

Course Code : ENCM 21542
Title : Applied Ecology Laboratory
Pre-requisite : ZOOL 12531
Co-requisite : ENCM 21533
Status : Compulsory, Practical

Learning outcomes:

After completion of the course unit, the student will be able to;

- sample terrestrial and aquatic habitats using appropriate techniques,
- use basic ecological techniques for understanding ecosystem functioning,
- apply ecological indices to assess communities,
- assess the ecological adaptations of animals in relation to their habitats, and
- analyse, interpret and present ecological data in scientific manner.

Course content:

Sampling techniques for terrestrial, aerial, soil and aquatic animals; Study of soil ecosystems; Diversity indices; Estimation of the size of animal populations; Measurement of water quality; Limiting factors and their effect on animals; Identification of animals in the brackish water, Freshwater and marine ecosystems and their ecological adaptations; Construction of life tables and key factor analysis, Climatic diagrams, Demography in terrestrial habitats

Field studies on terrestrial, freshwater, brackish water and marine ecosystems.

Method of teaching and learning:

A combination of laboratory and field studies and computer based learning.

Assessment:

In-course assessment and end of semester examination.

Recommended reading:

1. Brower, J. E., J. H. Zar, C. N. Von Ende (1997). Field and Laboratory methods for General Ecology. 4th Edition. McGraw-Hill, Boston.
2. Chalmers, N. & P. Parker (1996). Fieldwork and Statistics for Ecological Projects: The OU Project Guide, London.
3. Enger, E. D. & B. F. Smith (2012). Field laboratory exercises in environmental science, 7th edition. McGraw-Hill, New Jersey.
4. Krebs, C.J. (1999). Ecological Methodology, Addison-Welsey Educational Publishers, New York.
5. Magurran A. (2004). Measuring biological diversity, Wiley.
6. [Southwood](#), T. R. E. & [P. A. Henderson](#) (2000). Ecological Methods, 3rd Edition, Wiley-Blackwell.