Course Code	Course Name	Credits
26ZY006	WILDLIFE BIOLOGY	04

Course Objectives

- To introduce the concepts, values, and importance of wildlife conservation.
- To provide knowledge on wildlife habitat analysis and habitat management practices.
- To understand wildlife population estimation methods and disease management.
- To explain the causes and management of human–wildlife conflicts.
- To develop understanding of wildlife management planning and protected area conservation.

Learning Outcomes

- Understand the importance of wildlife conservation and related laws in India.
- Explain habitat analysis, restoration, and conservation strategies.
- Apply methods for wildlife population estimation and monitoring.
- Identify causes of human–wildlife conflicts and suggest suitable control measures.
- Describe the role of protected areas, ecotourism, and tiger reserves in wildlife conservation.

Unit 1 – Introduction to Wildlife **(12 Hrs.)**

Values of wild life - positive and negative; Conservation ethics; Importance of conservation; Causes of depletion; World conservation strategies, Conservation and protection Laws, wild animal of India and Odisha. Habitat analysis, Physical parameters: Topography, Geology, Soil and water; Biological Parameters: food, cover, forage, browse and cover estimation; Standard evaluation procedures: remote sensing and GIS.

Unit 2 – Management of habitats (12 Hrs.)

Setting back succession; Grazing logging; Mechanical treatment; Advancing the successional process; Cover construction; Preservation of general genetic diversity; Restoration of degraded habitats, In situ and Ex situ conservation, Wild life Protection act, wildlife trade and related laws.

Unit 3 - Population estimation (12 Hrs.)

Population density, Natality, Birth rate, Mortality, fertility schedules and sex ratio computation; Faecal analysis of ungulates and carnivores: Faecal samples, slide preparation, Hair identification, Census methods; Bio- telemetry; Care of injured and diseased animal; Quarantine; Common diseases of wild animals.

Unit 4 – Human wildlife conflicts (12 Hrs.)

Basic concepts, reasons for conflicts, Identification of damages caused by wild animals and control measures; Case studies – Elephant, gaur, wild boar, monkey, tiger and leopard; Translocation of Wild animals – Principles, Methods and applications.

Unit 5 - Management planning of wildlife in protected areas (12 Hrs.)

Estimation of carrying capacity; Eco tourism / wild life tourism in forests; Concept of climax persistence; Ecology of perturbance, National parks & sanctuaries, Community reserve; Important features of protected areas in India; Tiger conservation - Tiger reserves in India; Management challenges in Tiger reserve.

Reference Books:

1. Woodroffe R., Thirgood, S. and Rabinowitz, A. (2005). People and Wildlife, Conflict or Co-existence? Cambridge University.
2. Bookhout, T.A. (1996). Research and Management Techniques for Wildlife and Habitats, 5 th edition. The Wildlife Society, Allen Press.
3. Sutherland, W.J. (2000). The Conservation Handbook: Research, Management and Policy. Blackwell Sciences.
4. 4. Hunter M.L., Gibbs, J.B. and Sterling, E.J. (2008). Problem-Solving in Conservation Biology and Wildlife Management: Exercises for Class, Field, and Laboratory.Blackwell Publishing.
5. GopalRajesh (2011) Fundamentals of Wildlife Management, Natraj Publishers.

Websites and eLearning Sources:

https://www.nwf.org/Educational-Resources/Wildlife-Guide
https://www.biologydiscussion.com/wildlife-biology
https://www.easybiologyclass.com/category/wildlife-biology/