

B.Sc. ZOOLOGY PROGRAMME

PROGRAMME SPECIFIC OUTCOME (PSO)

PSO1: Describe the major concepts and theoretical principles in Undergraduate Programme of Zoology

PSO2: Apply scientific knowledge for experimentation and developing life-skills.

PSO3: Developing taxonomical skills in identifying and discovering new fauna and flora.

PSO4: To disseminate knowledge and new concepts by enhancing communication skills.

PSO5: Develop analytical, creative, cognitive skills with social responsibility and environmental consciousness

SEMESTER 1

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY1CRT01	General perspectives in Science & Protistan Diversity	2	CORE COURSE 1
ZY1CMT01	Non Chordate Diversity	2	COMPLEMENTARY COURSE 1

SEMESTER 1

CORE COURSE 1- General perspectives in Science & Protistan Diversity

CREDITS-2

COURSE OUTCOMES

CO1- Summarize the basic philosophy of science and its concepts and scope (U)

CO2- Describe the basic taxonomical principles and tools and apply it. (K, U, A, A)

CO3- Imparting knowledge on Protistan Diversity and its economic importance. (K,U,A)

CO4- Sketching and illustrating microbial forms. (U,A)

SEMESTER 1

COMPLEMENTARY COURSE 1- Non Chordate Diversity

CREDITS-2

COURSE OUTCOMES

CO1- Develop appreciation on Non-Chordate diversity(K,U)

CO2- Comparing and contrasting different taxa on invertebrates(K,E,A)

CO3- Discussion on Protistan Diversity and its economic importance. (K,U,A)

CO4- Imparting knowledge on the evolutionary significance of invertebrate fauna (K,U,E,A)

SEMESTER 2

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY2CRT02	Animal Diversity – Non Chordata	2	CORE COURSE 2
ZY2CMT02	Chordate Diversity	2	COMPLEMENTARY COURSE 2

SEMESTER 2

CORE COURSE 2- Animal Diversity – Non Chordata

CREDITS-2

COURSE OUTCOMES

CO1- Instill curiosity on Non-Chordate diversity(K,U)

CO2- Comparing and contrasting different taxa on invertebrates(K,E,A)

CO3- Explain the economic importance of invertebrates. (K,U,A)

CO4- Imparting knowledge on the evolutionary significance of invertebrate fauna (K,U,E,A)

SEMESTER 2

Complementary course 2- Chordate Diversity

CREDITS-2

COURSE OUTCOMES

CO1- Demonstrate the variety and diversity of Chordate life(K,U)

CO2- Comparing and contrasting different taxa of Chordate (K,E,A)

CO3- Convince the economic importance of Chordates and aid in their conservation. (K)

CO4- Describe the phylogeny of Chordata (K,U)

SEMESTER 3

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY3CRT03	Animal Diversity- Chordata	3	CORE COURSE 3
ZY3CMT03	Physiology and Immunology	3	COMPLEMENTARY COURSE 3

SEMESTER 3

CORE COURSE 3-ANIMAL DIVERSITY-CHORDATA- CREDITS-3

COURSE OUTCOMES

CO1-Explain the economic importance of some taxa and enhance life skills (K,U,A)

CO2-Describe the phylogenetic position of selected Chordata(K,U)

CO3- Illustrate the life cycle of selected organisms in various taxa (A,A,K)

CO4-.Rewrite the taxonomic status of selected organisms that are outdated (U,C)

CO5- Compare and contrast the physical and anatomical features of various taxa (K,U)

SEMESTER 3

COMPLEMENTARY COURSE 3-Physiology and Immunology

CREDITS-3

COURSE OUTCOMES

CO1- Explain and recognize the physiological structure and functions of various organs(K, U)

CO2-Describes physiological activity of organ system (K,U)

CO3- Apply anatomical knowledge in predicting the physiological consequences(U, A, A)

CO4- Distinguishes the types and functions of endocrine glands (K, U)

CO5- Discuss about health, health related problems , their origin and treatment(K, U, A,A)

CO6-Explain the immune systems and discuss the various immune responses (K, U, A)

SEMESTER 4

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY4CRT04	Research methodology, Biophysics and Biostatistics	3	CORE COURSE 4
ZY4CMT04	Applied Zoology	3	COMPLEMENTARY COURSE 4

SEMESTER 4

CORE COURSE 4- Research methodology, Biophysics and Biostatistics **CREDITS-3**

COURSE OUTCOMES

- CO1-** Explain the basic concept of scientific method in research process (K,U)
- CO2-** Describe the various research designs
- CO3-** Develop skill in research communication and scientific documentation (K,A,U)
- CO4-** Utilize statistical methods in biological studies (K,U,A)
- CO5-** Develop basic techniques of animal rearing, collection and preservation (K,U,A)

SEMESTER 4

COMPLEMENTARY COURSE 4- Applied Zoology

CREDITS-3

COURSE OUTCOMES

- CO 1-** Analyze the economic importance of fisheries and aquaculture. (K, U)
- CO2 -** Equip setting up and maintenance of Aquarium. (U, A)
- CO3-** Discuss the characteristics and role of earthworms in sustainable agriculture. (K, U, A)
- CO4-** Describe the various silkworms, rearing techniques and control measures of silkworm diseases. (U, A)
- CO5-** Explain various honey bees, beekeeping methods, maintenance and management of apiary. (K, U, A)
- CO6-** Equip for self employment opportunities with scientific knowledge to perform profitably & confidently (K, A, C)

SEMESTER 5

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY5CRT05	Environmental Biology and Human Rights	3	CORE COURSE 5
ZY5CRT06	Cell Biology and Genetics	3	CORE COURSE 6
ZY5CRT07	Evolution ,Ethology and Zoogeography	3	CORE COURSE 7
ZY5CRT08	Human Physiology ,Biochemistry and Endocrinology	3	CORE COURSE 8
ZY5OPT02	Public Health & Nutrition	3	OPEN COURSE

SEMESTER 5

CORE COURSE 5- Environmental Biology and Human Rights

CREDITS-3

COURSE OUTCOMES

CO1-Understand basic concepts of Environmental sciences and natural resources(k,U)

CO2- Develop the real sense of Human rights and its manifestations (U,K)

CO3- Summarize the basic concepts of Toxicology (K,U)

CO4-Construct consciousness regarding Biodiversity,environmental issues and conservation (U,C)

CO5- Create awareness on natural resources and their protection (K,U)

SEMESTER 5

CORE COURSE 6-Cell Biology and Genetics

CREDITS-3

COURSE OUTCOMES

CO1- Apply knowledge on the metabolic machinery of the cells. (K, U, A)

CO2 - Discuss the various stages of cell cycle (K, U)

CO3- Describe the Mendelian principles in dominance and Co- dominance.(U, A, A)

CO4- Understand the genetic linkage, crossing over and sex- linked inheritance in animals(K, U)

CO5- Analyze the Genetic disorders in Man (K, U, A, A)

CO6-Evaluate the need of genetic counseling and its significance(U, A,A)

SEMESTER 5

CORE COURSE 7- Evolution ,Ethology and Zoogeography

CREDITS-3

COURSE OUTCOMES

- CO1-** Explain the evolutionary history of Earth (K,U)
- CO2-** Describe the basic evolutionary concepts and theories (K,U)
- CO3-** Compare animal behavioral patterns (A,K,U)
- CO4-** Create basic knowledge on geographic animal distribution (C,K,U)
- CO5-** Impart knowledge on Animal Sociality (K,U)

SEMESTER 5

CORE COURSE 8-Human Physiology ,Biochemistry and Endocrinology

CREDITS-3

COURSE OUTCOMES

- CO1-** Explain and recognize the physiological structure and functions of various organs(K, U)
- CO2-** Apply anatomical knowledge in predicting the physiological consequences(K, A,A)
- CO3-** Describes physiological activity of various organ system(K)
- CO4-** Discuss the structure and role of carbohydrates, proteins, lipids and vitamins. (K, U)
- CO5-** Illustrate the Metabolic pathways of carbohydrates, proteins and lipids.(K, U)
- CO6-** Distinguishes the types and functions of endocrine glands (K,U)

SEMESTER 5

OPEN COURSE- Public Health & Nutrition

CREDITS-3

COURSE OUTCOMES

CO1-Discuss about the concept of health(K, U)

CO2- Understand the role of Nutrition in Man(U)

CO3-Create awareness on prevention and control of diseases(K, U)

CO4- Demonstrate various FIRST AID (U, A)

CO5-Equip and motivate to practice yoga and meditation in day-to-day life (K, A, C)

SEMESTER 6

COURSE CODE	TITLE OF THE COURSE	CREDITS	COURSE TYPE
ZY6CRT09	Developmental Biology	3	CORE COURSE 9
ZY6CRT10	Microbiology and Immunology	3	CORE COURSE 10
ZY6CRT11	Biotechnology, Bioinformatics & Molecular Biology	3	CORE COURSE11

ZY6CRT12	Occupational Zoology (Aquaculture, Apiculture, Vermicul ture	3	CORE COURSE12
ZY6CBT01	Ecotourism & Sustainable Development	3	CHOICE BASED CORE COURSE

SEMESTER 6

CORE COURSE- Developmental Biology

CREDITS-3

COURSE OUTCOMES

CO1-Study the laws and theories of development and gametogenesis.(K)

CO2- Describe various types of eggs, cleavage plan and patterns, blastula and gastrulation process(K, U)

CO3-Apply the knowledge on various developmental stages of animals.(K, A, A)

CO4-Evaluate the effect of gene action in cell differentiation and development.(U, A)

CO5-Understand the process and different methods of fertilization.(U, A)

CO6-Analyze the importance and knowledge on embryonic nutrition. (U, A)

SEMESTER 6

CORE COURSE- Microbiology and Immunology

CREDITS-3

COURSE OUTCOMES

CO1-Understanding the history and scope of microbiology (K,U)

CO2-Analyze the different techniques involved in microbiological studies (K,U,A)

CO3-Sketching and illustrating microbial life forms (K,A,U)

CO4- Describe the basic concepts of Immunology(K)

CO5-Assess the role of immune pathways in autoimmunity and other immunity related disorders (K,A)

SEMESTER 6

CORE COURSE- Biotechnology, Bioinformatics & Molecular Biology

CREDITS-3

COURSE OUTCOMES

CO1-Describe the basic concepts and history of Biotechnology (K,U)

CO2-Explain the application of Biotechnology in Human Life (K,U,A,A)

CO3-Create awareness on the potential hazards of Biotechnological inventions (K,U)

CO4- Discussion on application of Biotechnology on human and animal health care(K,A,A)

CO5-Discussion on the nature of genetic material (K,U)

CO6- Illustrate the step by step process of gene action in prokaryotes and eukaryotes.(K,U)

SEMESTER 6

CORE COURSE- Occupational Zoology (Aquaculture, Apiculture, Vermiculture & Quail farming)

CREDITS-3

COURSE OUTCOMES

CO 1-Analyze the economic importance of fisheries and aquaculture.(K, U)

CO2 - Equip setting up and maintenance of Aquarium. (U, A)

CO3- Explain various honey bees, beekeeping methods, maintenance and management of apiary.(K, U, A)

CO4- Discuss the characteristics and role of earthworms in sustainable agriculture.(K, U, A)

CO5-Describe the various process involved in the management of Quail in quail farming (K, U, A, A)

CO6- Equip for self employment opportunities with scientific knowledge to perform profitably & confidently(K, A,C)

SEMESTER 6

CHOICE BASED CORE COURSE-Ecotourism & Sustainable Development

CREDITS-3

COURSE OUTCOMES

CO1- Describe the types of tourism and their recreational values (K,U)

CO2- Critically analyze the cost and benefits of ecotourism (A,U,K)

CO3-Create awareness on laws and policies ,community involvement and future trends in Ecotourism(K,U,A)

CO4- Develop appreciation among students on tourism development from sustainability perspective (K,U)

CO5- Impart basic knowledge on the emerging ecotourism industry (K,U)