

Semester	4		
Course code	ZOOL 22561		
Course Name:	Geo-informatics for Zoological Studies		
Credit Value:	1		
Core/Optional	Core		
Pre requisites	BIOL 11542		
Co-requisites	ZOOL 22543		
Hourly Breakdown	Theory	Practical	Independent Learning
	10	10	30
Course Aim/Intended Learning Outcomes:			
After completion of the course unit, the student will be able to;			
<ul style="list-style-type: none"> ➤ describe definitions, components and data models of GIS, ➤ collect input data from the available sources to solve spatial problems, ➤ select the appropriate output method for the presentation, and ➤ use ArcGIS software to suggest solutions to simple spatial problems. 			
Course Content:			
Introduction to GIS including definitions of GIS, components of GIS, Spatial questions, GIS applications, Data output methods, Raster and vector data models, Mapping the spherical Earth (3D) into 2D using projection systems, Data sources and data capturing methods, Simple data analysis methods, Remote sensing concept and applications, GPS concept and applications. Practical sessions on Geo-informatics using simple case studies.			
Teaching /Learning Methods: A combinations of lectures, hands on training with GIS software, assignments, self-studies and small group discussions.			
Assessment Strategy: In-course assessment and end of semester examination.			
Continuous Assessment 40%		Final Assessment 60%	
Details: Practical reports, assignments 40%	Theory (%) 60%	Practical (%) NA	Other (%) (specify) NA
Recommended reading:			
<ol style="list-style-type: none"> 1. Burrough, P. A., & R. A. McDonnell (2011). Principles of Geographical Information Systems; Spatial Information Systems and Geostatistics. 2nd edition. Oxford University Press. UK. 2. Heywood, I., S. Cornelius, & S. Carver (2013). An Introduction to Geographical Information Systems. 4th edition. Pearson education Ltd., UK Korte, G. (1994). The GIS Hand Book, Third edition. On Word Press Camino Entrada. 3. Lo, C. P. & A. K. W. Yeung (2002). Concepts and techniques of Geographical Information Systems. Prentice-Hall of India. 4. Pascolo, P & C. A. Brebbia (1998). GIS technologies and their environmental applications. WIT Press, Southampton, Boston. 5. Schuurman, N. (2004). GIS -A Short Introduction, First edition- Blackwell Publishing. 6. Wilson, J. (2007). The Handbook of Geographic Information Science, 1st edition, Blackwell Publishing. 			