

# THE DEPARTMENT OF GEOGRAPHY OF THE UNIVERSITY OF DAR ES SALAAM

Announces a five days training workshop on

## GEOGRAPHICAL INFORMATION SYSTEM (GIS)



From 12<sup>th</sup> to 14<sup>th</sup> and 20<sup>th</sup> & 21<sup>st</sup> January, 2018

### ♥ Training Objective

The aim of this training workshop is to provide both a solid theoretical understanding and a comprehensive Practical introduction to the use of Remote Sensing and GIS for compiling, analyzing, communicating ideas, Concepts, plans, designs, reporting, and providing solution on different scientific and social problems.

### ♥ Mode of Delivery

The training will involve hands on activities throughout the training. The trainees will work with computers, Maps, satellite images and vector data, GPS and latest QGIS version 2.18.12 software. The course duration is 5 consecutive days (40 hrs), 8 hrs per day.

### ♥ Training Coverage

In particular, the training will cover four (4) modules/topics:

#### **Topic 1: Database Management Systems (DBMS)**

- Connect to external database (postgres) and manage data with QGIS
- Create a file geo-database
- Edit and structure geographical data with SQL
- Create and delete schemas and tables
- Connect to external database (postgres) and manage data with QGIS (**Case study**).

## **Topic 2: Mobile Phone Data Collection**

- Designing and Building a Questionnaire form using mobile device
- Setting server to mobile device
- Upload data to server and export data to QGIS
- Data collection using Android
- Uploading form to Mobile device

## **Topic 3: Hydrological modeling using SWAT**

- SWAT Project set-up
- Watershed delineation
- HRU analysis
- Processing and writing input tables
- Edit SWAT input
- SWAT Simulation
- Reading and Processing SWAT output

## **Topic 4: Climate Change and Land Use Changes Modeling/From GIS to Remote Sensing**

- Remote Sensing Images Processing; Correction and Interpretation
- Exploring the new features of Semi Automatic Classification Plugin; Land cover classification and Accuracy assessment
- Land use change analysis: Qualitative and Quantitative changes
- Land use Modeling: Transition potential modeling; Cellular Automata and Validation

### **♥ Fees and Material:**

The fee for training is Tsh. 50,000/= for undergraduate students, Tsh. 70,000/= for postgraduate students and Tsh. 200,000/= for non-students. Trainees will be offered certificates of Attendance, GIS data, practical hand-out, video tutorials, lecture notes and provision of latest GIS open software.

Registration – In progress until 12<sup>th</sup> January, 2018.

*Payments are made in-cash in the Department of Geography (Office No. 307) from Today till 10<sup>th</sup> January, 2018.*

**♥ CONTACT US VIA: 0713 632862/0768614161/0688466892**

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**All students and non students are warmly welcomed to study GIS.**

**We will do our best to prepare your future career in finding most excellent solutions to your geospatial problems.**