



**Government of Pakistan**  
**Ministry Of National Health Services, Regulations and Coordination**  
**Health Services Academy (HSA)**

**Courses No.1**

**Title: Fundamental of GIS (Introduction to GIS Mapping)**

**Duration:** 5 weeks (2 day per week (Saturday to Sunday)      *proposed Time From: 7 to 9 PM*

(Map your World with GIS. Explore, concepts, and terminology of spatial analysis and modeling)

**Software:** ArcGIS 10.x

**Certificate:** Earn a Certificate upon completion

**Participant Fee: 30,000**

**About This Course:**

Learn how advances in geospatial technology and analytical methods have changed how we do everything, and discover how to make maps and analyze geographic patterns using the latest tools. This course is for those new to mapping and GIS, as well as anyone looking to gain a better understanding of how it all works and why. You will learn practical skills that can be applied to your own work. You will get the most out of the learning experience if you can tailor your work to your own interests. You will learn how to create GIS data, how to find and evaluate data found online, how to design an effective map, and how to filter data and analyze spatial relationships. Maps are more than diagrams that help you navigate from point A to point B. They are windows into information that allow us to explore our world, understand it better, and engage with it more productively.

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

**Skills you will Gain:**

Maps, Geographic Information System (GIS), Cartography, Spatial Analysis,

**Acquire:** valuable GIS mapping skills that employers seek.

## Syllabus - What you will learn from this course

- What is a GIS?
- Introduction to ArcGIS
- Introduction to Raster and Vector dataset
- Making Maps with Common Datasets
- Data frame and map elements
- Symbology & Labeling
- Mapping the real world with vector and raster data
- Data storage , Table ,Joins and Relates,
- Mapping Locations with Coordinate Systems
- Project: Creating Your Own Data

## Suggested Skills:

- Experience with Windows-based software for basic file 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