Malawi University of Science and Technology

Short Courses

1. GIS Mapping and Spatial Data Analysis in QGIS and R

Geographic Information System (GIS) is one of the most powerful of all information technologies because it focuses on integrating knowledge from multiple sources and creates a cross-cutting environment for collaboration. The ability of GIS to perform analysis in order to solve spatially-related problems makes it an efficient communication, information sharing and decision support tool.

The use of GIS technology in various government departments and institutions, organizations, and the industry at large is increasing and so is the demand for GIS skills. The desire to integrate GIS into operations of many organizations and institutions is defeated by the costly commercial GIS software on the market. This course is designed to introduce GIS mapping and advanced spatial analysis tools which can be used to solve different spatial problems in order to enhance decision making while using Free and Open Source software: QGIS and R.

Final Award: Certificate in GIS Mapping and Spatial Data Analysis in QGIS and R

Aim: To equip participants with advanced skills in spatial data manipulation, analysis and visualization by introducing them to sophisticated spatial analysis packages of R and QGIS mapping and spatial analytical capabilities.

Indicative content: Fundamentals of GIS; Introduction to QGIS and R; Global Position System (GPS) data collection; Reading and visualizing GPS data in R and QGIS; Coordinate Reference System transformation in R and QGIS; Vector and Raster data manipulation in R; Point pattern analysis in R and QGIS; Geostatistics in R and QGIS; Terrain analysis in R and QGIS; Map design and map making.

Target participants: Data managers, statisticians, academicians, researchers, cartographers, project managers, executive managers and technical staff involved in disaster risk management, conservation managers, health specialists, social scientists, monitoring and evaluation experts, WASH specialists, hydrologists, GIS professionals, professionals working in utility institutions, town planners, environmentalists, college students and anybody who works/will work with spatial data.

Training dates: 23-27 March, 2020.

2. Fundamentals of Remote Sensing and Image Interpretation

Remote sensing imagery has been extensively used in among other areas, land-use and land cover mapping, soil mapping and land cover change detection and monitoring, urban planning and disaster risk management. Current developments in open source GIS and Remote Sensing software industry has increased the opportunity for individuals, organizations and government departments to process and interpret remote sensing imagery.

This course is designed to introduce fundamentals of remote sensing and satellite image processing procedures and skills using QGIS Desktop and QGIS Semi-Automatic Classification plugin (SCP).

Final Award: Certificate in Fundamentals of Remote Sensing and Image Interpretation

Aim: To equip participants with knowledge in fundamentals of applied remote sensing and demonstrate how QGIS Desktop is used to process and interpret satellite images. In addition to understanding concepts of remote sensing, attendees will also have a hands-on experience on applications of GIS and remote sensing in land use / land cover mapping and change detection and disaster risk management.

Indicative content: Fundamentals of remote sensing; Remote Sensing data sources; Introduction to basic principles of drone photogrammetry; Drone image interpretation; Remote sensing image processing and interpretation; Supervised and un-supervised image classification; GPS data collection for accuracy assessment; Case studies on the application of Remote Sensing in land use/ land cover change detection and disaster risk management; Map making.

Target Participants: Conservation managers, forestry officers, environmentalists, researchers, executive managers and technical staff involved in disaster risk management, project managers, academicians, professionals working in utility institutions, town planners, college students and those who work / will work with remote sensing data.

Training dates: 30th March 2020–3rd April 2020.

Fees

Fees for both courses is MK200,000 per participant and only those participants who will bring a deposit slip as proof of payment will be allowed to attend lessons. Once you receive an acceptance letter, please deposit the full amount of the fees to the following account: **MUST Collections, Standard Bank, Limbe, Account Number 9100001063429**

Both courses will be administered at MUST campus in Thyolo. The fee indicated is for each participant and covers training materials, lunch and refreshments.

Mode of Application

Interested candidates should send their application by enclosing their curriculum vitae and indicating their qualifications or relevant work experience to the following address, on and before March 16, 2020:

The Director of Research, Postgraduate Studies and Outreach

Malawi University of Science and Technology

P.O. Box 5196,

Limbe

Email: research@must.ac.mw

Indicate the name of the short course you are applying for on the envelope or as subject of your email.