AC – 20/04/2024
Item No. – 6.6 Sem. I (9b)

As Per NEP 2020

University of Mumbai

Syllabus for Basket of Basket of Open Elective (OE)	
Board of Studies in Zoology	
UG First Year Programme	
Semester - I	
Title of Paper	**Credits 2/ 4**
I) OE1: Wildlife documentation	**2**
II)	
From the Academic Year	**2024-25**

OE1: Wildlife Documentation

Sr. No.	Heading	Particulars
1	**Description the course:**	This course offers a comprehensive introduction to wildlife, focusing on practical wildlife documentation skills, enabling learners to observe, record, and document wildlife effectively, contributing to conservation efforts.
2	**Vertical :**	~~Major/Minor/~~Open Elective ~~/Skill Enhancement / Ability Enhancement/Indian Knowledge System~~ (Choose By √)
3	**Type :**	Theory
4	**Credit**:	2 credits (1 credit = 15 Hours for Theory in a semester)
5	**Hours Allotted :**	30 Hours
6	**Marks Allotted**:	50 Marks
7	**Course Objectives**: The course is designed to, CO1. To acquaint learners to the wildlife diversity of India and the World, and the causes of its depletion. CO2. To acquaint learners to the basic principles of wildlife conservation and strategies for effective community engagement in the preservation of wildlife. CO3. To familiarize learners with the field equipment, and methods for honing observation and documentation, used for wildlife census.	
8	**Course Outcomes**: Upon completion of the course, the learners should be able to: OC1. Comprehend the diverse wildlife of India and the world, and the factors of wildlife depletion. OC2. Understand the basic principles of wildlife conservation and gain insight into the importance of community engagement in preserving wildlife. OC3. Gain knowledge on the application of field equipment used in wildlife research and monitoring, and develop observational and documentation skills used for wildlife census.	

9	**Module 1: Introduction to wildlife and its conservation**	**15hr**
	1.1 Wildlife and its conservation **1.1.1 Wildlife and its importance:** An overview of wildlife of India and the world. **1.1.2 India as a mega wildlife biodiversity country:** biodiversity hotspots. **1.1.3 Red data book:** Extinct and threatened species of India. **1.1.4** Endemic species of vertebrates in India. **1.1.5 Causes of wildlife depletion:** Poaching, Animal trafficking, Loss of habitats and deforestation. **1.1.6 Case study:** Indian vulture crisis. **1.1.7 Human-wildlife conflicts:** causes, consequences and mitigation strategies. **1.1.8 Wildlife conservation:** need and role of NGOs in conservation and citizen science initiatives in bird population monitoring (Asian midwinter water birds census and eBird). **1.1.9** Role of local communities in wildlife conservation.	**15hr**
	Module 2: Wildlife monitoring and documentation	**15hr**
	2.1 Wildlife monitoring and documentation **2.1.1 Making observations and records:** field notes, datasheets. **2.1.2 Wildlife Photography:** Types of cameras, mobile phone applications (Google lens, Merlin Bird ID, BioAtlasIndia) and camera traps. Ethics of photography. **2.1.3 Field equipment:** altimeter, pedometer, monoscope, field compass, binoculars; radio collaring; GPS; remote sensing in wildlife conservation. **2.1.4 Planning census:** Basic concepts and applications of Direct and Indirect counting methods. **2.1.5 Direct and indirect count:** Direct count (block count eg. Flamingoes, Point counts eg. Machan census) and Indirect count (pellet count eg. Ungulates, pugmarks eg. Tigers); Capture-recapture technique. **2.1.6 Identifying animals based on indirect signs:** pugmarks, scat, songs and alarm calls. **2.1.7 Government organizations involved in Wildlife Conservation:** Wildlife Institute of India, Wildlife Crime Control Bureau, Wildlife Research and Training Centre- Gorewada; Non-government organizations involved in Wildlife Conservation- WWF, BNHS.	**15hr**
	*** Suggested topics for assignment:** Documentation of animals using the above techniques; India Biodiversity Portal; birds and bird calls/ songs using Merlin and eBird mobile applications; any other topic relevant to the syllabus.	

10.	**Text Books:** 1. Awadhiya, A. (2021). Principles of Wildlife Conservation. CRC Press. 2. Dickinson, J. L., & Bonney, R. (Eds.). (2017). Citizen science: Public participation in environmental research. Cornell University Press. 3. Fellowes, J. R., Lai, M. W., Chit, N. S., Chan, B. P., Boonratana, R., & Brown, A. (2012). Sustaining the Pulse: Managing for Biodiversity Conservation in South China's Forest Nature Reserves. KCC. 4. O'Connell, A. F., Nichols, J. D., & Karanth, K. U. (2011). Camera traps in animal ecology: methods and analyses (Vol. 271). New York: Springer. 5. Kenward, R. (1987). Wildlife radio tagging.
11.	**Reference Books:** 1. Chaudhuri, A. B., Chaudhuri, A. B., & Sarkar, D. D. (2003). Megadiversity conservation: flora, fauna and medicinal plants of India's hot spots. Daya Books. 2. Roth, H. H. (1997). Wildlife resources: a global account of economic use. Springer Science & Business Media. 3. Frank, B., Glikman, J. A., & Marchini, S. (Eds.). (2019). Human–wildlife interactions: turning conflict into coexistence (Vol. 23). Cambridge University Press. 4. Teeuw, R. (2005). Field Techniques: GIS, GPS and Remote Sensing. Royal Geographical Society. 5. Jani, R. (2021). Basics of Wildlife Health Care and Management. CRC Press. 6. Rajesh Gopal (2011). Fundamentals of Wildlife Management. Natraj Publishers.

12	**Internal Continuous Assessment: 40% (20 marks)**	**External, Semester End Examination : 60% Individual Passing in Internal and External Examination** (30 marks)	
13	**Continuous Evaluation through:** Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	As per paper pattern 01.00 hour	
14	**Format of Question Paper:** for the final examination		
	Time 1.0 Hr		**Max. Marks 30**
	Q.1. Questions in the form of MCQ and answer in one sentence. (Overall equal weightage for both modules I & II) Q1a. Five questions in the form of MCQ (5 marks) Q1b. Five questions of answer in one line (5 marks)		**10**
	Q.2 Answer any one of the following (based on Module I) a. b.		**06**
	Q.3. Answer any one of the following (based on Module II) a. b.		**06**
	Q4. Write short note any two of the four from module I and II (equal weightage) a. b. c. d.		**08**

Sign of the BOS Coordinator **Dr. Vaishali Somani** **BOS in Zoology**	**Sign of the Offg. Associate Dean** **Dr. Madhav R. Rajwade** **Faculty of Science & Technology**	**Sign of the Offg. Dean** **Prof. Shivram S. Garje** **Faculty of Science & Technology**