

**SRI MAHAYOGI LAKSHMAMMA GOVERNMENT DEGREE COLLEGE**

(Affiliated to Rayalaseema University, Kurnool.)

**Near Hanumapuram, Adoni Road, YEMMIGANUR-518 360**

**Kurnool District, Andhra Pradesh.**

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**DEPARTMENT OF ZOOLOGY**

**PROGRAMME OUTCOMES & COURSE OUTCOME**

**Domain Subject Programme (B. Sc.,) Outcomes:**

“The domain subject “Zoology”, embracing the fields of Animal diversity, Cell biology, Genetics, evolution, Animal physiology, Biochemistry, Embryology, Immunology, Molecular biology and Ecology gives the student a broad understanding of faunal diversity, various life processes involved in the development of an animal, its functioning, its response to environmental stimuli, molecular basis of life, new technological approach towards life, an insight for the lecturer into research and responsibility of the student towards environment”.

**Program Outcomes (POs):**

The Learning Outcomes of the programme could be in consonance with the Bloom’s Taxonomy, which includes –

1. Remember (Lower order)
2. Understand (Lower Order)
3. Apply (Lower Order)
4. Analyze (Higher Order)

5. Evaluate & Problem Solving (Higher Order)
6. Create (Higher Order)

**PO1 Critical thinking:** Able to understand and utilize the principles of scientific enquiry, think analytically, clearly and evaluate critically while solving problems and making decisions during biological study.

**PO2 Effective communication:** Able to formally communicate Scientific ideas and investigations of the biology discipline to others using both oral and written communication skills.

**PO3 Social interaction:** Able to develop individual behaviour and influence society and social structure.

**PO4 Effective citizenship:** Able to work with a sense of responsibility towards social awareness and follow the ethical standards in the society.

**PO5 Ethics:** Ability to demonstrate and discuss ethical conduct in scientific activities. **PO6 Environment and Sustainability:** Able to understand the impact of biological science in societal and environmental contexts and demonstrate the knowledge for sustainable development.

**PO7 Self-directed and life-long learning:** Able to recognize the need of life-long learning and engage in research and self-education.

## Zoology Course Outcomes

	I	I		Animal Diversity – I Biology of Non-Chordates	CO1	To enable the students understand the knowledge of different areas of Invertebrates.
					CO2	To understand the life cycles and mode of reproduction in different invertebrates
					CO3	To understand the systemic and functional morphology of various groups of Invertebrates.
					CO4	To study the economic importance, affinities and adaptations of invertebrates
	II	II		Animal Diversity – II Biology of Chordates	CO1	To instill knowledge about various groups of chordates
					CO2	To acquire knowledge on the life cycles and mode of reproduction in different vertebrates
					CO3	To understand the systemic and functional morphology of various groups of chordates,
					CO4	To study their economic importance, affinities and adaptations
	III	III		Cytology, Genetics & Evolution	CO1	To learn the different types of cells
					CO2	To be able to identify the cell organelles and list out the cell organelles
					CO3	To know Mendel's laws and inter-relationship between organisms in population and communities
					CO4	To understand the concept of major evolutionary innovations in animal groups and functional significance of associated morphologies and behaviors.
	IV	IV		Animal physiology, Cellular metabolism and Embryology	CO1	To study the aspects of digestion, respiration and other physiological activities in mammals

					CO2	To learn the relationship among organisms in population and communities
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					CO3	To study the population dynamics and population control and the importance of environment friendly practices.
					CO4	To study the concepts of zoogeography and, zoogeographical importance of Indian subcontinent.
	V	V		Animal Biotechnology and Immunology	CO1	To study the concepts of animal biotechnology including recombinant DNA technology, enzymes and vectors
					CO2	To understand PCR, Cloning, Breeding, polyclones ,DNA sequencing, Hybridization techniques
					CO3	To understand the recent techniques of line Stem cell culture, cell hybridoma and its applications
					CO4	To understand the recent advances in animals and plants reproduction technology
					CO5	To understand the recent advance in immunoglobulines
					CO6	To get knowledge of the organs of Immune system, types of immunity, cells andorgans of immunity.
	V	VI		Livestock animals-I VIB	CO1	<ul style="list-style-type: none"> <li>• Select the suitable breeds of livestock for rearing</li> </ul>
					CO2	<ul style="list-style-type: none"> <li>• Relate the anatomy of udder with let-down of milk</li> </ul>
					CO3	<ul style="list-style-type: none"> <li>• Identify and manipulate the reproductive behaviour of cattle</li> </ul>

					CO 4	<ul style="list-style-type: none"> <li>• Inspect economics of dairy farming</li> </ul>
						<ul style="list-style-type: none"> <li>• Apprise the various breeding techniques employed in live stock</li> <li>•</li> </ul>
	VI	VII		Livestock animals -II VIIB	CO 1	<ul style="list-style-type: none"> <li>• Identify and suggest the suitable housing system for the dairy farming</li> </ul>
					CO 2	<ul style="list-style-type: none"> <li>• Understand management practices for the dairy farming</li> </ul>
					CO 3	<ul style="list-style-type: none"> <li>• Learn the process of milk pasteurization</li> </ul>
					CO 4	<ul style="list-style-type: none"> <li>• Prepare cream from milk</li> </ul>

