**[FineResults Research Services](http://fineresultsresearch.org/)** invites you to training on:

## Topics: [GIS and Remote Sensing for Epidemiology and Public Health Course](https://bit.ly/3fNMtI9)

## Date: 17th to 21st August 2020

**Cost: USD 800 or Ksh 65000**

**Contacts: +254 759 285 295,** [**training@fineresultsresearch.org**](mailto:training@fineresultsresearch.org)**.**

**Venue :** **FineResults Research, Nairobi, Kenya Training Centre.**

**INTRODUCTION**

Epidemiology seeks to determine associations between exposure risk and disease that are spatially dependent. Public health focuses on the health of populations rather than of individuals and focuses more on prevention of health problems. These efforts fall naturally within the domain of problems requiring use of spatial analysis as part of the solution, and GIS and other spatial analysis tools are therefore recognized as providing potentially transformational capabilities for Epidemiology and public health efforts. Statistics are a mainstay in the toolkit of public health professionals. Human memory being what it is, however, even Public health professionals with reasonable statistical training, over the years, often forget the basics.

**Duration**

**5 Days**

**COURSE OBJECTIVES**

* To develop Understanding on the different components of a GIS and the role GIS plays in solving epidemiological and public health problems.
* To present to participants all data-related aspects of a GIS, such as the data models in GIS, data input, data editing, data visualization, metadata and managing a spatial database.
* To Carry out advanced analyses of geographical data with specific reference to epidemiological related issues
* To improve data management and analysis skills of the participants
* To perform spatial and temporal epidemiological and public health analysis using GIS.
* Establish understanding on how to work with spatial data and GIS techniques to solve epidemiology and public health problems.
* To expose participants to data capture, input, manipulation and display by GIS
* To demonstrate to participants use of GIS in mapping health facilities and projects.
* To explain to the participants role of GIS as a decision support system in public health

**COURSE OUTLINE**

**Module 1:**

**Epidemiology and public health concepts and frameworks**

* Introduction to Epidemiology and public health concepts
* Introduction to GIS in Epidemiology and public health context
* Planning for a GIS system installation
* GIS Data sources for Epidemiology and public health
* Working with a GIS software

**Module 2:**

**GIS data management in epidemiology and public health.**

* Public health and epidemiology GIS Database creation
* Data Types and Data Sources in Epidemiology and public health
* Working with GIS Data
* Working with data from different sources (databases, shapefiles and spreadsheets)
* Facilitated Practical exercises in working with GIS Data
* Styling and symbolization

**Module 3:**

**Spatial mapping and Visualization in Epidemiology and Public health**

* Mapping Project activities
* GIS mapping of priority public health problems (HIV and AIDS, Malaria, Tuberculosis)
* GIS mapping of most at risk populations (MARPS)
* GIS Mapping of health facilities and health resources

**Module 4:**

**GIS for monitoring in Epidemiology and public health**

* GIS in Disease transmission and progression mapping
* GIS as a Decision Support System for Public Health Management (What, where, when, how and why analysis – case studies)
* Use of GIS in Epidemiology and Health Related Disaster Management (case studies or practical)
* GIS in Environmental management and Public health (case studies or practical)
* Participatory GIS in public health
* Use of mobile GIS in health surveillance and assessments
* Integrating GIS into Electronic Medical Records (case studies or practical)

**Module 5:**

**Basic statistical data analysis for Epidemiology and Public health**

* Introduction to excel
* Preparing data for analysis
  + Creating a list
  + Manipulating data using formulas
  + Outlining and Sorting data
  + Entering Data: Data Forms
  + Finding Records Using Criteria
  + Filtering Data
  + Data Auditing
  + Data validation

**Graphs and ChartsLine Graphs**

* Bar Charts
* Statistical Data Analysis with Excel
  + Descriptive Statistics
  + Pivot tables
  + Probability Distribution
  + Hypothesis tests
  + Analyses of Variance
  + Measures of Precision
  + Single Factor Experiments
  + Factorial Experiments
  + Regression Analysis
* Data Quality reporting

NB: We are offering you a half day, fun and interactive team building event!

## **Be part of the Training**

* Click [**HERE**](https://bit.ly/2WxX3Ls) for the individual registration.

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