



## हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

शैक्षणिक खण्ड, शाहपुर ज़िला काँगड़ा, हिमाचल प्रदेश - 176206

Academic Block, Shahpur, Distt. Kangra (HP) – 176206

Website: [www.cuhimachal.ac.in](http://www.cuhimachal.ac.in)

Sustainable development, natural resource management in changing environment. Molecular ecology, genetic analysis of single and multiple population, phylogeography, molecular approach to behavioural ecology, conservation genetics.

### UNIT-V: ENVIRONMENTAL POLLUTION

Air pollution, Water pollution, Soil pollution, Noise pollution, Ozone and climate change.

### SUGGESTED BOOKS:

1. Charls J. Krebs. 1972. Ecology: The Experimental Analysis of Distribution and Abundance
2. Philipson, J. 1966. Ecological Energetic, Edward Arnold Ltd. London.
3. Odum, E.P. 1970: Ecology, Amerind Publ. Co. New Delhi.
4. Kormondy, E. T. 1971. Concept of Ecology. Prentice Hall of India, New Delhi.
5. Ricklefs, R. E. 1973. Ecology. Thomas Nelson and Sons Ltd.
6. Colinbaux, P. A. 1985 Introduction to ecology. John Wiley & Sons.
7. Wiegert, R. G. 1976. Ecological Energetic Dowden, Hutchinson & Ross. Inc. Pennsylvania.
8. Scuthwick, C. H. 1976. Ecology and the quality of our environment. D. Van Nestrand
9. Fahey, J. J., and Knapp, A. K. 2007. Principles and Standards for measuring primary production.
10. Oxford Univ. Press. UK.
11. Grant, W. E. and Swanmack, T. M. 2008. Ecological Modeling. Blackwell Publ. Hou
12. 1. Evolution, Barton, N. H., Briggs, D. E. G., Eisen, J. A., Goldstein, A. E., Patel, N. H., Cold Spring Harbor Laboratory Press, New York, USA
13. 2. Evolution, Hall, B. K. and Hallgrimsson, B., Jones and Bartlett Publisher, Sudbury, USA
14. 3. Evolution, Futuyma, D. J., Sinauer Associates, Inc., Sunderland, USA
15. 4. What Evolution Is, Mayr, E., (2001), Basic Books, New York, USA



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## SEMESTER - I

Course Code: ZOO 424

Course Name: Basics of Wild Life Studies

Credit: 02

### Objectives of the Course:

- To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
- To educate the students about the importance of wild life conservation.

### Course Learning Outcome:

- Identify problems in wildlife and conservation biology
- Know the principles of wildlife and conservation biology and how they are used to manage wildlife and solve environmental problems

### Course Contents:

#### Unit - I: BASIC CONCEPT OF WILDLIFE BIOLOGY

Definition and importance of wildlife and biodiversity; Values of wildlife- positive and negative; Threatened wildlife and IUCN status - Concept of Extinct, Critically Endangered, Endangered, Vulnerable and rare species; Red data book;

Conservation ethics; Importance of conservation; Causes of depletion; World conservation strategies: WCS, CBD, Agenda 21

#### Unit – II: WILDLIFE SAMPLING

Random sampling, systematic sampling, stratified sampling, cluster sampling (Basics).

Habitat analysis: a) Physical parameters: Topography, Geology, Soil and water; b) Biological Parameters: food, cover, forage, browse and cover estimation; Faecal analysis of ungulates and carnivores: Faecal samples, slide preparation, and Hair identification; Pug marks and Census methods, Standard evaluation procedures: remote sensing and GIS.

#### Unit – III: WILDLIFE CONSERVATION STRATEGIES AND POLICIES

Estimation of carrying capacity; Human-wildlife conflict; Eco tourism / wild life tourism in forests; Climax communities: characteristics and theories; Ecology of perturbation.

*In situ* and *Ex situ* conservation- problems and prospects; Sanctuaries, National parks, Community Reserves and Conservation Reserves; Biosphere Reserve, Concept of corridor. Environmental Laws- Environment Protection Act, Air act, Water act, Wildlife protection act, Forest conservation act



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**Unit – IV: WILDLIFE CONSERVATION IN INDIAN PERSPECTIVE**

Aims & Objectives of wildlife conservation. Wildlife wealth of India; causes for depletion of Indian wildlife; wildlife conservation in India- through age, post-independence initiatives. Different approaches for conservation – *in situ* and *ex situ*.

**Unit – V: MANAGEMENT OF IMPORTANT WILD ANIMALS**

Conservation status, habit & habitat, behavioural biology, threats and conservation management of the animals-Himalayan salamander/Olive ridley turtles/Great Indian bustard/Himalayan musk deer/Ganges river dolphin.

- Project tiger
- Project elephant
- Project crocodile

**SUGGESTED BOOKS:**

1. Saha, G.K. and Mazumdar, S. (2017). Wildlife Biology: An Indian Perspective. PHIlearning 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. Singh, I.K. and Maurya A.K. (2016) Basics of Environmental Studies, Book Age Publications, ISBN: 9789383281411