

**DISCIPLINE SPECIFIC ELECTIVE COURSE –DSE-6 :**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Conservation and Management of Wildlife (BS-DSE- 6)</b>	<b>4</b>	<b>2</b>		<b>2</b>	Class XII pass with Biology and chemistry,	<b>NA</b>

**Learning Objectives:**

The Discipline Specific Paper on Wildlife Conservation and Management is designed to acquaint students with varied aspects of wildlife conservation, including its importance, major threats, management of their habitats and populations. The emphasis will be on developing interest and invoking a sense of responsibility among students towards wildlife conservation. The course also explores different techniques, perspectives, and approaches to both identify and achieve wildlife management goals. This course will motivate students to pursue career in the field of wildlife conservation and management.

**Learning Outcomes:**

Upon completion of the course, students will be able to:

- Understand the importance of wildlife in general, and its conservation and management in particular.
- Comprehend the application of the principles of ecology and animal behaviour to formulate strategies for the management of wildlife populations and their habitats.
- Understand the management practices required to achieve a healthy ecosystem for wildlife population along with emphasis on conservation and restoration.
- Know the key factors for loss of wildlife and important strategies for their in situ and ex situ conservation.
- Recognize the techniques for estimation, remote sensing and Global Position Tracking for wildlife.
- Gain knowledge about the wildlife diseases and the quarantine policies.
- Know about the Protected Area Networks in India, Ecotourism, Ecology of perturbation and Climax persistence.
- Perform critical thinking, literature review; scientific writing as well as presentations; and participation in citizen science initiatives with reference to wildlife.

**SYLLABUS for DSE-6**  
**Course Contents- Theory**

**Unit 1: Introduction to Wildlife**

**No. of hours: 6**

Values of wildlife - positive and negative; Conservation ethics; Importance of conservation; Causes of depletion

**Unit 2: Management of Habitats**

**No. of hours:4**

Setting back succession: Grazing logging; Mechanical treatment; Advancing the successional process:  
Cover Construction

**Unit 3: Wildlife identification and estimation**

**No. of hours: 8**

Fecal analysis of ungulates and carnivores: Faecal samples, slide preparation, and Hair identification; Pugmarks and Census methods

**Unit 4: Wildlife Health Management**

**No. of hours: 6**

Common diseases of wild animals: Zoonosis (Ebola and Salmonellosis), Rabies, Foot and Mouth Disease, Mycobacterium TB, Bovine and Avian Flu

**Unit 5: Protected Areas and Management**

**No. of hours: 6**

National parks and sanctuaries; Biosphere reserves; Conservation and Community reserve; Important

features of protected areas in India; Tiger conservation - Tiger reserves in India and management

challenges in Tiger reserves. Human-wildlife conflict; Ecotourism / wild life tourism in forests

**PRACTICAL**

**Credits: 2**

**Total Hours: 60**

1. Identification of mammalian fauna, avian fauna, herpeto-fauna through direct and indirect evidences seen on a field trip to a wildlife conservation site.
2. Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Various types of Cameras and lenses).
3. Familiarization and study of animal evidences in the field: Identification of animals through Pug marks, Scats & Nests.
4. Identification of big cats: Lion, Tiger, Cheetah, Leopard and Jaguar.
5. To Study the various Animal tracking systems: VHF, UHF, GPS and GIS
6. Trail / transect monitoring for abundance and diversity estimation of wildlife (direct and indirect wildlife evidences).

7. A report based on a visit to National Park/Wildlife Sanctuary or any other wildlife conservation site.

### **Essential Readings**

1. Saha, G.K. and Mazumdar, S. (2017) Wildlife Biology: An Indian Perspective. PHI learning Pvt. Ltd. ISBN: 8120353137, 978-812035313
2. Sinclair, A.R.E., Fryxell, J.M. and Caughley, G. (2006) Wildlife Ecology, Conservation and Management. Wiley-Blackwell, Oxford, UK.
3. Singh, S.K. (2005) Text Book of Wildlife Management. IBDC, Lucknow.
4. Hossetti, B. B. (1997). Concepts in Wildlife Management. Daya Publishing House, Delhi.

### **Suggested Readings:**

1. Hudson, P.J., Rizzoli, A., Grenfell, B.T. Heesterbeek, H. and Dobson, A.P. (2002) The Ecology of Wildlife Diseases. Oxford University Press, Oxford.
2. Banerjee, K. (2002) Biodiversity Conservation in Managed and Protected Areas. Agrobios, India. • Sharma, B.D. (1999) Indian Wildlife Resources Ecology and Development. Daya Publishing House, Delhi.
3. Primack, R.B. (1998). Essentials of Conservation Biology. Sinauer Associates, Inc. Sunderland, MA.

### **Online Tools and Web Resources:**

- <https://swayam.gov.in/courses/4687-july-2018-wildlife-conservation>
- <https://swayam.gov.in/courses/5364-jan-2019-wild-life-ecology>
- <https://papaco.org/mooc-on-species-conservation/>
- <https://www.iucn.org/theme/protected-areas/our-work/capacity-development/moocs>
- <https://www.zsl.org/united-for-wildlife-free-conservation-courses>
- <https://wildlife.org/next-generation/career-development/online-courses/>
- <https://www.openlearning.com/umtmooc/courses/wildlife-management>