

Department of Zoology Course Outcomes

Sl.No.	Semester	Course Code	Course Title	Course Outcomes(COs)
				CO1 Phylogeny of life is understood, connecting link between different phyla and appreciate the diversity of fauna.
				CO2 Explain the general characters, classification and identification points of each phylum using different taxonomical strata.
				CO3 Describe the prerequisite of each body part and it's functioning in animals.
				CO4 Knowledge on helpful and harmful animals such as parasites, insects, shell fishes etc. using additional OE resources available in the internet using modern ICT tools.
				CO5 Conservation of animals and nature is described.
			Animal Diversity of Non-chordates- Practical	Skill of handling microscope is obtained.
				Many slides and specimens were explained after observation.
				The observations were recorded and made a document.
				Through demonstrations dissection skills were learnt
				Museum visit lead to understand the diversity of fauna.
				Acquaint with different types of fauna and their classification through sample collection.
			Animal Diversity of Chordates	Develop an aesthetic sense to appreciate the richness of fauna and the precision with which each organism functions.
				The difference between various species and the complexity involved in evolution in each system is understood.
				Explain the general characters and classifications of chordates using additional OE resources available in the internet using modern ICT tools.
				Animals that are commercially important and methodologies to rear them are realized.
				Describe animal culture, breeding and could create self-employment by establishing different farms.
			Animal Diversity of Chordates	Based on observation of specimens and slides morphological identification of animals is explained.

			Practical		mounting of various animal parts and preservation techniques skill is aquired.
					Various research areas and different instruments involved in research are explored through educational tours.
					Interact with subject experts and expand their knowledge on the scope of Zoology in future career through field trips.
			Cytology, Genetics and Evolution		Variation of species is understood with its basic and functional unit that is cell and its components.
					Explain about the structure and functions of Genetic material <i>i.e</i> ; DNA and RNAs.
					Knowledge on the process of evolution and the forces operating in it.
					Explain the development of speciation and diversification of species using additional OE resources available in the internet using modern ICT tools.
					Understand the role of genes in transmission of parental characters and the disease caused due to its defects.

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			Cytology, Genetics and Evolution -Practical		Aptness to prepare slides and staining techniques
					Various stages of cell division are identified and explained.
					skill to isolate and mount giant chromosomes through practical exposure is obtained.
					The evolutionary process explained and recorded based on observation of petrified fossils and moulds as a document.
					Understand the concept of gene and genetic variability and Ability to do calculations on Mendel,, s law and Karyotype alignment of chromosomes.
			Embryology, Physiology and Ecology		Explain the gametogenesis, fertilization and growth of each organisms.
					The concept of „Ontogeny repeats Phylogeny“ is understood.

				Explain various functioning systems in the body.
				Understand the vitality of each organ, their basic fundamental units and their functions along with the importance of organ donations.
				Discover the interaction that takes place between organisms and their environment using additional OE resources available in the internet using modern ICT tools.
				Realize the importance of interactions between biotic and abiotic factors, how effective they are and their interdependency.
			Embryology, Physiology and Ecology-Practical	Oxygen, alkalinity and salinity present in water are estimated through titration methods.
				the pH value of water samples are identified which are collected from different parts of Vijayawada.
				Carbohydrates, proteins, fats, and nitrogenous wastes(Ammonia, Urea and Uric acid) are recognized.
				Understand the growth and development of various animals through videos, observations of slide, models and charts.
			Animal Biotechnology Theory	Aware of the technology involved in cloning.
				Understand the improved quality of species with gene manipulations.
				Explain the recent developments in biotechnology for better environment, evolve different species - transgenic animals and production of resistant variety such as Bt cotton that yield better.
				Describe production of monoclonal antibodies, Hybridoma cells and vaccines and the use of hybridoma technology using additional OE resources available in the internet using modern ICT tools.
				Describe the utilization of stem cells, IUF, IVF, transgenic animals and precautions.

				Skilled to handle different instruments involved in biotechnology
				Prepare culture media, agarose gel and inoculation of microbes into the culture media
				Acquire skills on isolation of DNA and gel documentation techniques.

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				Imbibe the spirit of research and motivated for higher education through visits to various firms related to vaccine production.
			Animal Husbandry	Knowledgeable about different varieties of fowls and cattle using additional OE resources available in the internet using modern ICT tools.
				Understand recent technologies that are applied to produce different species with variations which are more beneficial and income fetching.
				Develop own firms, provide employability to others and create awareness about self- help schemes supported by Government and Nongovernmental sectors.
			Animal Husbandry- Practical	Understand various breeds of layers and broilers (photographs)
				Identify disease causing organisms in poultry birds (as per theory)
				Explain the anatomy of a poultry bird by way of dissecting a bird. (Demonstration)
				Understand various activities in a poultry farm (layers and broilers) and write reports.
				Identify various breeds of cattle (photographs/microfilms)
				Explain various activities carried out in a dairy farm and submit a report.
				Understand immune system, improve their immunity, preservation techniques from the attack of pathogens using additional OE resources.
				Identify blood groups, their compatibility and the need to donate blood to save life.

				Recognize the classes, structures and functions of antibodies, antigen – antibody reactions, cure of different diseases through various vaccines, the instruments involved in identification of immune reactions etc.
				Describe self-care and timely precautions against various diseases.
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