

Programme / Course Outcome

	Objective of Programme / Course Outcome	Employability of Programme / Course	Attainment of Programme / Course Outcome
<p style="text-align: center;">Programme</p> <p style="text-align: center;">Bachelor of Science in Zoology (Honours/General Elective and Program)</p>	<p>The outcome of the teaching/learning process is the overall integrated development of the learners. Students are motivated to learn, to establish themselves as independent individuals, and to create their own identity through their interest in and love of the subject. The B.Sc. in Zoology Honours programme is focused on imparting knowledge of the study of animals, including that of human beings along with several economically important courses.</p>	<p>Students who complete this programme can find employment in academia (college and university teaching), commercial farms such as fishery, sericulture, apiculture, poultry, etc.</p> <p>They can also start their own entrepreneurship in various above mentioned fields. Students can also work in pathological laboratories, microbiological laboratories as they get a sound preliminary knowledge on these topics.</p>	<p>This programme uses a combination of traditional classroom teaching, ICT classes, project work, field study, excursions, guided reading, and honing of secondary skills (especially soft skills) to attain the desired outcome.</p>
Courses	UG: Semester I		
UG-SH/ZOOH-101/C-1: Non-chordates 12611(T), 12621(P)	<p>CO1: The Students will be able to gain sound knowledge on the structure, habitat, habit and economic importance of the non-chordate animals.</p>		
UG-SH/ZOOH-102/C-2: Perspective in Ecology 12612(T), 12622(P)	<p>CO2: The Students will be able to understand the concepts of ecology, population, community, ecosystem, wild life, etc. The students will also grow concept about the natural abode of animals through educational visits.</p>		
UG-SH/ZOOH-103/GE-1: Animal Diversity 12614(T), 12624(P)	<p>CO3: They will be able to understand the various facets of different phylum of non-chordate and chordate animals along with the</p>		

	zoogeography of the earth. They will feel confident about different non chordate and chordate structures through their hand on dissection.		
UG-SP/ZOOH-101/C1A-: Invertebrate-I 12618(T), 12621(P)	CO4: The Students will be able to gain sound knowledge on the structure, habitat, habit and economic importance of the non-chordate animals.		
UG: Semester II			
UG-SH/ZOOH-201/C-3: Non-chordates-II 22611(T), 22621(P)	CO5: The Students will be able to gain sound knowledge of the general characteristics and classification of the non-chordate animals. The students can also identify the life cycle stages of several non-chordate animals.		
UG-SH/ZOOH-202/C-4: Cell Biology 22612(T), 22622(P)	CO6: The Students will be able to have a sound knowledge on the overview of cell and its various organelles, concept of cancer, cell cycle and cell signalling.		
UG-SH/ZOOH-203/GE-2: Aquatic Biology 22614(T), 22624(P)	CO7: The Students will be able to understand the aquatic biomes-freshwater as well as marine and know about the management of aquatic resources.		
UG-SP/ZOOH- 201/C1B-: Com. Anatomy and developmental Biology of Vertebrates 22618(T), 22628(P)	CO8: The students will develop a comparative overview of Indian Classical Literature with respect to its Western counterpart.		
UG: Semester III			
UG-SH/ZOOH-301/C-5: Diversity of chordata 32611(T), 32621(P)	CO9: They will be able to understand the various facets of different phylum of chordate animals along with the zoogeography of the		

	<p>earth.</p> <p>They will feel confident about different chordate structures through their hand on dissection.</p>		
<p>UG-SH/ZOOH-302/C-6: Animal Physiology 32612(T), 32622(P)</p>	<p>CO10: They will be able to understand and appreciate the controlling and coordinating systems of Animal Physiology through concept of histology as well as knowledge of different system of the body.</p> <p>They will be able to identify and prepare various tissue sections.</p>		
<p>UG-SH/ZOOH-303/C-7: Fundamentals of Biochemistry 32613(T), 32623(P)</p>	<p>CO11: They will be able to learn about the fundamentals of biochemistry through theoretical study as well as hand on practical practice.</p>		
<p>UG-SH/ZOOH-304/GE-3: Environment and Public Health 32614(T), 32624(P)</p>	<p>CO12: The students will be able to identify the sources of environmental hazards, know about the climate changes, different types of pollutions and waste management technologies and diseases.</p>		
<p>UG-SH/ZOOH-305/SEC-1: Apiculture 32615</p>	<p>CO13: The students will be able to understand about the biology of bees as well as develop skills on the rearing of bees.</p> <p>They will be able to know about the various diseases of bees and learn about their economic importance.</p>	<p>This course will specifically enable the students to take up jobs involving rearing of bees and also training and teaching peoples at various levels.</p> <p>Entrepreneurship in Apiculture is another prospect of this course.</p>	
<p>UG-SP/ZOO-301/DSE/ C-1C-: Physiology and Biochemistry 32618(T), 32628(P)</p>	<p>CO14: The students will develop knowledge on the different physiological as well as biochemical phenomenon inside the animal body.</p>		

<p>UG-SP/ZOO- 304/ SEC-1-: Apiculture(Economic Zoology) 32610</p>	<p>CO15: The students will be able to understand about the biology of bees as well as develop skills on the rearing of bees. They will be able to know about the various diseases of bees and learn about their economic importance.</p>	<p>This course will specifically enable students to take up jobs involving rearing of bees and also training and teaching peoples at various levels.</p>	
UG: Semester IV			
<p>UG-SH/ZOOH- 401/C-8: Comparative Anatomy of Vertebrates 42611(T), 42621(P)</p>	<p>CO16: The students will be able to relate different systems of the body such as integumentary, skeletal, digestive, respiratory, circulatory, etc. After studying this course paper. They will be able to identify the skeletal components of various animal groups and dissect out various systems.</p>		
<p>UG-SH/ZOOH- 402/C-9: Animal Physiology 42612(T), 42622(P)</p>	<p>CO17: The students will be able to develop concepts on various life sustaining systems such as digestion, respiration, circulation, osmoregulation, excretion, etc.</p>		
<p>UG-SH/ZOOH- 403/C-10: Immunology 42613(T), 42623(P)</p>	<p>CO18: They will be able to develop an overview of the immune system, antigens, vaccines, and other topics related to the immune system of an individual. They will be able to identify and prepare permanent slides of various organs related to the immunity system.</p>		
<p>UG-SH/ZOO- 404/GE-4: Insect Vectors and Diseases 42614(T), 42624(P)</p>	<p>CO19: The students will be able to understand the general features of insects, they will grow concept about the various kinds of insect vectors.</p>		

<p>UG-SH/ZOOH-305/SEC-2: Sericulture 42615</p>	<p>CO20: The students will develop skill in identifying the different types of silkworms, their life cycle and diseases, rearing of different species and their harvesting. They will learn about the prospects of sericulture in India, sericulture industry in different states, their employment and potential in mulberry and non-mulberry silks. They will also know about the various sericulture centres in India.</p>	<p>A sound knowledge and skill in this field will help the learners to get employment in various sericulture farms across India.</p>	
<p>UG-SP/ZOO-401/DSE/ C-1D-: Vertebrate 42618(T), 42628(P)</p>	<p>CO21: The students will be able to relate different types of vertebrates and their systems of the body such as integumentary, skeletal, digestive, respiratory, circulatory, etc. After studying this course paper. They will be able to identify the skeletal components of various animal groups and dissect out various systems.</p>		
<p>UG-SP/ZOO- 304/ SEC-3-: Aquarium Fish Keeping 42610</p>	<p>CO22: The students will learn about the potential scope of aquarium fish industry as a cottage industry. They will develop skill in identifying and rearing the exotic and endemic species of aquarium fishes. They will develop skill on knowing the different fish feeds, fish transportation as well as maintenance of aquarium.</p>	<p>After completing this skill enhancement curriculum course the learners can start their own business with ornamental fish rearing and their marketing to different places. They can also engage themselves in different ornamental fish feed preparation and rearing farms.</p>	
<p>UG: Semester V</p>			
<p>UG-SH/ZOOH-501/C-11: Molecular</p>	<p>CO23: The students will be able to understand different</p>		

<p>Biology 52611(T), 52621(P)</p>	<p>aspects of molecular biology and molecular techniques.</p>		
<p>UG-SH/ZOOH-502/C-12: Principles of Genetics 52612(T), 52622(P)</p>	<p>CO24: The students will be able to understand the different principles of genetics such as Mendelian Genetics, linkage and different chromosomal mappings, mutations, transposable elements, etc. They will be able to identify different chromosomal aberrations and syndromes through karyotypes. They will be able to set up laboratory cultures such as of <i>Drosophila</i>.</p>		
<p>UG-SH/ZOO-503/DSE-1/ DSE-I-: Animal behaviour and Chronobiology 52616(T), 52626(P)</p>	<p>CO25: The students will learn about the various animal behaviour and chronobiology along with the different biological rhythms.</p>		
<p>UG-SH/ZOO-504/DSE-2/ DSE-2-: Biology of Insects 52617(T), 52627(P)</p>	<p>CO26: The students will be able to understand the general features of insects, basis of their classification, etc. They will be able to identify the life cycle of insects along with their various body parts.</p>		
<p>UG-SP/ZOOP-501/DSE-IA/ DSE-IA-: Animal Physiology 52618(T), 52628(P)</p>	<p>CO27: The students will be able to develop concepts on various life sustaining systems such as digestion, respiration, circulation, osmoregulation, excretion, etc.</p>		
<p>UG-SP/ZOO- 504/ SEC-3-: Sericulture (Economic Zoology) 52610</p>	<p>CO28: The students will develop skill in identifying the different types of silkworms, their life cycle and diseases, rearing of different species and their harvesting. They will learn about the prospects of sericulture in India, sericulture industry in</p>	<p>A sound knowledge and skill in this field will help the learners to get employment in various sericulture farms across India.</p>	

	different states, their employment and potential in mulberry and non-mulberry silks. They will also know about the various sericulture centres in India.		
UG: Semester VI			
UG-SH/ZOOH-601/C-13: Developmental Biology 62611(T), 62621(P)	CO29: The students will gain an insight of the various phases of development initiating from the early embryonic development They will be able to understand the implications of developmental biology They will develop a hand on experience on the initiation, rearing and maintaining of <i>Drosophila</i> culture in the laboratory.	After gaining some laboratory based knowledge on process such as IVF and <i>Drosophila</i> culture the students may get job facilities in medical clinics and research laboratories.	
UG-SH/ZOOH-602/C-14: Evolutionary Biology 62612(T), 62622(P)	CO30: The students will be able to gain knowledge on the basic concepts of origin of life, evolution, extinctions, etc.		
UG-SH/ZOO-DSE-3/ DSE-3-: Fish and Fisheries 62613(T), 62623(P)	CO31: The students will develop general idea about different fish along with their feeding habit, habitat and manner of reproduction. They will know about different types of fisheries and aquaculture, transgenic fish, etc. The students will be able to visit and write project report on different fish farm, pisciculture unit, or rearing laboratory.	After gaining some sound knowledge on fish types, fish rearing, fish feed and fish reproduction the students will be able to work on commercial farms or start their own business entrepreneur. It would prove to be very helpful for students coming from less privileged economic group of the society.	
UG-SH/ZOO- /DSE-4 / DSE-4 -: Endocrinology 62614(T), 62624(P)	CO32: The students will develop some sound knowledge on the endocrine systems that include several endocrine glands, their secreted hormone and		

	regulation.		
UG-SP/ZOOP/ Biochemistry 62618(T), 62628(P)	CO33: The students will acquire the skills necessary for practical criticism and writing a term paper, conceptualizing and drafting research proposals, familiarity with style manuals, adopting necessary skills in the writing of notes, references, and bibliographies, or they will learn about the ideas of Travel Writing and ethnography, gender and travel, globalization and travel, travel and religion, and Orientalism and travel, depending on which course is offered.		
UG-SP/ZOOP/SEC-4 Medical Techniques 62610	CO34: The students will be able to know about different medical diagnostics and their importance, different diagnostic methods used for the analysis of blood, urine, diseases, etc. They will develop sound knowledge on clinical biochemistry.	After gaining sufficient knowledge on medical techniques the learners may pursue their carriers in different paramedical fields and they may also get involvement in different pathological laboratories as operators or laboratory staff.	