

**eventh Semester**

| <b>Sr. No.</b> | <b>Course Code</b> | <b>Course Title</b>          | <b>Credit Hours</b> |
|----------------|--------------------|------------------------------|---------------------|
| <b>Theory</b>  |                    |                              |                     |
| 4              | ZOOL-4203          | Environmental<br>Biology-Lab | 1                   |

The main goal of this course is to:

- Enable students to develop strong expertise in contemporaneous themes in ecological research.
- Develop critical thinking and to discuss about advanced topics in population, community and ecosystem ecology as well as in biodiversity research.
- Develop expertise to update their knowledge continuously, and to design their own research in ecology.

**Course Learning Outcomes:****Course outlines:****Practicals:**

1. Measurement of environmental factors on land, water and air.
2. Study of different ecosystems: pond, agricultural or grassland, forest.
3. Community analysis through different sampling techniques (quadrat, Transect),
4. Population studies mark and recapture method, statistical analysis of field data.
5. Adaptive features of animals in relation to food and environment.
6. Food chain studies through analysis of gut contents.
7. Analysis of polluted and fresh water for biotic and abiotic variations.
8. Field visits for study of selected terrestrial habitat and writing notes.
9. Experimental design and approaches in ecological research; writing a research project
10. Development of an ecological management plan of some selected area.

**Recommended Books:**

1. Molles, M.C. 2005. Ecology: Concepts and Applications. 6th Ed., McGraw Hill, New York, USA.
2. Cox, C.B., Morre, D. 2000. Biogeography: An Ecological and
3. Evolutionary Approach, 6th Ed., Life Sciences King's College, London, UK.
4. Dondson, S.I., Allen, T.F.N., Carpenter, S.R., Ives, A., Jeanne, R.L.,