Offered by
Government of Pakistan
Ministry of National Health Services, Regulations and Coordination
Health Services Academy (HSA)

Course No.4:

Title: GIS Mapping and Spatial Analysis (Specialization)

Duration: 24 Weeks (2 day per week (Saturday to Sunday)

Software: ArcGIS 10.x MS excel, Labeling Analysis, MS Access, Spatial Analysis

Certificate: Earn a Certificate upon completion

Participant Fee: 80,000

About This Course:

In this course, you will learn how to find GIS data for your own projects, and how to create a well-designed map that effectively communicates your message. The first section focuses on the basic building blocks of GIS data, so that you know what types of GIS files exist, and the implications of choosing one type over another. Next, 'll discuss metadata (which is information about a data set) so you know how to evaluate a data set before you decide to use it, as well as preparing data by merging and clipping files as needed. We'll then talk about how to take non-GIS data, such as a list of addresses, and convert it into "mappable" data using geocoding. Finally, you'll learn about how to take data that you have found and design a map using cartographic principles. In the course project, you will find your own data and create your own quantitative map.

Note: software will provide for this course ArcGIS (crack version).

Skills you will Gain

Map, Geographic Information System (GIS), Cartography, Spatial Analysis, , Metadata

Acquire: valuable GIS mapping skills that employers seek.

Syllabus - What you will learn from this course

- Filtering Data Using Queries
- Mapping the real world with vector and raster data
- Vector analysis
- Remote sensing as a GIS data source
- Raster analysis
- Data Acquisition and Preparation
- Project: Spatial Analysis
- GIS, spatial analysis, and statistics
- Introduction to story map
- Finding data and preparing it for your Project
- Map design Principle

Suggested Skills:

- Experience with Windows-based software for basic file management, data management and browsing is required.
- Familiarity with GIS and cartographic concepts will be helpful, but is not required.
- Knowledge with Statistical, data analysis and census concept will be helpful but is not mandatory

Use of GIS Skills:

We will explore how can use GIS to easily integrate location and spatial analysis in your workflows and how to utilize the power of GIS in your official statistic and census data set. Location is the connective thread allowing us to uncover hidden patterns, discover trends in our data, or improve predictive modeling. GIS is being used today by statisticians to visualize and explore data and conduct spatial analysis, including the integration of machine learning models. They're also using GIS in the area of big data analytics and data sciences.

What is GIS?

A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data. GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there). This provides a foundation for mapping and analysis that is used in science and almost every industry. GIS helps users understand patterns, relationships, and geographic context. The benefits include improved communication and efficiency as well as better management and decision making

Address: *Health Services Academy Park Road, Chakshahzad, Islamabad Phone: 051-9255590-4 Mobile 03468563483,* 03218580007