

### Courses taught in Department (under UGC CBCS system)

Please see Syllabus of B.Sc. Life science attached with Department Profile

Course (UG) (DSC/DSE/AECC/GE/SEC)	Course Name	Course Code	Course Outcome	Common Teaching
				Type of Method
Discipline Specific course(DSC) DSC-Zoology-I	Animal Diversity	ZOOL 101TH (04 Credits) ZOOL 101 PR (02 Credits)	<p>Ø Learner acquire knowledge about various animal phylum found in various continents and habitats in the world</p> <p>Ø Learner understands about classification and key characters of various animals</p> <p>Ø Knowledge and hand on experience by performing different practical's involving study of microscopic to macroscopic animals through anatomical sections (T.S./ L.S/ V.S)</p>	<p>Chalk &amp; Talk Method [Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>
Discipline specific course (DSC) DSC-Zoology-II	Comparative Anatomy & Developmental Biology of Vertebrates	ZOOL 102TH (04 Credits) ZOOL 102PR (02 Credits)	<p>Ø Learner acquires knowledge about Comparative account of various vertebrate animal phylum</p> <p>Ø Learner understands about biology behind the</p>	<p>Chalk &amp; Talk Method [Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p>

			development from formation of sperm/ ova to the embryological stages to youn one Ø Knowledge and hand on experience by performing different practical's involving study of different embryological sections (W.M/ T.S./ L.S/ V.S)	Any Other Methods [If Yes Give Name]
Discipline specific course (DSC) DSC-Zoology-III	Physiology & Biochemistry	ZOOL 201TH (04 Credits) ZOOL 201PR (02 Credits)	Ø Learner understand the key concepts and physiological process going in various systems inside the body of animals Ø Learner gets the knowledge of various biochemical reactions having inside the dynamic environment inside a cell Ø Knowledge and hand on experience by performing different practical's involving study of different physiological organ sections	Chalk & Talk Method [Yes/No] E-Resources [If Yes Give Name] Mobile Apps [If Yes Give Name] College Library [Yes/No] Any Other Methods [If Yes Give Name]

			(W.M/ T.S./ L.S/ V.S) and biochemical analysis of various macromolecules like proteins, carbohydrates etc.	
Discipline specific course(DSC) DSC-Zoology-IV	Genetics & Evolutionary Biology	ZOOL 202TH (04 Credits) ZOOL 202PR (02 Credits)	Ø Learner understand the key concepts of genetics happening in each organism Ø Learner gets the knowledge of various evolutionary forces transforming the living organism making it fittest to the changing environment Ø Knowledge and hand on experience by performing different practical's involving key concepts of genetics and evolution	Chalk & Talk Method[Yes/No] E-Resources [If Yes Give Name] Mobile Apps [If Yes Give Name] College Library [Yes/No] Any Other Methods [If Yes Give Name]
Skill Enhancement Courses SEC-I	Medical Diagnostics	ZOOL 203 TH (04 Credits)	Ø Learner understands about the fundamental of different kind of tests and procedures used in medical diagnostic laboratories / hospitals for the	Chalk & Talk Method[Yes/No] E-Resources [If Yes Give Name] Mobile Apps [If Yes Give Name] College Library [Yes/No] Any Other

			<p>early detection of disease and prophylaxis.</p> <p>Ø Learner gets the knowledge of infectious agents, diseases like Tuberculosis, Diabetes, Hypertension, Hepatitis, Benign /malignant Tumors' etc in full detail.</p> <p>Ø Learner gets the preliminary skill to become an entrepreneur in medical diagnostic industry</p>	Methods [If Yes Give Name]
Skill Enhancement Courses SEC-II	Apiculture	ZOOL 204 TH (04 Credits)	<p>Ø Learner learn about the Honey Bee morphology anatomy, various species, artificial Beekeeping, Beehives, Bee diseases, Bee enemies etc.</p> <p>Ø Learner gets the skill to start an Apiculture apiary, knowledge about its marketable products like Honey, Beewax, Propolis, Bee-venom, Royal Jelly etc</p> <p>Ø Learner can</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>

			become an entrepreneur in Bee keeping industry.	
Skill Enhancement Courses SEC-III	Sericulture	ZOOL 303 TH (04 Credits)	<p>Ø Learner gets knowledge about the Silkworm biology, various species available in world, moriculture and vanya culture rearing, diseases and worm enemies etc.</p> <p>Ø Learner gets the basic skill to start a Sericulture station at his/ her home, knowledge about its marketable products, profit/ earning as side business with agriculture and horticulture etc.</p> <p>Ø Learner can become an entrepreneur in Sericulture</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>
Skill Enhancement Courses SEC-IV	Aquarium Fish Keeping	ZOOL 304 (A)TH (04 Credits)	<p>Ø Learner gets knowledge about the Aquarium Fish keeping as a cottage industry. Along with this he/she learn about various indigenous and exotic species</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other</p>

			<p>available, Fish food, fish-transportation Fish diseases and enemies etc.</p> <p>Ø Learner gets the basic skill to start a aquarium fish keeping as business, can provide basic expertise in market being a aquarist, profit/earning analyst as side business with agriculture/ horticulture</p> <p>Ø Learner can become an entrepreneur in Aquarium Fish keeping etc.</p>	Methods [If Yes Give Name]
Skill Enhancement Courses SEC-V<	Research Methodology	ZOOL 304 (B) TH (04 Credits)	<p>Ø Learner gets knowledge about the basics of research analysis, design. Data collection methods, sampling methods, data presentation and use of digital technology etc</p> <p>Ø Learner gets the basic knowledge about ethical issues, Intellectual Property rights, commercialization, copy right, royalty,</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>

			<p>patent law, plagiarism, citation, acknowledgement etc.</p> <p>Ø Learner can become an entrepreneur in research guidance and consultation etc.</p>	
Discipline specific Electives DSE-I(A)	Applied Zoology	<p>ZOOL 301 (A) TH (04 Credits)</p> <p>ZOOL 301 (A) PR (02 Credits)</p>	<p>Ø Learner acquires knowledge about Parasitology viz. Host parasite interaction, zoonosis, important human diseases prevention prophylaxis and control measure</p> <p>Ø Learner understands about biology of Insect pest of economic importance, their control measures in store grains sections. In addition to above, students and acquainted with knowledge about Animal Husbandry, Animal Farming and Fish Technology etc.</p> <p>Ø Knowledge and hand on experience</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>

			by performing different practical's involving study of different specimens/sections , visit to poultry form etc.	
Discipline specific Electives DSE-I(B)	Animal Biotechnology	ZOOL 301 (B) TH (04 Credits) ZOOL 301 (B)PR (02 Credits)	<p>Ø Learner acquires knowledge about basics of DNA recombinant technology and its applications</p> <p>Ø Learner understands about different tools and techniques used in Biotechnology</p> <p>Ø Learner gets knowledge about animal cell culture, molecular diagnostics of certain important genetic diseases, gene therapy etc.</p> <p>Ø Knowledge and hand on experience by performing different practical's involving study of different molecular biology techniques</p>	<p>Chalk &amp; Talk Method [Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>
Discipline specific Electives DSE-I(C)	Aquatic Biology	ZOOL 301 (C) TH (04	Ø Learner acquires knowledge about Freshwater/ marine Biomes and incite	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p>



		Credits) ZOOLOGY 301 (C)PR (02 Credits)	specially about lakes, Streams, sea etc. Ø Learner understands about different management techniques and concepts of Aquatic resources Ø Knowledge and hand on experience by performing different practical's involving studies on different Aquatic Biomes Ø Student have to prepare a project report about sewage treatment plant/marine reserve/ Fisheries Institute	Mobile Apps [If Yes Give Name] College Library [Yes/No] Any Other Methods [If Yes Give Name]
Discipline specific Electives DSE-II A)	Insect, Vector and Diseases	ZOOLOGY 302 (A)TH (04 Credits) ZOOLOGY 301 (C)PR (02 Credits)	Ø Learner acquires knowledge about biology specially morphology of insect body parts Ø Learner understands about different insect acting as vectors of different Human diseases Ø Knowledge and hand on experience by performing different	Chalk & Talk Method[Yes/No] E-Resources [If Yes Give Name] Mobile Apps [If Yes Give Name] College Library [Yes/No] Any Other Methods [If Yes Give Name]

			<p>practical's based on morphology of different types of vectors</p> <p>Ø Student have to prepare a project report on any one of the insect vectors and diseases transmitted</p>	
Discipline specific Electives DSE-II (B)	Immunology	<p>ZOOL 302 (B) TH (04 Credits)</p> <p>ZOOL 301 (C) PR (02 Credits)</p>	<p>Ø Learner acquires knowledge about Human Immune system and its main components</p> <p>Ø Learner understands about concept of antigens/ antibodies, working of Immune system, knowledge about vaccines, immunodeficiency diseases</p> <p>Ø Knowledge and hand on experience by performing different practical's on anatomical sections of important immune organs and study of different immunological techniques</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>

Discipline specific Electives DSE-II (C)	Reproductive Biology	ZOOL 302 (C) TH (04 Credits) ZOOL 301 (C)PR (02 Credits)	<p>Ø Learner acquires knowledge about reproductive endocrinology</p> <p>Ø Learner understands about concept of functional anatomy of male/ Female reproductive system</p> <p>Ø Knowledge and hand on experience by performing different practical's like maintenance of animal house, histological sections of various parts of reproductive system, practical based on surgical techniques and modern contraceptive techniques</p>	<p>Chalk &amp; Talk Method[Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other Methods [If Yes Give Name]</p>
Additional Course taught by Department				
Ability enhancement Compulsory Course (AECC)	Environmental Science	ENVE01 AECC02	<p>Ø Learner acquires knowledge about Environmental studies and its scope, studies on concept of Ecosystems and its types, concept of Biodiversity status of India, threats</p>	<p>Chalk &amp; Talk Method [Yes/No]</p> <p>E-Resources [If Yes Give Name]</p> <p>Mobile Apps [If Yes Give Name]</p> <p>College Library [Yes/No]</p> <p>Any Other</p>

			<p>and conservations methods</p> <p>Ø Learner understands about importance of natural resources and its management</p> <p>Ø Learner acquires knowledge about Environmental pollution, control measures like laws, international agreements and treties, Human wildlife conflict and its mitigation measures, important environmental and social issues and dangers of ill effects of drugs consumption etc.</p>	Methods [If Yes Give Name]
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