



ArcGIS Enterprise GIS Training Plan for Staff of Ministries of Health

World Health Organization

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OVERVIEW

This ArcGIS® Enterprise GIS Training Plan is a tool for Ministries of Health (MoH) to use to help determine the staff training that will best meet their needs. It provides training recommendations that can assist an organization in optimizing functional management, operation, and maintenance of the ArcGIS platform.

ROLES/PERSONAS IN GIS

Based on the direction of the World Health Organization and building on Esri's many years of experience implementing ArcGIS, here are the roles typically found at MoHs that are needed to build, use, and grow your GIS. *Often one person will take on more than one role.* The training recommendations below are essential for gaining skills needed for each role.

The following staff roles and the recommended training for each are outlined in the remainder of this document:

- **Policy Maker | Director | Team Leader | Minister**
- **GIS Officer | GIS Specialist**
- **Monitoring and Evaluation Officer | Data Manager | Health Information System Officer**
- **Officers responsible for Disease Surveillance | Routine Immunization | Supplemental Immunization**

ESRI TRAINING COURSES

Esri offers a range of training options for both new and experienced GIS users, in both instructor-led and self-paced formats. This allows you to select training solutions that match the preferences of your organization and your individual users.

Instructor-led courses are mostly 2-3 days in length, with a few exceptions. They may be conducted at an Esri training facility, through a virtual online classroom, or held privately at a customer site – with an appropriate training facility. Private classes may also be followed up by a day of coaching to address an organization’s specific learning requirements.

Options for **self-paced e-Learning** through web courses and training seminars are also listed in this document.

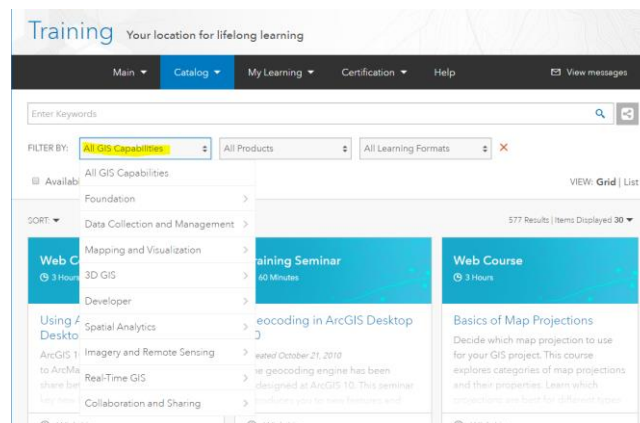
Web courses include:

- Hands-on practice with ArcGIS (local access to ArcGIS software is often required)
- Demonstrations and interactive activities
- Conceptual material
- Course exams to assess learning
- Certificate of Completion

Training seminars are pre-recorded presentations that include software demonstrations on various solutions. Seminars are offered live on a regular basis. You can go to: [Subscribe to Live Training Seminar Reminders](#) to receive email notification on upcoming events.

Massive Open Online Courses (MOOCs) are free online classes that offer a convenient, effective, and fun way to keep up with the fast-paced developments in the ArcGIS platform. Classes are open day and night and require only a couple of hours of study per week. A certificate is available upon completion.

As this is not a complete list of all learning options available, please refer to our full course catalog: [Esri training website](#). Filtering the search results by Capabilities may be the easiest way to find appropriate additional resources:



POLICY MAKER | DIRECTOR | TEAM LEADER | MINISTER

Learn GIS Concepts

Putting ArcGIS to Use Across Your Organization, Instructor-led, 3 days

Get a comprehensive introduction to ArcGIS platform components and capabilities. In this course, you explore ArcGIS apps used for mapping and visualization, data collection and management, spatial analytics, and collaboration and sharing. Discover how the ArcGIS platform helps organizations address common business challenges and apply location-based insights to streamline operations and improve decision making.

This course is designed for: New GIS Professionals needing to learn more about how the entire ArcGIS platform can work across the organization should attend this course. Other managers interested in leading GIS adoption throughout their agency/organization.

Learn how to:

- Map and analyze business data using ArcGIS apps and tools
- Create and share data, web maps, and web apps using ArcGIS portal
- Streamline field data collection workflows
- Configure web apps and dashboards to monitor field operations in real time

Additional e-Learning and Tutorials to meet your learning objectives:

- [Help End Homelessness](#)– This case study was designed to help cities, counties, and other jurisdictions build powerful analytical tools for addressing homelessness. By completing this lesson, you'll learn how to create a homelessness risk map, explore spatial patterns of various risk factors, and compare characteristics among different homeless communities. You'll also learn how to weigh different planning scenarios to decide where to locate new resources. You can start with the data provided and repeat the workflows using your own data. Total time to complete all lessons is 2.5 hours.
Requires ArcGIS Pro Advanced License.

GIS OFFICER | GIS SPECIALIST

ArcGIS Pro

Introduction to GIS Using ArcGIS, Instructor-led, 2 days

Learn fundamental concepts that underlie GIS technology and geographic data. In this course, you will gain experience working with GIS maps to visualize and explore real-world features; analyze data to answer questions and create new information; and share maps, data, and other resources so they can be easily accessed throughout your organization. This course is taught using ArcGIS Online.

This course is designed for: New Users

Learn how to:

- Identify appropriate data to support a mapping project.
- Create a map, add data to it, and symbolize map features to support the map's purpose.
- Share data, maps, and other content to an organizational portal.
- Perform spatial analysis to obtain information about map features within an area of interest

ArcGIS Pro: Essential Workflows, Instructor-led, 3-days

In this course, you will explore ArcGIS Pro capabilities as you become comfortable working with this new desktop application. The course emphasizes common GIS workflows and best practices to map, manage, analyze, and share GIS data and resources. You will acquire the essential skills you need to be productive with ArcGIS Pro.

This course is designed for: Individuals with introductory-level knowledge of GIS concepts and limited ArcGIS experience

Learn how to:

- Combine data from different sources to create accurate, informative maps.
- Organize, create, and edit geographic data to keep it accurate and up to date.
- Symbolize map features to support 2D and 3D visualization.
- Design an attractive page layout for maps that will be printed.
- Analyze GIS data to solve spatial problems and create new information.
- Share maps, analysis results, and geoprocessing models so they are easily accessible to colleagues, decision makers, or the public.

Analytics

Spatial Analysis using ArcGIS Pro, Instructor-led, 3 days

In this course you will learn essential concepts and a standard workflow you can apply to any spatial analysis project. You will work with a variety of ArcGIS tools to explore, analyze, and produce reliable information from data. Course exercises use an Advanced license of ArcGIS Pro and ArcGIS 3D Analyst, ArcGIS Spatial Analyst, and ArcGIS Geostatistical Analyst.

This course is designed for: Individuals performing spatial analysis.

Learn how to:

- Quantify spatial patterns using spatial statistics and analyze change over time to identify emerging hot spots.
- Use interpolation and regression analysis to explain why patterns occur and predict how patterns will change.
- Prepare data and choose appropriate tools and settings for an analysis.
- Examine features and distribution patterns within an area of interest and identify optimal locations using 2D and 3D analysis tools.
- Analyze GIS data to solve spatial problems and create new information.

Additional e-Learning and Tutorials to meet your learning objectives:

[Preparing for Network Analysis](#) - One of the first steps for transportation network analysis projects is to create the data modeling infrastructure. Learn the basic concepts of network data modeling in ArcGIS and how to use the ArcGIS Network Analyst extension to create a network dataset.

Mobile

Field Data Collection and Management Using ArcGIS, Instructor-led, 2 days

Learn how ArcGIS supports a complete field data management workflow—from the office to the field, in the field, and back to the office. You will learn best practices to configure and deploy ArcGIS field-productivity apps to meet your data-collection needs. You will have the opportunity to use your own iOS or Android device to complete some course exercises.

This course is designed for: GIS Professionals and GIS Managers needing to understand best practices for deploying field apps.

Learn how to:

- Be productive with ArcGIS Pro 2.0; ArcGIS Online; Collector for ArcGIS (Android/iOS); Navigator for ArcGIS, Operations Dashboard for ArcGIS; Workforce for ArcGIS and Survey123 for ArcGIS.
- Create a web app to collect requests and generate work assignments.
- Efficiently manage field workforce assignments and monitor field data collection in real time.
- Create and configure a web map for map-based data collection and surveys for form-based data collection.
- Create a navigation map that includes custom asset data.

E-Learning resources for Field Data Collection

- [Modernize Your Field Workflows Using Collector for ArcGIS](#) - In this seminar, the presenters demonstrate how to deploy Collector on smartphones or tablets to streamline data collection and improve data quality. You will see how maps featuring intelligent, data-driven forms are used to collect data in the field with accuracy, even when Wi-Fi or cellular service is unavailable (Training Seminar) - *V10.4*
- [Simplify Field Data Workflows with Collector for ArcGIS](#) - This seminar introduces essential concepts of Collector for ArcGIS and shows how this app integrates with other components of the ArcGIS platform to provide a seamless data management workflow (Training Seminar) – *V10.3*
- [Navigator for ArcGIS: An Introduction](#) - Learn how to use Navigator maps offline, work seamlessly with other ArcGIS field apps, and integrate with custom stop lists (Training Seminar) – *ArcGIS Online & Navigator for ArcGIS*
- [Navigator for ArcGIS: Creating Custom Navigation Maps - Jan 2017](#) - Navigator for ArcGIS uses your organization's authoritative GIS data. Learn how to route on your own roads, search your own assets, and view your own maps with turn-by-turn voice-guided directions (Training Seminar) – *January 3, 2017*
- [Survey123 for ArcGIS: Get Started with Online Surveys](#) – Learn how to build smart but powerful forms that anyone can use in the field for citizen science, surveys, crowd-sourcing, and other data-collection projects. This seminar walks you through the steps to quickly design intuitive forms on the web (Training Seminar)
- [Survey123 for ArcGIS: Collect Field Data with Smart Forms](#) - This seminar introduces Survey123 for ArcGIS and shows how to deploy simple and logic-driven form-based surveys (Training Seminar) – *Live December 15, 2016 – Survey123 for ArcGIS*
- [Survey123 for ArcGIS: Author a Survey on the Web](#) - Author forms for field data collection with Survey123 for ArcGIS. In this course, you will gain the skills to create, share and analyze surveys on the Web. Learn design best practices and how to deploy your surveys to a mobile device (Web course) – *ArcGIS requirements: To use a form in Survey123, you must have an ArcGIS*

organizational account or Portal for ArcGIS. To create forms in Survey123, you must have user account with publishing permissions. ArcGIS Online and Portal for ArcGIS 10.3.1 and later are supported.

- [Introduction to Workforce for ArcGIS \(2016\)](#) - In this seminar, the presenters show how to get started using Workforce to improve field-office coordination and expedite field data collection workflows (Training Seminar) - V10.4 – ArcGIS Online & Workforce for ArcGIS – August 2016.

Dashboarding

E-Learning resources for Dashboarding

- [Real-Time Decision Making with Operations Dashboard for ArcGIS](#) - This seminar introduces the latest version of Operations Dashboard for ArcGIS, the app that monitors assets, activities, and events to support data-driven, "at-a-glance" decision making. The presenters highlight the new web experience for authoring interactive dashboards and how to leverage Operations Dashboard capabilities from within an ArcGIS Online organization. (Training Seminar)
- [Operations Dashboard for ArcGIS: An Introduction](#) - Operations Dashboard for ArcGIS helps decision makers oversee their day-to-day operations. This session is for anyone who wants to learn how to create and configure dashboards using a gallery of Esri provided visualizations and tools. (Training Seminar)

Sharing

[Sharing GIS Content Using ArcGIS, Instructor-led, 2 days](#)

Learn how to efficiently share a variety of geospatial resources to an ArcGIS Online organizational site or ArcGIS Enterprise portal website. This course teaches how to publish high-performing services that extend ArcGIS mapping and analytics capabilities across your organization. Course attendees receive a free e-Book copy of [Getting to Know Web GIS, third edition](#).

This course is designed for: GIS Professionals needing to understand best practices for sharing content in ArcGIS.

Learn how to:

- Share content between ArcGIS portals.
- Devise a sharing strategy that supports your organization's workflows and business goals.
- Share map layers, web maps, data, imagery, custom analysis tools, and ArcGIS Pro project packages.
- Create map and vector tile caches to enable fast display performance.

MONITORING AND EVALUATION OFFICER | DATA MANAGER | HEALTH INFORMATION SYSTEM OFFICER

Management Information

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Additional E-Learning resources Management

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OFFICERS RESPONSIBLE FOR DISEASE SURVEILLANCE | ROUTINE IMMUNIZATION | SUPPLEMENTAL IMMUNIZATION

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- ArcGIS Learn Lesson [Map Breast Cancer Differences by Ethnicity](#)
- ArcGIS Learn Lesson [Policy Mapping – Improve Newborn Health](#)
- ArcGIS Learn Lesson [Monitor Malaria Epidemics](#)
- ArcGIS Learn Lesson [Visualize Shrinking Malaria Rates in Africa](#)