

Module Code	AW-4314		
Module Title	Advanced Topics in GIS		
Degree/ Diploma	Bachelor of Arts (Geography, Environment and Development Studies)		
Type of Module	Major Option/ Breadth		
Modular Credits	4	Student Workload	8 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-Requisite	None		
Aims			
To provide an understanding of the fundamental concepts principles, functions and applications of Geographic Information Systems (GIS) and remote sensing. A special focus of the course will be to illustrate the utility of GIS and Remote Sensing (RS) in a diverse range of data gathering, acquisition, data analysis and data presentation and application.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower Order	30 %	- Understand the basic principles and theories and descriptive approaches of Geographical Information systems (GIS).	
Middle Order	40 %	- Data acquisition, development, analysis and presentation, - Practical GIS lab work in the laboratory practice	
Higher Order	30 %	- Independent interpretation, data based analysis and presentation. Work in a group project and display the project results using ArcGIS	
Module Contents			
<ul style="list-style-type: none"> - Introduction to Geographical Information system (GIS) - Introduction to PC, GIS software download and introduce with the functional methods of ArcGIS - Cartography and map projection - Data bases and attributes - Vector structure and vector analysis - Raster structure and raster analysis - Discussion on data, map and data dictionary will follow the functional issues in GIS - Protect selection in geographical and environmental issues - Project work in GIS lap for practical visualization - Visualization - Introduction to Remote Sensing (RS) and GIS (ArcGIS) - Individual project presentation/ Group project presentation 			
Assessment	Formative Assessment	Class lecture feedback MCQ Test/ Case Studies Online Discussion/ Focus Group Discussion (FGD) Field Excursion	
	Summative Assessment	Examination 50 % Course Work: 50% - Individual assignment on advanced level project (20%) - Individual project presentation (20 %) - Group/ individual assignment (10 %)	