Program specific outcome for BSc Zoology

PSO1. The learner will be able to express a thorough understanding of the diversity of animals, as well as knowledge of the scientific classifications and evolutionary links of the major animal groups. They will have the ability to differentiate and compare the anatomy and physiology of several invertebrate and vertebrate phyla.

PSO2. The learners will have the understanding to link between structure and function of at several levels of biological organization, including molecules, cells, organs, organisms, populations, and animal species.

PSO3. The learner will be competent in skills for describing the biological, chemical, and physical features of environments that animals inhabit, and explain how animals function and interact with respect to biological, chemical, and physical processes in natural environments, as well as implement these skills to be used in diagnosis and the creation of therapeutics.

PSO4. Students can use their knowledge of the animal physiological, adaptations, development, reproduction, and behavior to comprehend the effects of climate change and create mitigation strategies.

PSO5. Learners can comprehend the practical aspects of economic zoology such as sericulture, apiculture, aquaculture, animal husbandry, and biotechnology in medicine for their employment options.

PSO6. Learners will have a stronger understanding of marine biology and oceanography and can develop applications in the fields of fisheries science and marine research.

PSO7. Learners can apply their understanding of problem-solving, biostatistics and research methods for future professional growth in research and higher education.

PSO8. Students will grow to love and have empathy for animals.

Syllabus outcomes
Zoology Department

Class/ Semester	Course	Outcome
F.Y.B.Sc. Course: ZOOLOGY Semester I	Course Code: USZO101 (Course 1) WONDERS OF ANIMAL WORLD, BIODIVERSITY AND ITS CONSERVATION	**Unit 1: Wonders of Animal World**
		Objective: To take learners through a captivating journey of hoarded wealth of marvellous animal world. **Outcome**: Curiosity will be ignited in the mind of learners, to know more about the fascinating world of animals which would enhance their interest and love for the subject of Zoology.
		Unit 2: Biodiversity and its Conservation
		Objective: To orient learners about rich heritage of Biodiversity of India and make them understand significance of its conservation. **Outcome**: Learners would appreciate treasure of Biodiversity, its importance and hence would contribute their best for its conservation.
		Unit 3: Footsteps to follow
		Objective: To teach learners about innovative and novel work of scientists/philosopher/entrepreneurs in the field of biological sciences. **Outcome**: Minds of learners would be impulsed to think differently and would be encouraged ipso facto to their original crude ideas from the field of biological sciences.
	Course Code: USZO102 (Course 2) INSTRUMENTATION AND ANIMAL BIOTECHNOLOGY	**Unit 1: Laboratory safety, Units and Measurement**
		Objective: To make learners aware of risks involved in handling of different hazardous chemicals, sensitive (electrical/electronic) instruments and infectious biological

		specimens especially during practical sessions in the laboratory and to train them to avoid mishap. **Outcome**: Learners would work safely in the laboratory and avoid occurrence of accidents (mishaps) which will boost their scholastic performance and economy in use of materials/chemicals during practical sessions.
		Unit 2: Animal Biotechnology
		Objective: To acquaint learners to the modern developments and concepts of Zoology highlighting their applications aiming for the benefit of human being. **Outcome**: Learners would understand recent advances in the subject and their applications for the betterment of mankind; and that the young minds would be tuned to think out of the box.
		Unit 3: Instrumentation
		Objective: To provide all learners a complete insight about the structure and train them with operational skills of different instruments required in Zoology. **Outcome:** Students will be skilled to select and operate suitable instruments for the studies of different components of Zoology of this course and also of higher classes including research.
F.Y.B.Sc. Course: ZOOLOGY Semester II	Course Code: USZO201 (Course: 3) ECOLOGY AND WILDLIFE MANAGEMENT	**Unit 1: Population ecology**
		Objective: To facilitate the learning of population ecology, its dynamics and regulatory factors important for its sustenance. **Outcome:** This unit would allow learners to study about nature of animal population, specific factors affecting its growth and its impact on the population of other life form.
		Unit 2: Ecosystem
		Objective:

		To impart knowledge of different components of ecosystem and educate about essentials of coexistence of human beings with all other living organisms. **Outcome:** Learners will grasp the concept of interdependence and interaction of physical, chemical and biological factors in the environment and will lead to better understanding about implications of loss of fauna specifically on human being, erupting spur of desire for conservation of all flora and fauna.
		Unit 3: National parks and Sanctuaries of India
		Objective: To enlighten learners about the current status of wild life conservation in India in the light of guidelines from different relevant governing agencies vis-à-vis with adversity of poaching and biopiracy. **Outcome:** Learners would be inspired to choose career options in the field of wild life conservation, research, photography and ecotourism.
	Course Code: USZO202 (Course: 4) NUTRITION, PUBLIC HEALTH AND HYGIENE	**Unit 1: Nutrition and Health**
		Objective: To make learners understand the importance of balanced diet and essential nutrients of food at different stages of life. **Outcome:** Healthy dietary habits would be inculcated in the life style of learners in order to prevent risk of developing health hazards in younger generation due to faulty eating habits.
		Unit 2: Public Health and Hygiene
		Objective: To impart knowledge about source, quantum and need for conservation of fast depleting water resource and essentials of maintaining proper sanitation, hygiene and optimizing use of electronic gadgets. **Outcome:** Promoting optimum conservation of water, encouragement for maintaining

		adequate personal hygiene, optimum use of electronic gadgets, avoiding addiction, thus facilitating achievement of the goal of healthy young India in true sense.
		UNIT 3: Common Human Diseases and Disorders
		Objective: To educate learners about causes, symptoms and impact of stress related disorders and infectious diseases. **Outcome:** Learners will be able to promptly recognize stress related problems at initial stages and would be able to adopt relevant solutions which would lead to psychologically strong mind set promoting positive attitude important for academics and would be able to acquire knowledge of cause, symptoms and precautions of infectious diseases.

S. Y. B. Sc. Zoology Sem-III(Theory)	**USZO301 COURSE-5 Fundamentals of Genetics, Chromosomes and Heredity, Nucleic acids**	**Unit I: Fundamentals of Genetics, Chromosomes and Heredity, Nucleic acids**
		Objective: ➢ To introduce basic terms of genetics. ➢ To study Mendelian principles of inheritance and other forms and pattern of inheritance . **Desired outcome:** ➢ Learner shall comprehend and apply the principles of inheritance to study heredity. ➢ Learner will understand the concept of multiple alleles, linkage and crossing over.
		Unit: 2: Chromosomes and Heredity
		Objective: ➢ To familiarize the learners with the structure, types and classification of chromosomes. ➢ To introduce the concept of sex determination and its types, sex influenced and sex limited genes. **Desired outcome:** ➢ Learner will comprehend the structure of chromosomes and its types. ➢ Learner shall understand the mechanisms of sex determination. ➢ Learner would be able to correlate the disorders linked to a particular.

		Unit: 3 Nucleic acids
		Objectives: ➢ To introduce the learner to the classical experiments proving DNA as the genetic material. ➢ To make the learner understand the structure of nucleic acids and the concept of central dogma of molecular biology. ➢ To familiarize the learner with the concept of gene expression and regulation. **Desired outcomes:** ➢ Learner will understand the importance of nucleic acids as genetic material. ➢ The learner shall comprehend and appreciate the regulation of gene expressions.
	USZO302 COURSE-6 **Study of Nutrition and Excretion , Respiration and circulation, Control and coordination, Locomotion and Reproduction**	**Unit: 1 Study of Nutrition and Excretion**
		Objectives: ➢ To introduce the concepts of physiology of nutrition, excretion and osmoregulation. ➢ To expose the learners to various nutritional apparatus, excretory¬ and osmoregulatory structures in different classes of organisms. **Desired outcomes:** ➢ Learner would understand the increasing complexity of¬ nutritional, excretory and osmoregulatory physiology in evolutionary hierarchy. ➢ Learner would be able to correlate the habit and habitat with¬ nutritional, excretory and osmoregulatory structures. Comparative study of Nutritional Apparatus (structure and function)
		Unit: 2: Study of Respiration and Circulation
		Objectives: ➢ To introduce the concepts of physiology of respiration and¬ circulation ➢ To expose the learner to various respiratory and circulatory¬ structures in different classes of organisms **Desired outcomes:** ➢ Learner would understand the increasing complexity of respiratory¬ and circulatory physiology in evolutionary hierarchy. ➢ Learner would be able to correlate the habit and habitat with¬ respiratory and circulatory

		structures. Comparative study of Respiratory organs (structure and function).
		Unit: 3 Control and coordination, Locomotion and Reproduction
		Objectives: ➢ To introduce the concepts of physiology of control and coordination¬ and locomotion and reproduction ➢ To expose the learner to various locomotory and reproductive¬ structures in different classes of organisms **Desired outcomes:** ➢ Learner would understand the process of control and coordination¬ by nervous and endocrine regulation. ➢ Learner would be fascinated by various locomotory structures¬ found in the animal kingdom. ➢ Learner would be acquainted with various reproductive strategies¬ present in animals.
	USZOE1303 COURSE-7A Ethology , Parasitology, Economic Zoology	**Unit: 1 Ethology**
		Objective: ➢ To equip learners with a sound knowledge of how animals interact with one another and their environment. ➢ To enable the learners to understand different behavioural patterns. **Desired Outcome:** ➢ Learners would gain an insight into different types of animal behaviour and their role in biological adaptations. ➢ Learners would be sensitized to the feelings instrumental in social behavior.
		Unit: 2 Parasitology
		Objective: ➢ To acquaint learners with the concepts of parasitism, their relationship with environment. ➢ To make learners aware about the modes of transmission of parasites. **Desired Outcome:** ➢ Learners would understand the general epidemiological aspects of parasites that affect humans and apply simple preventive measures for the same.

		➢ Learners would comprehend the life cycle of specific parasites, the symptoms of the disease and its treatment.
		Unit 3 Economic Zoology
		Objective: ➢ To disseminate information on economic aspects of zoology like apiculture, vermiculture, dairy science. ➢ To encourage young learner for self employment **Desired Outcome:** ➢ Learner shall understand the concept of life time-line. ➢ Learner will gain knowledge of and develop various skills while studying amazing animals
	USZOE2303 COURSE-7B Aquarium maintenance,Agricultural pests and their control,Amazing animals	**Unit 1 Aquarium maintenance**
		Objective: ➢ To develop the skill of aquarium maintenance and budget allocation for setting up an aquarium fish farm. ➢ To study the biology of aquarium fishes, food, feeding and transportation of fishes. **Desired Outcome:** ➢ Learner will develop the skill of aquarium maintenance and become familiar with the budgeting aspects for setting aquarium fish farm. ➢ Learner will derive knowledge about the biology of aquarium fishes as also food, feeding and transportation of fishes.
		Unit: 2 Agricultural pests and their control
		Objective: ➢ To study different types of pests ➢ To comprehend various aspects of agricultural pests and their economic implications. ➢ To learn about the differing pest control practices and plant protection appliances

		Desired Outcome: ➢ Learner will gain information on the different types of pests and comprehend various aspects of agricultural pests and its economic implications. ➢ Learner shall derive knowledge of pest control practices and appliances used for plant protection against pests
		Unit 3 Amazing animals
		Objective: ➢ To comprehend the concept of life timeline, and the natural history of some amazing animals. ➢ To kindle interest and yearning to study amazing animals **Desired Outcome:** ➢ Learner shall understand the concept of life time-line. ➢ Learner will gain knowledge of and develop various skills while studying amazing animals.
S. Y. B. Sc. Zoology Sem-IV(Theory)	**USZO401 COURSE-8 Origin and Evolution of Life, Population and Evolutionary Genetics, Scientific Attitude, Methodology, Scientific Writing and Ethics in Scientific Research.**	**Unit 1: Origin and Evolution of Life**
		Objectives: ➢ To impart scientific knowledge about how life originated and evolved on our planet **Desired outcomes:** ➢ Learner will gain insight about the origin of life. ➢ Learner will ponder and critically view the different theories of evolution.
		Unit: 2: Population Genetics and Evolution
		Objectives: ➢ To develop knowledge and understanding of genetic variability within a population and how the change in the gene pool leads to evolution of species **Desired outcomes:** ➢ Learner would understand the forces that cause evolutionary changes in natural populations

		➢ Learner would comprehend the mechanisms of speciation ➢ Learner will be able to distinguish between microevolution, macroevolution and megaevolution
		Unit: 3 Scientific Attitude Methodology, Scientific Writing and Ethics in Scientific Research
		Objectives: ➢ To inculcate scientific temperament in the learner **Desired outcomes:** ➢ The learner shall develop qualities such as critical thinking and analysis ➢ The learner will imbibe the skills of scientific communication and he/she will understand the ethical aspects of research
	USZO402 Course 09 Cell Biology, Endomembrane System,Biomolecules	**Unit 1: Cell Biology**
		Objectives: ➢ To study the structural and functional organization of cell with an emphasis on nucleus, plasma membrane and cytoskeleton. **Desired outcomes:** ➢ Learner would acquire insight of transport mechanisms for the maintenance and composition of cell ➢
		Unit: 2: Endomembrane System
		Objectives: ➢ To acquaint the learner with ultrastructure of cell organelles and their functions **Desired outcomes:** ➢ Learner would appreciate the intricacy of endomembrane system. ➢ Learner would understand the interlinking of endomembrane system for functioning of cell

		Unit: 3 Biomolecules
		Objectives: ➢ To give learner insight into the structure of biomolecules,¬ and their role in sustenance of life **Desired outcomes:** ➢ The learner will realize the importance of biomolecules and¬ their clinical significance
	USZOE1403 COURSE-10A Comparative Embryology, Aspects of Human Reproduction, Pollution and its effect on organisms	**UNIT 1: Comparative Embryology**
		Objective: ➢ To acquaint the learner with key concepts of embryology **Desired Outcomes:** ➢ Learner will be able to understand and compare the different pre- embryonic stages ➢ Learner will be able to appreciate the functional aspects of extra embryonic membranes andclassify the different types of placentae.
		UNIT 2: Aspects of Human Reproduction
		Objectives: ➢ To acquaint the learners with different aspects of human reproduction. ➢ To make them aware of the causes of infertility, techniques to overcome infertility and the concept of birthcontrol **Desired Outcome:** ➢ Learners will able to understand human reproductive physiology ➢ Learners will become familiar with advances in ART and related ethical issues.
		UNIT3: Pollution and its effect on organisms
		Objective: ➢ To provide a panoramic view of impact of human activities leading to pollution and its implications

		Desired Outcome: ➢ The learners will be sensitized about the adverse effects ofpollution and measures to control it.
	USZOE2403 COURSE-10B Dairy Industry,sericulture, Aquaculture	**UNIT 1: Dairy Industry**
		Objective: ➢ To comprehend the functioning of various aspects of dairyindustry. ➢ To study different indigenous and exotic cattle breeds andbuffalo breeds in India. ➢ To develop an understanding of the different systems ofbreeding and various aspects dealing with housing ofdairy animals. **Desired Outcomes:** ➢ Learner shall gain knowledge on the functioning ofvarious aspects of dairy industry,indigenous, exotic cattleand buffalo breeds in India. ➢ Learner shall study different systems of breeding and gaininformation regarding various aspects pertaining tohousing of dairy animals.
		UNIT 2: Sericulture
		Objectives: ➢ To comprehend the functioning of sericulture industry andits scope in India. ➢ To study the varieties of silk-worms and host plants. ➢ To critically study the life history and rearing ofBombyxmori, harvesting, processing of cocoon, productionof silk and diseases afflicting silk-worms. **Desired Outcome:** ➢ Learner shall understand the basics of the functioning ofsericulture industry and its scope in India. ➢ Learner shall gain knowledge on the varieties of silk-worms, host-plants and aspects on silk extraction and thediseases afflicting silk-worms.
		UNIT3: Aquaculture
		Objective: ➢ To comprehend various kinds of aquaculture practices andits scope as fishery resource in India. ➢ To study various techniques employed in aquaculturePractices

		Desired Outcome: ➢ Learner shall understand the aquaculture practices andthe scope of fishery in India. ➢ Learner will gain knowledge of various techniquesemployed in aquaculture practices.

T. Y. B. Sc. Zoology Sem- V(Theory)	Course Code: USZO501 Taxonomy - Invertebrates and Type Study Course 11	**Unit I: Principles of Taxonomy**
		Objective: To introduce the principles of taxonomy and modern system of classification in animalkingdom with evolution point of view. **Desired outcome:** Learners will apprehend the basis of classification and modern classification up to classof the lower invertebrate animals.
		Unit II: Kingdom Animalia- I
		Objective: To comprehend the general characters and classification of kingdom Animalia fromPorifera to Nematoda and specific characters of organisms belonging to these phyla. **Desired outcome:** The learners will be familiarized with classification up to phylum Nematoda along withtheir examples**.**
		Unit III: Kingdom Animalia- II
		Objective: To introduce basic concepts of classification up to class in animal kingdom from phylumAnnelida to Hemichordata and to familiarize with their characters. **Desired outcome:** Learners will get an idea of higher groups of invertebrate animal life, their classificationand their peculiar aspects.
		Unit IV: Type study: Sepia
		Objective To acquaint learners with the details of Sepia as a representative of invertebrate animals. **Desired outcome** Learners will get an idea of general characteristics and details of invertebrate

		animalsystems.
	Course Code: USZO502 Haematology and Immunology Course 12	**Unit I: Basic Haematology**
		Objectives: To introduce to the learner the composition of blood, haemorrhage and haematopoiesis.To acquaint the learner with the physiology of blood clotting and clinical aspects of haematology. **Desired outcome:** The learner shall comprehend basic haematology.The learner will be able to identify various components of haemostatic systems
		Unit II: Applied Haematology
		Objective: To introduce to the learner the basics of applied haematology and to impart knowledge ofdiagnostic techniques used in pathology. **Desired outcome:** The learner will be familiar with the terminology used and diagnostic tests performed in apathological laboratory.The learner shall be acquainted with diagnostic approaches in haematological disorders.The learner will be better equipped for further pathological course or working in adiagnostic laboratory.
		Unit III: Basic Immunology
		Objective: To introduce the topic of immunology by emphasizing the basic concepts to build astrong foundation and to give an overview of the immune system that plays an importantrole in disease resistance. **Desired outcome:** The learner shall comprehend the types of immunity and the components of immunesystem.The learner will realize the significant role of immune system in giving resistance againstdiseases.
		Unit IV: Applied Immunology
		Objectives: To introduce immunopathology to the learner

		To introduce the concept of vaccines and vaccination. To familiarise the learner to immunological perspectives of organ transplantation. **Desired outcome:** The learner shall understand immunopathology and the principles and applications ofvaccines. The learner will develop basic understanding of immunology of organ transplantation.
	Course Code: USZO503Histology, Toxicology, Pathology and Biostatistics Course 13	**Unit I: Mammalian Histology**
		Objectives: To familiarize the learner with the cellular architecture of the various organs in the body. To make the learner understand the need and importance of different types of tissues inthe vital organs and their functions. **Desired outcome:** Learner would appreciate the well planned organization of tissues and cells in the organ systems.
		Unit II: Toxicology
		Objectives: To introduce the learner to the principles of toxicology with particular emphasis on toxicresponses to chemical exposures, nature and effect of toxicity and toxicity testing. It also intends to develop amongst students an introductory understanding of regulatoryaffairs in toxicology. **Desired outcome:** The course will prepare learner to develop broad understanding of the different areas oftoxicology. It will also develop critical thinking and assist students in preparation for employment inpharmaceutical industry and related areas.
		Unit III: General Pathology
		Objectives: To introduce the learner to basics of general pathology. To impart knowledge of retrogressive, necrotic, pathological conditions in the

		body. To explain repair mechanism of the body. **Desired outcome:** Learner will be familiar with various medical terminology pertaining to pathologicalcondition of the body caused due to diseases.
		Unit IV: Biostatistics
		Objective: To make learner familiar with biostatistics as an important tool of analysis and itsapplications. **Desired outcome:** The learner will be able to collect, organize and analyse data using parametric and nonparametrictests. They will also be able to set up a hypothesis and verify the same using limits ofsignificance.
	Course Code: USZO504 Anatomy and Developmental Biology Course 14	**Unit I: Integumentary system and derivatives**
		Objective: To introduce the learner to understand different integumentary structures and derivativesin the vertebrates and to acquaint learners with special derivatives of integument. **Desired outcome:** Learner will be able to understand the importance of various types of epidermal anddermal derivatives along with their functions.
		Unit II: Human Osteology
		Objective: To introduce the learner to different bones of human skeleton and their functionalimportance. **Desired outcome:** Learner will be able to understand the structure, types and functions of human skeleton.

		Unit III: Muscles of long bones of Human limbs
		Objectives: To study long limb muscles involved in body movements. To identify various arrangements of the long limb muscles and to relate the arrangement with contraction and motion. To study muscle injuries and syndromes. **Desired outcome:** Learner will be able to understand the types of long limb muscles, its arrangement andtheir role in body movements.
		Unit IV: Developmental biology of Chick
		Objective: To introduce the learner to the basics of developmental biology with reference to chick asa model and also familiarize with experiments related to it. **Desired outcome:** Learner will be able to understand the processes involved in embryonic development andpractical applications of studying the chick embryology.
Sem- VI (Theory)	Course Code: USZO601 Taxonomy - Chordates and Type Study Course 15	**Unit I: Phylum Chordata: Group Protochordata and Group Euchordata I**
		Objective: To introduce basic concepts of modern Chordate classification with evolution point of viewand to understand the concept of taxonomy in higher animal kingdom. **Desired outcome:** Learners will get an idea of origin of Chordates, its taxonomy up to class with referenceto phylogeny and their special features.
		Unit II: Group Euchordata II
		Objective: To introduce basic concepts of modern Chordate classification with evolution point of viewand to understand the concept of taxonomy in higher animal kingdom.

		Desired outcome: Learners will get an idea of origin of Chordates, its taxonomy up to class with referenceto phylogeny and their special features.
		Unit III: Group Euchordata III
		Objective: To introduce the learners to the distinguishing characters of classes Reptilia, Aves andMammalia and their adaptive features with reference to their habitat. **Desired outcome:** Learners will understand the characteristic features and examples of class of Reptilia,Aves and Mammalia.
		Unit IV: Type study: Shark (15L)
		Objective: To study in depth one vertebrate animal type i. e. general characteristics and salientfeatures of animal type - shark. **Desired outcome:** Learners will get an idea of vertebrate animal life after studying one representative animal- shark.
	Course Code: USZO602 Physiology and Tissue Culture Course 16	**Unit I: Enzymology**
		Objective: To introduce to the learner the fundamental concepts of enzyme biochemistry and toenable the learner realize applications of enzymes in basic and applied sciences. **Desired outcome:** The learner shall understand fundamentals of enzyme structure, action and kinetics. The learner shall appreciate the enzyme assay procedures and the therapeuticapplications of enzymes.
		Unit II: Homeostasis

		Objective: To introduce to the learner the concept of homeostasis-thermoregulation andosmoregulation **Desired outcome:** The learner shall comprehend the adaptive responses of animals to environmentalchanges for their survival.
		Unit III: Endocrinology
		Objective: To introduce to the learner the details of endocrine glands and its disorders. **Desired outcome:** The learner shall understand the types and secretions of endocrine glands and theirfunctions.
		Unit IV: Animal Tissue Culture
		Objective: To introduce to the learner the fundamental concepts of tissue culture and guide themprogressively to certain areas of animal tissue culture. **Desired outcome**: The learner shall understand the significance of tissue culture as a tool in specializedareas of research. The learner will appreciate its applications in various industries.
	Course Code: USZO603 Genetics and Bioinformatics Course 17	**Unit I: Molecular Biology**
		Objectives: To introduce learner to chemical and molecular processes that affect genetic material. To make learner understand the concept of DNA damage and repair, and how genecontrol is necessary for cell survival.

		Desired outcome: Learner shall get an insight into the intricacies of chemical and molecular processes thataffect genetic material. The course shall prepare learner to recognize the significance of molecular biology as abasis for the study of other areas of biology and biochemistry. Learner shall also understand related areas in relatively new fields of genetic engineeringand biotechnology.
		Unit II: Genetic Engineering
		Objective: To introduce learner to a set of techniques to modify an organism's genome to produceimproved or novel genes and organisms. **Desired outcome:** The learner shall get acquainted with the vast array of techniques used to manipulategenes which can be applied in numerous fields like medicine, research, etc. for humanbenefit.
		Unit III: Human Genetics
		Objective: To introduce learner with genetic alterations in human genome and their diagnosis. **Desired outcome:** The learner shall become aware of the impact of changes occurring at gene level onhuman health and its diagnosis.
		Unit IV: Bioinformatics
		Objective: To introduce learner to bioinformatics - a computational approach to learning the structure and organization of genomes, phylogeny and metabolism. **Desired outcome:** Learner shall become aware of the computational point of view of studying the genomes.
	Course Code: USZO604 Environmental	**Unit I: Environment management**

	Biology and Zoopharmacognosy Course 18	**Objective:** Learner should understand different factors affecting the environment and variousmethods to improve environmental stewardship. **Desired outcome:** Learner will understand the different factors affecting environment, its impact andenvironment management laws.
		Unit II: Wildlife Management
		Objectives: To sensitize learner regarding the various threats to the wildlife To introduce learner various ways that can help in the protection, conservation,management, and enhancement of wildlife populations and habitat. **Desired outcome:** Learner will be able to understand various methods for wildlife conservation. Learner will be able to apply knowledge to overcome the issues related to wildlifeconservation and management.
		Unit III: Bioprospecting and Zoopharmacognosy
		Objectives: To introduce the learner to the concepts of bioprospecting and zoopharmacognosy. Learner will be made aware of the process of discovery and commercialization of newproducts based on biological resources.To introduce learner with various ethological aspects by which non-human animalsapparently self-medicate themselves. **Desired outcome:** Learner will understand the paradigms of discovery and commercialization of biologicalresources and knowledge gained from self-medication observed in animals.
		Unit IV: Zoogeography
		Objectives: To introduce learner to the geographic distribution (present and past) of animal species. To introduce learner to various ways of animal distribution. **Desired outcome:**

		The learners will become acquainted with how and why different animal species aredistributed around the globe.