arthropoda and Metamorphosis and Economic importance of Insects.	Comprehension (Level K2)
CO3.	To study the External as well as internal characters of Non-chordates.	Application (Level K3)
CO4.	Described the general biology of few selected Non-chordates which are useful to mankind.	Analysis (Level K4)
CO5.	Enriched knowledge on some importance of Mollusca and Echinodermata	Application (Level K3)
ANCILLARY ZOOLOGY : INVERTEBRATA & VERTEBRATA		
CO1.	Identified the Invertebrates and Features of Protozoa and Porifera.	Knowledge (Level K1)
CO2.	External and Internal features of the organisms will be remembered.	Comprehension (Level K2)
CO3.	Identified the features and classify Vertebrates.	Comprehension (Level K2)
CO4.	Identify Prochordates, Pisces and Amphibians.	Comprehension (Level K2)
CO5.	Compare Poisonous and Non- poisonous Snakes and explain the adaptive features in Aves and Mammals.	Comprehension (Level K2)

SKILL BASED COURSE I: APICULTURE		
CO1.	Gain knowledge about steps involved in Bee keeping.	Knowledge (Level K1)
CO2.	Comprehend innovative ideas to flourish economically.	Application (Level K3)
CO3.	To produce value added products from the byproducts.	Synthesis (Level K6)
CO4.	To overcome the practical difficulties in apiculture.	Synthesis (Level K6)
CO5.	To learn techniques to commercialize the byproducts of Bee keeping	Evaluation (Level K5)
CORE III: CHORDATA		
CO1	Portray the origin and ancestry of Chordates and basic principles of Chordate classification.	Knowledge (Level K1)
CO2	Gain knowledge on fundamental Chordate characters.	Comprehension (Level K2)
CO3	Understand interrelationship of Pro-chordates with Invertebrates and Vertebrates	Application (Level K3)
CO4	Gain knowledge on Birds and their Migration.	Analysis (Level K4)
CO5	To understand the Economic importance of higher animals.	Evaluation (Level K5)
ANCILLARY ZOOLOGY II: INTEGRATED ZOOLOGY		
CO1.	Basic Human Physiology and Developmental biology.	Knowledge (Level K1)
CO2.	To study the Animal cell and fundamental concepts of Genetics.	Comprehension (Level K2)
CO3.	Compare the types of Immunity and diseases.	Comprehension (Level K2)
CO4.	Discuss about the Cloning and concept of Evolution.	Comprehension (Level K2)
CO5.	Utilize the knowledge gained in Poultry farming and Vermicomposting to become an Entrepreneur.	Application (Level K3)
SKILL BASED COURSE II: DIARY FARMING		
CO1.	To gain knowledge about Dairy farming and new techniques adapted for Cattle Breeding.	Knowledge (Level K1)
CO2.	To understand about various Dairy breeds and their importance	Comprehension (Level K2)
CO3.	To learn the techniques and apply for the preparation of Cattle feed and their nutritive values.	Application (Level K3)
CO4.	To analyse the composition and Nutritive value of Milk and gain in-depth knowledge about Pasteurization of milk and Milk products.	Analysis (Level K4)
CO5.	Have an enhanced knowledge about Bacterial and Viral disease in Dairy farms.	Evaluation (Level K5)

CORE PRACTICAL I: INVERTEBRATA & CHORDATA		
CO1.	Able to dissect and examine various Organ systems in situ.	Knowledge (Level K1)
CO2.	Preserving the Animals for examination.	Comprehension (Level K2)
CO3.	Acquire basic Skills in animal dissections.	Application (Level K3)
CO4.	Be familiar with the External morphology of animals.	Analysis (Level K4)
CO5.	To know their salient features by observing the animals.	Evaluation (Level K5)
ANCILLARY PRACTICAL I: INVERTEBRATA & VERTEBRATA AND INTEGRATED ZOOLOGY		

CO1.	To remember and distinguish animals with their Morphology and Anatomy.	Application (Level K3)
CO2.	Experimental knowledge on Developmental aspects.	Analysis (Level K4)
CO3.	To understand different types of Macroscopic concept.	Evaluation (Level K5)
CO4.	Identification of developmental stages of Frog.	Evaluation (Level K5)
CO5.	Understand the Evolutionary concept.	Analysis (Level K4)

CORE IV: CELL BIOLOGY		
CO1.	Understand different types of Microscopic techniques to identify Subcellular structures in a Cell.	Knowledge (Level K1)
CO2.	Learn various Cytological techniques to understand Ultra-structure of Cellular organelles.	Comprehension (Level K2)
CO3.	Be able to describe the structure and functions of Nucleus with reference to special chromosomes.	Application (Level K3)
CO4.	Understand the Cell division and Genetic makeup of the cell and its significance.	Analysis (Level K4)
CO5.	Know about Cancer and its types, Causes, Diagnosis and Treatment.	Evaluation (Level K5)

SKILL BASED COURSE III: VERMICULTURE		
CO1.	To analyze the Role of Earthworm in Organic farming.	Knowledge (Level K1)
CO2.	Environmental protection through Solid Waste Management.	Comprehension (Level K2)
CO3.	Adopt new techniques in maintaining Soil Health.	Application (Level K3)
CO4.	Deploy Vermitechnology for Sustainable agriculture	Analysis (Level K4)
CO5.	To understand Primary, Secondary degradation and Vermibed preparation.	Evaluation (Level K5)

NON-MAJOR ELECTIVE I: SERICULTURE		
CO1.	Identify and know the importance of Silkworm	Knowledge (Level K1)
CO2.	Comprehend the methodologies involved in Silkworm rearing	Comprehension (Level K2)
CO3.	Execute self-employment in Sericulture	Application (Level K3)
CO4.	Validate different Rearing techniques and it's by products	Analysis (Level K4)
CO5.	Understand and control the diseases of Silkworm	Evaluation (Level K5)

CORE V: GENETICS		
CO1.	To understand Mendelian principle in Plant Cross.	Knowledge (Level K1)
CO2.	To know about Linkage and Crossing over.	Comprehension (Level K2)
CO3.	To understand Mutation.	Application (Level K3)
CO4.	To study Human Chromosomes and Syndromes.	Analysis (Level K4)
CO5.	To know about DNA and DNA repair.	Evaluation (Level K5)

CORE PRACTICAL II: CELL BIOLOGY, GENETICS, BIostatISTICS AND BIOINFORMATICS		
CO1.	Understand the process of mitotic and meiotic cell division.	Knowledge (Level K1)
CO2.	Gain knowledge about cell and cell organelles	Comprehension (Level K2)
CO3.	To give an insight about biochemistry and cell organelles in research.	Application (Level K3)
CO4.	To understand the Mendelian Laws through Experiments	Analysis (Level K4)
CO5.	To acquaint with Biological Data Bases	Evaluation (Level K5)

CORE VI:BIostatISTICS AND BIOINFORMATICS		
CO1.	Understand the basic concept and application of Biostatistics and Bioinformatics.	Knowledge (Level K1)
CO2.	Know about the methods of data collection and techniques of Sampling.	Comprehension (Level K2)
CO3.	Understand the process of Classification and Tabulation of Data.	Application (Level K3)
CO4.	Know about the Diagrammatic and graphic presentation of data, measures of Central tendency and Dispersion.	Analysis (Level K4)
CO5.	To communicate the results of Statistical analysis accurately and effectively.	Evaluation (Level K5)

SKILL BASED COURSE IV : SERICULTURE		
CO1.	Identify and know the importance of Silkworm	Knowledge (Level K1)
CO2.	Comprehend the methodologies involved in Silkworm Rearing	Comprehension (Level K2)
CO3.	Execute self-employment in Sericulture	Application (Level K3)
CO4.	Validate different Rearing techniques and it's by products	Analysis (Level K4)
CO5.	Understand and control the diseases of Silkworm	Evaluation (Level K5)

CORE VII: BIOCHEMISTRY		
CO1.	Gain basic knowledge on Biomolecules.	Knowledge (Level K1)
CO2.	Understand the classification and biological importance of Carbohydrate.	Comprehension (Level K2)
CO3.	Get thorough knowledge the importance of Amino acids & Protein.	Application (Level K3)
CO4.	Know the classification, properties, and biological importance of Lipids.	Analysis (Level K4)
CO5.	Understand the Metabolism & Enzymes.	Evaluation (Level K5)

CORE VIII: DEVELOPMENTAL BIOLOGY		
CO1.	Acquaint with the theories of Developmental Biology.	Knowledge (Level K1)
CO2.	Gain in-depth knowledge in the developmental stages of Embryogenesis.	Comprehension (Level K2)
CO3.	Comprehend the process of Gastrulation and Organogenesis.	Application (Level K3)
CO4.	Have an enhanced knowledge and appreciation of life cycle transitions like Metamorphosis and Regeneration.	Analysis (Level K4)
CO5.	Acquire better understanding of scientific reasoning exhibited in experimental life science.	Evaluation (Level K5)

CORE PRACTICAL III: BIOCHEMISTRY AND DEVELOPMENTAL BIOLOGY		
CO1.	The biochemical understanding through scientific enquiry.	Application (Level K3)
CO2.	Students gain knowledge about various tools and techniques used in biological systems.	Analysis (Level K4)
CO3.	Understand the nature of mechanical, physical, and biochemical functions of humans.	Evaluation (K5)
CO4.	To know the enzymes, and the cells of which they are composed.	Evaluation (K5)
CO5.	To identify the developmental stages of Frog and Chick	Evaluation (K5)

ELECTIVE I: IMMUNOLOGY		
CO1.	To remember the structure and function of Immunological cells and organs.	Knowledge (Level K1)
CO2.	To understand the methods of Immunological interactions.	Comprehension (Level K2)
CO3.	To apply the knowledge of Antigens and Antibodies.	Application (Level K3)
CO4.	Recognize the significance of Immune system in Transplantation of organs.	Analysis (Level K4)
CO5.	Gain knowledge about Autoimmune and Immune Deficiency diseases.	Evaluation (Level K5)

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ELECTIVE I: BIOPHYSICS & INSTRUMENTATION		
CO1.	Able to know the basics about the Molecular bonds and interactions	Comprehension (Level K2)
CO2.	The learner will be trained in preparing solutions and handling Instruments at basic level.	Comprehension (Level K2)
CO3.	The students will be capable of interpreting and understanding the basis of Bioenergetics in living system.	Application (Level K3)
CO4.	Gain the knowledge in the area of Enzyme and its action.	Evaluation (Level K4)
CO5.	Understand and apply skills in Biological tools and techniques.	Evaluation (Level K5)

ELECTIVE II: MICROBIOLOGY		
CO1.	To keep in mind about the basic technologies applied in Microbiology.	Knowledge (Level K1)
CO2.	To understand the different Culture techniques.	Comprehension (Level K2)
CO3.	To apply the Microbial Culture techniques in Industrial and Agricultural aspects.	Application (Level K3)
CO4.	To analyze the Applications of Microbiology.	Analysis (Level K4)
CO5.	To evaluate the Microbial diseases.	Evaluation (Level K5)
ELECTIVE II:HUMAN GENETICS AND COUNSELING		
CO1.	The students will be able to get the knowledge of Physiology and Genetics of blood groups.	Comprehension (Level K2)
CO2.	Knowledge of research principles and methods applicable in the discipline of Genetic testing approach taken for specific Genetic disorders.	Comprehension (Level K2)
CO3.	Gain knowledge of the role of Genetics as the underlying cause of various disorders of the human body.	Application (Level K3)
CO4.	The course will give an idea about Genes related to behavior and Behavioral disorders.	Application (Level K3)
CO5.	To train the students to seek the possibilities of identifying Human genetics and counseling as a Profession.	Analysis (Level K4)

SKILL BASED COURSE V : AQUACULTURE		
CO1.	To study the Introductory of aspects of Aquaculture.	Comprehension (Level K2)
CO2.	Demonstrate the technical aspects of Aquaculture.	Application (Level K3)
CO3.	To know the Pond preparation and production of Prawn and Oyster.	Application (Level K3)
CO4.	To know about the commercial importance of Pearl and Seaweed.	Comprehension (Level K2) Application (Level K3)
CO5.	To elaborate the Diseases in Fishes and Entrepreneur development in Aquaculture.	Comprehension (Level K2) Application (Level K3)

CORE IX: ANIMAL PHYSIOLOGY		
CO1.	Know the importance of food and Nutrition and Digestion.	Knowledge (Level K1)
CO2.	Attain knowledge on respiratory organ and blood circulation systems.	Comprehension (Level K2)
CO3.	Comprehend the structure and function of excretory system.	Application (Level K3)
CO4.	Interpret the association between the nerve coordination and muscle physiology and Receptors.	Analysis (Level K4)
CO5.	Gain a deep knowledge on Bioluminescence and Hormones.	Evaluation (Level K5)
CORE X: BIOTECHNOLOGY		
CO1.	Know about the tools and methods of Cloning by using Bio techniques.	Knowledge (Level K1)
CO2.	Elucidate transgenic animals and their importance. Acquire knowledge on tissue culture.	Application (Level K3), Synthesis (Level K6)
CO3.	Explain the history, scope and basis of Microbial Biotechnology and Transgenic plants.	Comprehension (Level K2)
CO4.	Analyze the various aspects of Environmental Biotechnology including Bio degradation, bioremediation, and biosensor.	Analysis (Level K4)
CO5.	Understand the production and application of r-DNA proteins.	Application (Level K3), Synthesis (Level K6)
CORE PRACTICAL IV: ANIMAL PHYSIOLOGY AND BIOTECHNOLOGY		
CO1.	Impart knowledge about various metabolic and Physiological mechanism of animals.	Application (Level K3)
CO2.	Students gain fundamental knowledge of Physiological process like Thermoregulation and Excretion.	Analysis (Level K4)
CO3.	To understand and gain knowledge about r-DNA.	Analysis (Level K4)
CO4.	Apply their knowledge in the production and application of Human Health Care products.	Evaluation (Level K5)
CO5.	Impart knowledge about various Metabolic and Physiological mechanism of animals.	Application (Level K3)
ELECTIVE III - EVOLUTION		
CO1.	Recall the basic concepts of Origin of Life on Earth.	Comprehension (Level K2)
CO2.	Relate the evidence of Evolution and the supporting theories.	Comprehension (Level K2)
CO3.	To know about the Species concept and Genetic Drift.	Application (Level K3)
CO4.	know the causes for Evolution.	Knowledge (Level K1)
CO5.	Discuss the stages of Human Evolution.	Application (Level K3)

ELECTIVE III: ANIMAL BEHAVIOUR

CO1.	Understand different type of Animal behavior and its significance.	Comprehension (Level K2)
CO2.	Get an insight to the students about the stereotyped behaviors.	Comprehension (Level K2)
CO3.	Know the Social behavior.	Comprehension (Level K2)
CO4.	Understand the Sexual behavior.	Comprehension (Level K2)
CO5.	Understand the type and characters of short- and long-term rhythms: Circadian Rhythm.	Analysis (Level K4)

NON-MAJOR ELECTIVE II: ECONOMIC ZOOLOGY

CO1.	Explain the Aquaculture practices.	Knowledge (Level K1)
CO2.	Outline Shrimp culture methods and Hatchery management.	Comprehension (Level K2)
CO3.	Apply the knowledge of Dairy and Pig farming.	Comprehension (Level K2)
CO4.	Analyze the methods of Poultry farming, Disease and control measures.	Knowledge (Level K1)
CO5.	Assess the methods and uses of Vermicomposting.	Application (Level K4)

SKILL BASED COURSE VI: PROJECT

CO1.	Make Research proposal.	Application (Level K3)
CO2.	Construct tool of Data collection.	Analysis (Level K4)
CO3.	Learn fieldwork modalities.	Evaluation (Level K5)
CO4.	Understand the process of Data analysis.	Synthesis (Level K6)
CO5.	Writing Research report.	Synthesis (Level K6)

M.Sc., ZOOLOGY**PROGRAMMES OUTCOMES**

POs	Description of POs
PO1	Relevant knowledge of core concept, principles, themes, terminology and classified system in the biology and microbiology disciplines covered in Zoology
PO2	Scientific explanation for the unity and diversity of life, genetical and heredity concepts of life in the earth and analyze this with developmental stages of animal with copious examples.
PO3	Keen awareness about the environment, ecological balance and clean green concepts and develop empathy and love towards the society.
PO4	Quantitative, qualitative analysis and interpretation of biological data synthesis of information from the database.
PO5	Skills in designing and carryout the research projects using appropriate biological techniques and approaches
PO6	Clear knowledge about the function of physiological system of animals at cell and molecular level and their biological concepts.
PO7	Gain knowledge of agro based small scale industries like sericulture, fish farming, poultry farming and vermicompost production to aim at self-reliance.

M.Sc., ZOOLOGY / COURSE OUTCOMES

	Description of CO's	Bloom's Taxonomy / Cognitive Domain
COREI:CELL AND MOLECULAR BIOLOGY		
CO1.	Understand techniques of Microscopes.	Comprehension (Level K2)
CO2.	Learn the structure and functions of Cell organelles.	Comprehension (Level K2)
CO3.	Understand the role of membranes in Cell communication.	Application (Level K3)
CO4.	Know about Gene organization, expression& regulation.	Analysis (Level K4)
CO5.	Know about Cell cycle, Cancer and its causes.	Analysis (Level K4)

CORE II: ENVIRONMENTAL BIOLOGY		
CO1.	Focus on population and Community Ecology.	Comprehension (Level K2)
CO2.	Illustrate the different types of Resources.	Comprehension (Level K2)
CO3.	To comprehend Environmental pollution and their impact on the environment.	Application (Level K3)
CO4.	To know about the Environmental Disaster and Management strategies. Analyze causes of Climatic change and its effect.	Analysis (Level K4)
CO5.	Introduce the basic concepts of Ecology.	Analysis (Level K4)
CORE III: MOLECULES OF LIFE		
CO1.	To understand the structural organization and functions of Biomolecules.	Comprehension (Level K2)
CO2.	To be able to explain the specificity of Enzymes (biochemical catalysts), and the chemistry involved in Enzyme action.	Comprehension (Level K2)
CO3.	To understand the principles of Bioenergetics and Enzyme catalysis.	Application (Level K3)
CO4.	To be able to explain how the metabolism of organic compounds leads ultimately to the generation of large quantities of ATP.	Analysis (Level K4)
CO5.	To understand the types, structure, biochemical properties and functions of Hormones and Vitamins.	Analysis (Level K4)
CORE PRACTICAL I: CELL & MOLECULAR BIOLOGY, ENVIRONMENTAL BIOLOGY AND MOLECULES OF LIFE		
CO1.	To apply modern tools in Cell and Molecular Analysis.	Application (Level K3)
CO2.	To validate metabolic and Microbial studies	Application (Level K3)
CO3.	To keep in mind the Environmental Assessment Strategies and Management systems.	Application (Level K3)
CO4.	To remember the Biochemical activity at Cellular level.	Analysis (Level K4)
CO5.	To comprehend the methodologies of Biochemistry.	Evaluation (Level K5)
ELECTIVE I: STRUCTURE & FUNCTION OF INVERTEBRATES		
CO1.	Under stood the Classification and General characteristics Phylogeny of Invertebrates.	Application (Level K3)
CO2.	Describe important Biological processes in Invertebrates.	Application (Level K3)
CO3.	Describe common and distinctive features of Invertebrate organisms.	Application (Level K3)
CO4.	Gain knowledge about Locomotion, Digestion, Respiration and. Excretion	Analysis (Level K4)
CO5.	Explain Phylogenetic relationships between the Phyla covered.	Evaluation (Level K5)

ELECTIVE I: COMPARATIVE ANATOMY OF CHORDATES		
CO1.	Under stood the Classification and General characteristics Phylogeny of Chordates.	Application (Level K3)
CO2.	Describe important biological processes in Vertebrates.	Application (Level K3)
CO3.	Describe common and distinctive features of Vertebrate organisms.	Application (Level K3)
CO4.	Gain knowledge about Locomotion, Digestion, Excretion and Osmoregulation, Respiration.	Analysis (Level K4)
CO5.	Explain Phylogenetic relationships between the phyla covered.	Evaluation (Level K5)
CORE IV: MOLECULAR GENETICS		
CO1.	Mendelian Genetics, their principles and Gene interaction will be taught.	Knowledge (Level K1)
CO2.	To learn about Chromosomes in Linkage and Crossing over.	Comprehension (Level K2)
CO3.	To know the Genetic Disorders and Diseases.	Application (Level K3)
CO4.	Know about the basics of Population genetics.	Analysis (Level K4)
CO5.	To explore the Applications of Genetics.	Evaluation (Level K5)
CORE V: EMBROLOGY		
CO1.	Explain specialized cells of gonads and the process of Gametogenesis	Knowledge (Level K1)
CO2.	Compare fertilization process, events during and affect Fertilization and Cleavage patterns in selected animals.	Comprehension (Level K2)
CO3.	Comprehend the process of Gastrulation and Organogenesis.	Application (Level K3)
CO4.	AnalyzetheprocessofinductionanddifferentiationinEmbryonicDevelopment.	Analysis (Level K4)
CO5.	Acquire better understanding of scientific reasoning exhibited in experimental Life science.	Evaluation (Level K5)
COREVI: APPLIED MICROBIOLOGY		
CO1	Gain knowledge in isolation and identification of Microbes.	Comprehension (Level K2)
CO2	Exploit Microorganism in Food production.	Application (Level K3)
CO3	An overview of the Microbes in medical field.	Application (Level K3)
CO4	An understanding of Microbes in sewage treatment.	Analysis (Level K4)
CO5	Illustration of Microbial fermentation.	Evaluation (Level K5)

CORE PRACTICAL II: MOLECULAR GENETICS, EMBROLOGY AND APPLIED MICROBIOLOGY		
CO1	To study the Mendelian Experiments.	Application (Level K3)
CO2	Basic applications of embryonic development.	Application (Level K3)
CO3	To keep in mind the development strategies.	Application (Level K3)
CO4	To comprehend embryonic formation stages with suitable example.	Analysis (Level K4)
CO5	Gain knowledge in isolation and identification of microbes.	Evaluation (Level K5)
ELECTIVE II: BIOLOGICAL TECHNIQUES		
CO1.	To learn the Procedures, Principles and Applications of various techniques.	Comprehension (Level K2)
CO2.	Explain the Principles and applications of various Recombinant DNA methods.	Comprehension (Level K2) Analysis (Level K4)
CO3.	Analyze immune techniques of ELISA, RIA, Immuno blotting, Immuno fluorescence Microscopy and Flow Cytometry.	Application (Level K3), Analysis (Level K4)
CO4.	Outline the Biophysical and Radio labeling techniques.	Comprehension (Level K2)
CO5.	To know the Principles of Research Design and Thesis writing.	Comprehension (Level K2), Application (Level K3),
ELECTIVEII: ECONOMIC ZOOLOGY		
CO1.	To study the Introductory of aspects of Beneficial insects.	Comprehension (Level K2)
CO2.	Demonstrate the technical aspects of Aquaculture.	Application (Level K3)
CO3.	To know the Poultry farming.	Application (Level K3)
CO4.	To know about the Commercial importance of Zoology.	Comprehension (Level K2), Application (Level K3),
CO5.	To elaborate the Diseases of animals.	Comprehension (Level K2), Application (Level K3),

CORE VII: HUMAN PHYSIOLOGY		
CO1.	To gain knowledge of the feeding mechanism and Digestion.	Knowledge (Level K1)
CO2.	To know about the regulation of Heartbeat and Blood Pressure, Neural and Chemical Regulation of Respiration and transfer of air.	Comprehension (Level K2)
CO3.	To perceive the knowledge about Kidney function and pattern of Excretion.	Application (Level K3)
CO4.	To understand the concept of about Muscular system and theories related to it.	Analysis (Level K4)
CO5.	To understand about the Nervous system and its working mechanism, Sense organ and Hormones.	Evaluation (Level K5)
CORE VIII : APPLIED SERICULTURE		
CO1.	Students learn the basics of Silkworm rearing techniques.	Application (Level K3)
CO2.	Understand the economic importance of Sericulture.	Application (Level K3)
CO3.	Obtain knowledge on the basic facts about Grainages.	Application (Level K3)
CO4.	Know about the Silk reeling and Cocoon marketing.	Analysis (Level K4)
CO5.	Know about Importance of Soils with reference to Mulberry cultivation.	Evaluation (Level K5)
CORE IX: ANIMAL BIOTECHNOLOGY		
CO1.	To know about the importance of enzymes, gene transfer methods and techniques in Biotechnology.	Knowledge (Level K1), Comprehension (Level K2)
CO2.	Explain the procedures in Animal Cell culture and Applications.	Comprehension (Level K2), Application (Level K3),
CO3.	Identify the overall process in Plant tissue culture and Applications.	Application (Level K3), Synthesis (Level K6)
CO4.	Analyze the principles in formulating Pharmaceutical industrial products and their applications.	Application (Level K3), Analysis (Level K4)
CO5.	To know the recent trends in Biotechnology and applying their knowledge in life sciences for betterment of Society.	Comprehension (Level K2), Application (Level K3),

CORE PRACTICAL III: HUMAN PHYSIOLOGY, APPLIED SERICULTURE AND ANIMAL BIOTECHNOLOGY		
CO1.	To apply functional knowledge on various organs and its status.	Evaluation (Level K5)
CO2.	To comprehend Physiological activity of organ systems.	Analysis (Level K4)
CO3.	To understand the Economic importance of Sericulture.	Synthesis (Level K6)
CO4.	To gain knowledge on Silkworm rearing techniques.	Evaluation (Level K5)
CO5.	To analyze the Biotechnological areas.	Evaluation (Level K5)
ELECTIVE III: BIOSTATISTICS & BIOINFORMATICS		
CO1.	Understand the basic concept and application of Biostatistics and Bioinformatics.	Knowledge (Level K1)
CO2.	Know about the methods of Data collection techniques.	Comprehension (Level K2)
CO3.	Know about measures of Central tendency and Dispersion.	Application (Level K3)
CO4.	To communicate the results of Statistical analysis accurately and effectively	Analysis (Level K4)
CO5.	Caters the immediate needs in Pharmaceutical industries.	Evaluation (Level K5)
ELECTIVE III: ORNAMENTAL FISH CULTURE		
CO1.	To study the various Ornamental fishes and its culture	Comprehension (Level K2)
CO2.	To recollect the general Ornamental fishes	Application (Level K3)
CO3.	To understand the scope of Fish culture	Application (Level K3)
CO4.	To apply the ornamental Fish culture methods for Aquarium maintenance	Analysis (Level K4)
CO5.	To review the different types of Cultural methods	Evaluation (Level K5)
CORE X: IMMUNOLOGY		
CO1.	An overview of the Immune system, Principles of Innate and Adaptive Immunity.	Knowledge (Level K1)
CO2.	An Understanding of Antigen recognition by Immune cells.	Comprehension (Level K2)
CO3.	Illustration of Antigen processing and presentation to T Lymphocytes by Antigen presenting cells and understanding the role of MHC Complex.	Comprehension (Level K2)
CO4.	Description of consequence of Immunodeficiency leading to diseases such as Inherited Acquired Immunodeficiency disease, Hypersensitivity diseases, Autoimmunity and Transplant rejection.	Evaluation (Level K5)

CO5.	An understanding of manipulation of Immune responses for the benefit of mankind -Vaccines	Evaluation (Level K5)
CORE XI: ORGANIC EVOLUTION		
CO1.	To understand the concepts of origin of life and their evolution in different Past Eras and to understand different theories of Evolutionary concepts.	Knowledge (Level K1)
CO2.	To know well about the Adaptations, Adaptive Radiations with appropriate examples.	Comprehension (Level K2)
CO3.	To Understand the genetic basis of Evolution, Human Karyo typing and Speciation.	Application (Level K3)
CO4.	To have an knowledge about Molecular Evolution.	Analysis (Level K4)
CO5.	To have a knowledge about the origin and evolution of Human and milestones of Cultural evolution.	Evaluation (Level K5)
CORE PRACTICAL IV: IMMUNOLOGY & ORGANIC EVOLUTION		
CO1.	Understanding the role of MHC Complex.	Application (Level K3)
CO2.	To understand T Lymphocytes by antigen presenting cells.	Application (Level K3)
CO3.	Illustration of Antigen processing and presentation.	Application (Level K3)
CO4.	To understand the Evolution through experiments	Analysis (Level K4)
CO5.	Able to perform, analyses and report on experiments and observations in Evolution.	Evaluation (Level K5)
ELECTIVE IV: POULTRY FARMING		
CO1.	Discuss the aspects of Poultry industry and Nutrition	Knowledge (Level K1)
CO2.	Identify the Indian Exotic breeds, Importance of Layers and Broilers and to evaluate their efficiency.	Evaluation (Level K5)
CO3.	Use the Poultry equipment for day-to-day activities to be involved in the Farm and explain the Rearing system and use them efficiency.	Application (Level K3)
CO4.	Compile the source of ingredients for the Poultry feed stuff and formulate homemade feed for Broilers and Layers and Feed additives.	Knowledge (Level K1), Application (Level K3)
CO5.	Demonstrate the practical aspects of Chick rearing.	Application (Level K3)
ELECTIVE IV: NUTRITION AND DIETETICS		
CO1.	To understand the Energy values of various Foods.	Comprehension (Level K2)
CO2.	To apply the importance of Food chart.	Application (Level K3)
CO3.	To analyze the Food deficiency diseases.	Evaluation (Level K5)

CO4.	To know about the Food borne diseases.	Analysis (Level K4)
CO5.	To avoid Malnutrition and FSSAI	Evaluation (Level K5)
CORE PROJECT : PROJECT		
CO1.	To prepare the students for further Research.	Evaluation (Level K5)
CO2.	Inculcate innovative ideas for modern Science and Technology Development.	Analysis (Level K4)
CO3.	Learn to write Research proposals for funding.	Synthesis (Level K6)
CO4.	To become Technically knowledge students.	Evaluation (Level K5)

