Semester:	3		
Course Code:	ENCM 21711		
Course Name:	Terrestrial and Aquatic Ecology Laboratory		
Credit Value:	1		
Status:	Compulsory		
Pre-requisites:	None		
Co-requisite:	ENCM 21703		
Hourly Breakdown:	Theory	Practical	Independent Learning
	-	45	05

Intended Learning Outcomes:

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

1. apply standard ecological techniques and methods for quantifying environmental characteristics of terrestrial and aquatic habitats,
2. sample terrestrial and aquatic habitats using appropriate techniques,
3. use basic ecological techniques for understanding ecosystem functioning,
4. apply ecological indices to assess communities,
5. assess the ecological adaptations of animals in relation to their habitats, and
6. analyse, interpret and present ecological data in a scientific manner.

Course Content:

Sampling techniques for terrestrial, aerial, soil and aquatic animals, Measurement of physico-chemical parameters in terrestrial, soil and aquatic habitats, Estimation of productivity in aquatic habitats, Limiting factors, their effects on animals and limits of tolerance, Assessing the variability of communities using diversity indices, Constructing niche diagrams, Estimation of the population density/size of an immobile and mobile animal populations, Construction of life tables and key factor analysis, Construction of climatic diagrams, Demography in terrestrial habitats, Identification of animals in the brackish water, freshwater and marine ecosystems and their ecological adaptations, Field studies on terrestrial, freshwater, and brackish water ecosystems.

Teaching /Learning Methods:

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

Assessment Strategy:

Continuous assessment and end of semester examination. Percentage given for each sub-component indicates the percent contribution to the final marks.

Continuous Assessment	Final Assessment		
30 %	70 %		
Details:	Theory	Practical	Other
Lab reports 15	-	70	-
Field reports 15			

Recommended Readings:

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, WileyBlackwell.