Section/ Part	Course Description	Hours	Days	Cost
Module 1 Introduction to GIS and Mapping (5 Days)	GIS Definitions; Objectives; Components; and Applications of GIS	2	Day 1	Ksh. 15000
	Nature of GIS Data- Raster and Vector data	2		
	Data Management; creating shape files- polygon, polyline and point	2		
	Georeferencing; digitizing;	2	Day 2	
	Editing features	2		
	Symbolizing qualitative and quantitative data	2		
	Symbolizing qualitative and quantitative data querying of GIS attribute table	2	Day 3	
	Layer display properties	2		
	Viewing maps; zooming and panning; fixed and zoomable map scale	2		
	GIS data analysis; Spatial-Measurements analysis	2	Day 4	
	Spatial overlays Analysis	2		
	Buffer Analysis	2		
	Data presentation **Certificate Presentation**		Day 5	

Section/ Part	Course Description	Hours	Days	Cost
Module 2 Remote Sensing and Photogrammetry Image Analysis (5 Days)	Principles of Remote Sensing and Photogrammetry; Key concepts; EM spectrum	2	Day 1	Ksh. 15000
	Opening and displaying an image. Importing an image	2		
	Understanding image spectral bands	2		
	Spectral bands and their environmental applications	2	Day 2	
	Image processing- image rectification	2		
	Atmospheric corrections	2		
	Image projection	2	Day 3	
	Image stacking, image enhancement	2		

	Image resampling and interpolation	2		
	Supervised and unsupervised image classification	2	Day 4	
	Change detection	2		
	Normalized Difference Vegetation Index (NDVI)	2		
	Principal component analysis	2	Day 5	
	Accuracy assessment. Downloading raster datasets **Certificate Presentation**	2		
Module 3 Mobile Mapping using GPS (5 Days)	Introduction to Super Pad software; tracks and waypoints	2	Day 1	Ksh. 15000
	Checking in and Checking-out data	2		
	Creating a Project; Creating layers (point, line and polygon)	2		
	Data collection and editing	3	Day 2	
	Adding attributes to a project	3		
	Collecting and integrating field data using GPS receivers	3	Day 3	
	Mobile phone apps for GIS data collection	3		
	Importing Data from GPS to PC	2	Day 4	
	Downloading the data	2		
	Data manipulation and Analysis	2		
	Creating maps from the collected data and adding base maps. **Certificate Presentation**	5	Day 5	