Esri Eastern Afica Training 2018-2019
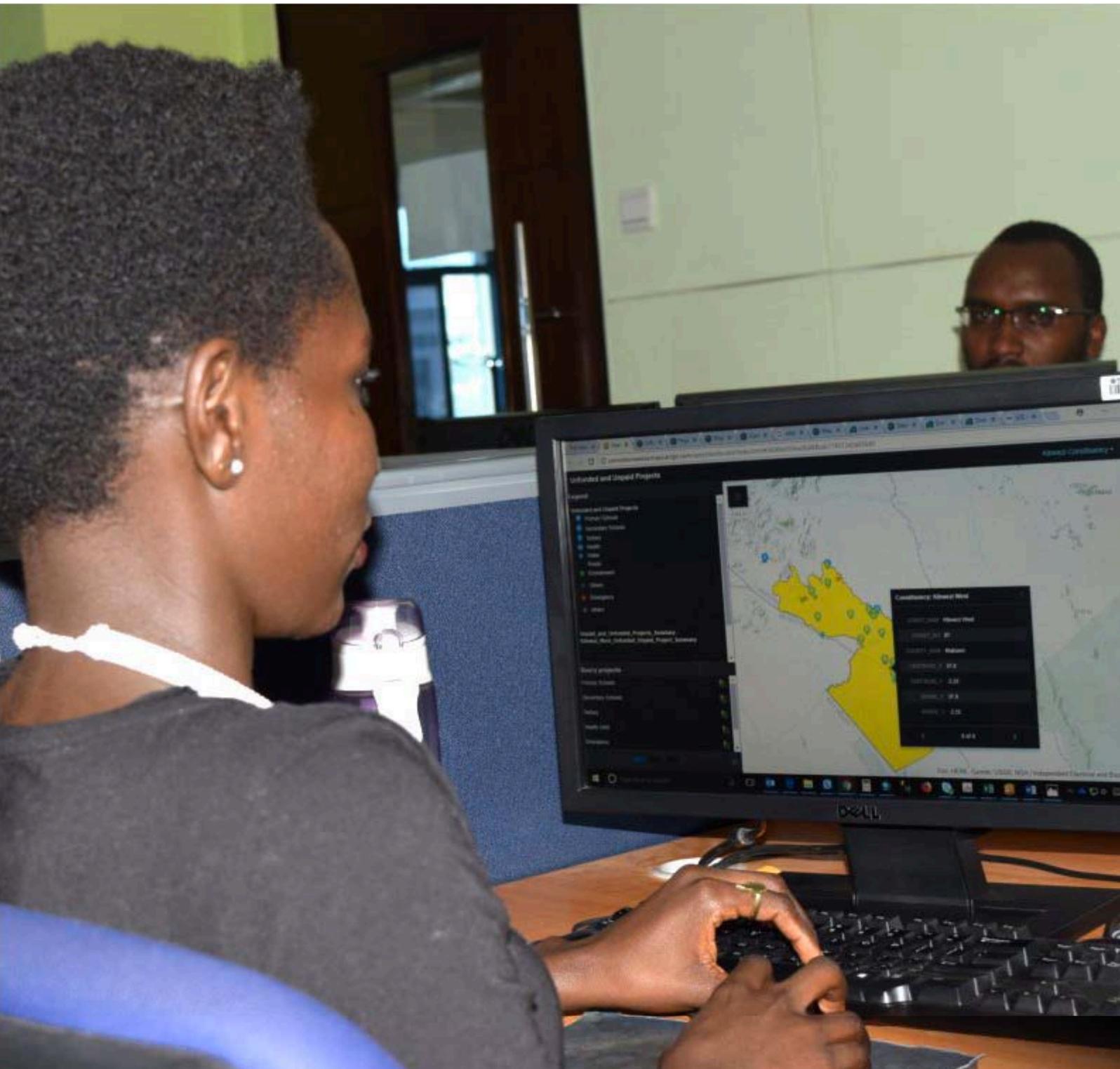
Your Location for Lifelong Learning

Instructor-Led Courses
Training Catalog

Introduction

Esri training options teach GIS problem-solving skills and best practices to accomplish GIS tasks and workflows. Developed by education specialists with expertise in Esri® products, our courses help thousands of professionals each year.

At Esri Eastern Africa, we recognize individual and distinct learning styles and training goals. With our complete range of training solutions, for beginners, intermediate and advanced users both in the classroom and over the Internet, we cater for all skill sets and educational requirements.

We offer instructor-led and self-paced training solutions that teach fundamental GIS technology skills and best practices to accomplish GIS workflows. Esri Eastern Africa closely monitors new training technologies to offer creative and cost-effective solutions to our users.

Training and education are critical to every successful GIS implementation and will help your organization derive maximum benefits from its GIS solution.

Why train with Esri Eastern Africa

- You are assured of quality based on our exceptional group of highly qualified, knowledgeable, experienced and friendly instructors who have all been certified through the rigorous Esri Instructor Certification Program. Our instructors are also equipped with wide knowledge and skills acquired from consultancy and technical support as well as regular training on the latest updates of our products.
- We offer you a wide range of courses that are tailored to suit your exact needs.
- Our curriculum provides demonstrations and hands-on exercises which reinforce the course lectures.

- Esri Eastern Africa offers a conducive learning environment which comprises of two, 16-seat fully equipped classrooms and one 8-seat classroom for Web-based training.
- Our courses are designed and written by GIS experts and our course materials are Esri and Esri Eastern Africa copyrighted.
- We offer flexible trainings at Esri Eastern Africa. Training can be conducted at your organization's premises or your preferred venue of choice. We simply bring training to your doorstep.

Benefits	Instructor-led Training	Self-paced Training
Hands-on software exercises with data	●	●
Esri software provided for use during class	●	●
Software demonstrations showing real-world application of course concepts	●	●
Course workbook (to review and practice concepts and workflows after class) Taught by certified instructor with expertise in the course subject matter	●	
Real-time interaction with instructor and other students	●	●
Opportunity to ask questions during class and get immediate answers	●	●
Certificate of completion awarded	●	●

At Esri Eastern Africa you are assured of a variety of training courses delivered both as instructor-led and self-paced.

Instructor-Led Training

Instructor-led courses are offered at our Esri Authorized Learning Centre in Nairobi, Kenya and at our Learning Centre in Arusha, Tanzania.

Instructor-led format focuses on learner engagement. Esri instructor-led courses take an immersive, experiential approach to learning. Their design incorporates proven adult-learning principles and focuses on interaction and skills application to ensure that learners acquire relevant and directly

The course format includes the following:

- Interactive discussions with learners contributing real-world experiences
- Demonstrations and hands-on individual exercises
- Facilitated group exercises
- Activities and problem-solving scenarios that encourage peer-to-peer learning
- Learners can interact with each other and the instructor during class demonstrations and exercises. Instructors can even shadow learners' computers to monitor progress during individual exercises or to check in on groups and facilitate discussion.

Self-paced Training

Self-paced training support independent on demand training. Flexible learning comes with more choices in your learning opportunities; allowing you to decide on when and what you want to learn.
With a fully equipped classroom and friendly, high-caliber instructors who are committed to learner success, this is certainly the opportunity you have been waiting for.

Only the selected ArcGIS Foundation courses are offered under the Self-paced training

Customized Training

With our customized instructor-led training, we train based on your needs,workflows and what you do at your workplace.

We can customize our courses and programs to meet your organization's needs. Each program we design is different; it is unique to your organization and your particular industry and needs. It is carefully crafted by our training and solutions teams to meet your specific goals and objectives

---

Our staff have expertise in many areas including:
1. Desktop GIS
2. Online/Cloud GIS
3. Enterprise GIS
4. Mobile GIS
5. Developer GIS
6. Cartography
7. Remote sensing

Benefits
- Specific training is tailored to user need
- Content based on users' workflows and processes
- Delivery by experts in the specific industry
- Feature current trends in technology and new developments and improvements in the products
- Classes can be conducted at user preferred venue and arrangement

ArcGIS 1: Introduction to GIS

Three days

Overview

This course introduces GIS concepts and ArcGIS tools used to visualize real-world features, discover patterns, and communicate information. Using ArcMap and ArcGIS Online, you will work with GIS maps, explore data, and analyze maps and data as you learn fundamental concepts that underlie GIS technology.

Learn how to:

- Understand GIS fundamental concepts and its massive benefits
- Quickly create and share a GIS map using ArcGIS web-based tools and content.
- Find and organize geographic data and other GIS resources for a mapping project.
- Accurately display features on a GIS map and efficiently access information about them.
- Analyze a GIS map to identify where features that meet specific criteria are located.
- Share GIS maps and analysis results with others so they can be viewed using desktop applications, websites, and mobile devices.

Prerequisite

- Experience with Windows-based software for basic file management and browsing.
- Suitable for individuals who do not have any prior GIS education or workplace experience with GIS.

Who should Attend

- Individuals who have no or minimal experience with GIS and GIS Professionals

ArcGIS 2: Essential Workflows

Four days

Overview

Explore a range of ArcGIS functionality and basic ArcGIS skills! In this course, you will acquire the skills to perform the most common ArcGIS workflows. Primarily using ArcMap, you will explore, manage, and analyze geographic data and create informative maps. Learn techniques to effectively share your ArcGIS work with decision makers, colleagues, and the public.

Learn how to:

- Organize, create, and edit geographic data so that it is accurate and up to date.
- Manage, symbolize, and label map layers to support visualization and data exploration.
- Apply a standard workflow to analyze GIS data and solve spatial problems.
- Deliver maps and analysis results to multiple platforms for access to both GIS users and non-GIS users.
- Provide the fundamental ArcGIS knowledge and experience needed to enroll in courses such as Data and Map Production, Geoprocessing and Analysis,
- Enterprise GIS and Multi-user Geodatabases.

Prerequisite

- Experience with Windows-based software for basic file management and browsing.
- Suitable for GIS professionals and others who have an introductory-level knowledge of GIS concepts and limited ArcGIS experience.

Who should Attend

- Data Editors, GIS Analysts, GIS Database Designers, Map Designers and GIS Desktop Application Developers

Apps for Everyone

Field workers, executives, customers, contractors, citizens—so many people want location-based information. ArcGIS Online comes with mapping apps and tools that make it easy to do your work and share it with others.

Introduction to ArcGIS Pro for GIS Professionals

Three days

Overview

This course helps experienced GIS professionals get up to speed quickly with ArcGIS Pro terminology and the new, intuitive tools to efficiently complete mapping, editing, geoprocessing, and analysis projects. You will explore the new interface, experience for yourself the tight integration between 2D and 3D capabilities, and learn how to share your authoritative GIS content more quickly and easily than ever before.

Learn how to:

- Create ArcGIS Pro projects and assign tasks.
- Edit 2D data and 3D scenes.
- Perform geoprocessing and analysis tasks.
- Create and share multiple layouts from a single map.

Prerequisite

- Completion of ArcGIS 2: Essential Workflows or equivalent knowledge.

Who should attend

- Data Editors, GIS Analysts, Map Designers, GIS Technical leads

ArcGIS Pro: Essential Workflows

Four days

Overview

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 results you need to be productive with ArcGIS Pro.

Learn how to:

- Combine data from various 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.

Prerequisite

- Completion of Introduction to ArcGIS Pro for GIS Professionals or equivalent knowledge

Who should attend

- Data Editors, GIS Analysts, GIS Database Designers and Map Designers

Migrating from ArcMap to ArcGIS Pro

Two days

This course introduces essential ArcGIS Pro terminology and prepares you to be productive right away. You will learn how to

efficiently complete a variety of tasks related to mapping; editing; analyzing; and sharing data, maps, and other geospatial resources.

Learn how to:

- Create an ArcGIS Pro project and import map documents and 3D scenes.
- Create and modify map layouts and symbology.
- Edit feature geometry and attributes.
- Import a geoprocessing model and identify potential migration issues.
- Share geospatial resources to your organization's ArcGIS portal.

Prerequisite:

- GIS and ArcMap experience

Who should attend

- Experienced ArcMap users

Putting ArcGIS to use Across your Organization

Three days

Overview

Get a comprehensive introduction to The ArcGIS platform components and capabilities. In this course, you explore ArcGIS apps used for mapping and visualization, data collection and management, spatial analytics, 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.

Learn how to:

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

Prerequisite

Experience working with Microsoft Excel tables and other Windows-based software for file management and web browsing.

Spatial Analtyics

Imagery and Remote Sensing

Mapping and Visualization

ArcGIS 3: Performing Analysis

Three days

Overview

Learn a standard workflow you can apply to any spatial analysis project. You will perform different types of analyses to efficiently create reliable results that support informed decision making. This course uses ArcGIS for Desktop Advanced (ArcMap) and some exercises use tools in the ArcGIS Spatial Analyst extension.

Learn how to:

- Automate analysis tasks using geoprocessing models.
- Create a weighted suitability model to select the optimal location for a new site.
- Apply spatial statistics to examine distribution patterns and identify hot spots.
- Model temporal data to analyze and visualize change over time.

Prerequisite

- Completion of [ArcGIS 2: Essential Workflows](#) or [Using ArcGIS for Geospatial Intelligence](#) or equivalent knowledge.

Who should attend

- GIS Analysts and GIS Technical Leads

Get Started with Insights for ArcGIS

Three days

This course prepares you to work with Insights for ArcGIS to dynamically visualize and analyze data from multiple sources on maps, charts, tables, and more. You will learn how to define a workflow to investigate a spatial problem, interactively apply analysis tools, and share your insights across the enterprise.

Learn how to:

- Connect to data sources and prepare data for analysis.
- Visualize, interact with, and analyze multiple datasets.
- Share analysis results and workflow models

Prerequisite

- Some familiarity with GIS concepts is required.

Who should attend

GIS Analysts, GIS Technical Leads, GIS Managers

Building 3D Cities using Esri CityEngine

Three days

Overview

Esri CityEngine uses a rule based approach to help you efficiently produce highly realistic 3D models. This course introduces the CityEngine procedural modeling workflow and best practices to create compelling 3D cities that can be used to visualize urban landscapes, explore impacts of proposed development, generate virtual city simulations, and support geodesign projects.

Learn how to:

- Create an Esri CityEngine project to organize and manage data and assets.
- Import 2D GIS data and apply Computer Generated Architecture rules to create detailed 3D shapes.
- Import, modify, and create rules to generate realistic content that brings a 3D city to life.
- Sketch and texture 3D building models.
- Share 3D city scenes to ArcGIS Online

Prerequisite

- None

Who should attend

- GIS professionals, urban planners, landscape architects, architects, entertainment professionals, and others who want to create 3D city models and urbanlandscapes

Designing Maps with ArcGIS

Three days

Overview

Are you interested in designing attractive maps through application of standard cartographic workflows?

This is a workflow-oriented course that focuses on essential cartographic principles using ArcGIS for Desktop that enables users to design, evaluate and publish high quality maps.

Learn how to:

- Create a map layout using dynamic map elements.
- Design map symbols and apply symbology to qualitative and quantitative data.
- Share maps in a variety of ways including hard copy, soft copy and dynamic map services
- Create labels and annotation.
- Produce attractive maps for print and web delivery.

Prerequisite

Completion of ArcGIS 2: Essential workflows or equivalent knowledge

- Familiarity with Cartography terminologies

Who Should Attend

- GIS Analysts, GIS Technical Leads and Map Designers.

Creating Story Maps using ArcGIS

Two days

Overview

Thanks to their engaging user experience, story maps have achieved mass appeal as a vehicle to inform the public, engage stakeholders, and inspire an audience. This course—for anyone that wants to communicate with maps—teaches the concepts, best practices, and decisions that need to be made when creating and sharing a story map.

Learn how to:

- Choose an appropriate story map app for your purpose and audience.
- Add web maps, images, multimedia, and text to create an engaging story map.
- Apply best practices to share and promote your story maps.

Prerequisite

- Familiarity with ArcGIS Online will be helpful but is not required.

Who should attend

- Anyone

ArcGIS 4: Sharing Content on the web

Three days

Overview

Did you know that ArcGIS supports sharing geographic content across multiple platforms so that it is accessible to everyone?

Find out how to share your work as maps, globes, or geoprocessing tasks.

Learn how to:

- Determine which sharing option is appropriate for your needs.
- Author and publish map services to share your authoritative GIS data
- Publish feature services to enable editing of GIS data over the web.
- Create and publish image services to provide fast access to imagery.
- Publish geoprocessing services to share your GIS models and analysis results.
- Share GIS resources as stand-alone services and in web maps and web mapping applications.

Prerequisite

- ArcGIS II: Essential Workflows or equivalent knowledge.

Who Should Attend

- Suitable for GIS analysts, specialists, and other experienced ArcGIS users who want to share geographic content in web maps and web mapping applications.
- Developers who want to incorporate GIS services and web maps into custom applications.
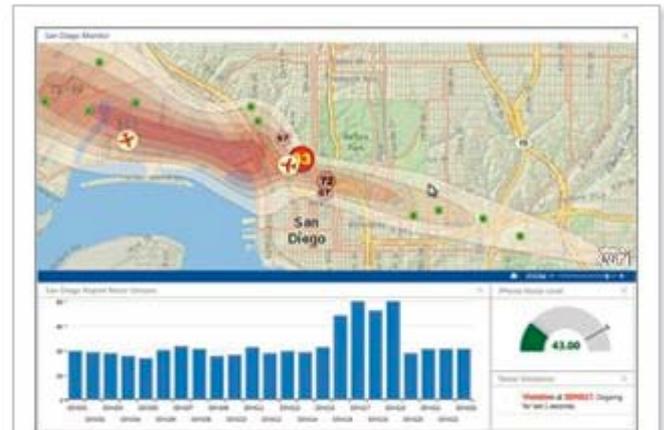
Web GIS supports real-time visualization and analysis. It also provides a flexible and agile framework for implementing GIS as a platform.
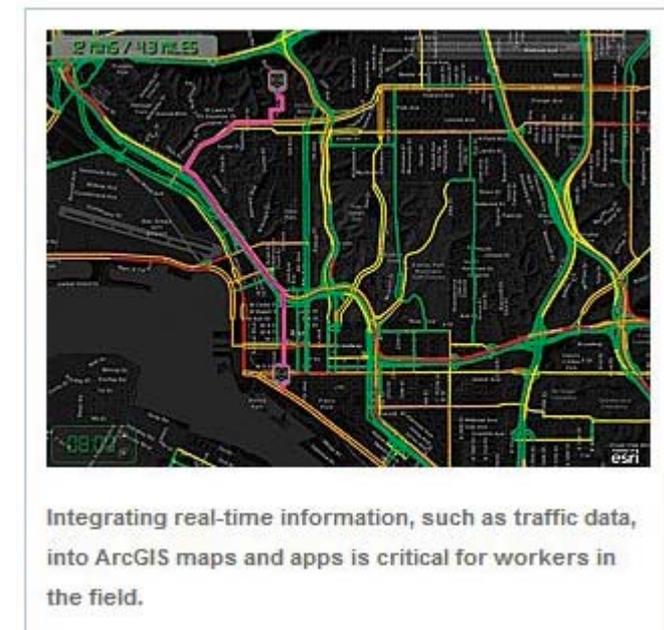
Integrating real-time information, such as traffic data, into ArcGIS maps and apps is critical for workers in the field.

Deploying and Maintaining a Multiuser Geodatabase

Four days

Overview

Prepare to successfully create a multiuser geodatabase to store and manage your organization's geographic data. Learn about the multiuser geodatabase architecture, configuration options, and techniques to efficiently load data, assign user privileges, and maintain performance over time

Learn how to:

- Create and connect to a multiuser geodatabase.
- Efficiently load and update data in a multiuser geodatabase.
- Configure storage settings to support your organization's data management workflows.
- Set up user roles and permissions to provide secure data access.
- Apply best practices to optimize geodatabase performance.

Prerequisite

- Building Geodatabases or equivalent knowledge.
- Individuals who are experienced in managing a relational database management system will find the course of benefit.

Who Should Attend

- Spatial database administrators and GIS data managers

Implementing Versioned Workflows in a Multiuser Geodatabase

Four days

Overview

Learn a sound versioning workflow that minimizes disruption to editors, ensures the integrity of your organization's GIS data, and integrates well with existing business workflows. This course explores a variety of versioned editing workflows and examines how versioning decisions impact data accuracy and database performance.

Learn how to:

- Design a versioning workflow that meets your organization's needs.
- Load data into a versioned feature class.
- Manage multiple geodatabase versions.

- Monitor and maintain database performance in a versioned editing environment.

Prerequisite

- Completion of <u>Deploying and Maintaining a Multiuser Geodatabase</u> Course or equivalent knowledge.

Who Should Attend

- GIS Technical Leads, GIS Database Designers and Database Administrators.

Distributing Data using Geodatabase Replication

Three days

Overview

This course teaches best practices to plan and implement geodatabase replication to support multiuser editing workflows and data-sharing initiatives. Learn how to protect the integrity and performance of your production database while meeting the needs of desktop, mobile, and online users.
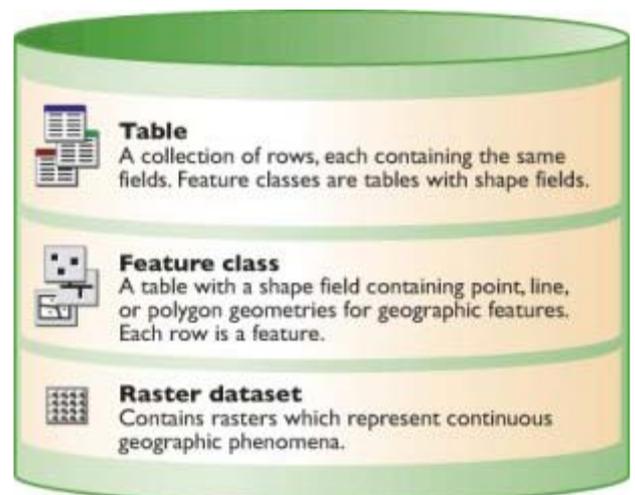
Learn how to:

- Determine the number and type of replicas needed to support your organization's GIS workflows.
- Plan a synchronization strategy for replicated data.
- Manage schema changes between replicas.
- Use a geodata service in a web application to create a replica and synchronize edits.

Prerequisite

- Completion of <u>Implementing Versioned Workflows in a Multiuser Geodatabase</u> or equivalent knowledge.

Who Should Attend

- GIS Technical Leads, GIS Database Designers and Database Administrators

Table
A collection of rows, each containing the same fields. Feature classes are tables with shape fields.

Feature class
A table with a shape field containing point, line, or polygon geometries for geographic features. Each row is a feature.

Raster dataset
Contains rasters which represent continuous geographic phenomena.

ArcGIS Server: Site Configuration and Administration

Four days

Overview

Learn how to plan, configure, deploy, and manage an ArcGIS for Server system, that enables GIS content sharing across your Enterprise. You will explore the ArcGIS for Server architecture and practice applying recommended workflows to configure ArcGIS Server sites and manage GIS services, applications, and users. Techniques and best practices to ensure system performance and security are emphasized.

Learn how to:

- Integrate your ArcGIS Server with a web server.
- Plan, create, and update a cache for map and image services.
- Tune and monitor services to ensure high performance.
- Implement security for your site and services.

Prerequisite

- Completion of ArcGIS 4: Sharing Content on the Web or equivalent knowledge.

Who Should Attend

- IT administrators, GIS web administrators and others who install, manage or support an ArcGIS Enterprise system.

Deploying Portal for ArcGIS

Three days

Overview

Learn recommended workflows and best practices to install, configure and deploy Portal for ArcGIS to meet your organization's need for private, secure geospatial content sharing. The course introduces portal for ArcGIS Components and architecture models that support web GIS workflows. Techniques to ensure Portal security and availability are covered.

Learn how to:

- Install, Configure and License Portal for ArcGIS software
- Create and manage user accounts and configure enterprise authentication.
- Create enterprise groups to efficiently organize and manage access to portal content.
- Publish ArcGIS Services to validate the portal configuration.
- Integrate a portal with an ArcGIS Server site to add capabilities and simplify user access and

content publishing workflows.
- Apply techniques to optimize the performance of your organization's portal.

Prerequisite

- ArcGIS for Server: Site Configuration and Administration or equivalent knowledge.

Who should attend

ArcGIS Server Administrators who need to set up and configure a private organizational portal that provides secure access to geospatial data, maps and apps

System Architecture Design Strategies

Four days

Overview

This course covers GIS system architecture design strategies and infrastructure architecture patterns that support successful enterprise operations. Learn comprehensive guidelines for planning and selecting the system solution to meet your organization's needs.

This course also covers performance validation and system capacity planning techniques ArcGIS Enterprise deployments.

Learn how to:

- Define user workflow requirements and software deployment patterns.
- Recognize system design factors that impact GIS software performance and scalability.
- Incorporate security best practices throughout system design and deployment
- Identify a target IT platform and network solution that satisfies your peak system performance needs.

Prerequisite

- Review the System Design Strategies wiki site.

Who should attend

- GIS Technical Leads, System Administrators and GIS Managers

Building Geodatabases

Four days

Overview

Are you an experienced ArcGIS user or data manager who wants to take advantage of geodatabase functionality to model features?

With Esri's geodatabase models you have rich content, rules and behavior for easier data management and improved data validation.

Learn how to:

- Create a file geodatabase, load vector and raster data.
- Create and apply attribute domains, subtypes, and relationship classes.
- Create a geodatabase topology and apply topology rules during feature editing
- Create and edit geodatabase annotation.
- Edit a geometric network and perform network tracing.
- Build a geodatabase schema

Prerequisite

- ArcGIS II: Essential Workflows or equivalent knowledge
- Suitable for experienced ArcGIS users and data managers

Who Should Attend

- GIS data managers, analysts, specialists, technicians, database administrators, and others who manage and maintain data stored in a geodatabase
- GIS managers who need to understand the capabilities of the geodatabase

Editing and Maintaining Parcels using ArcGIS

Three days

Overview

Are you interested in learning techniques and the best practices to efficiently store, edit and ensure the accuracy of land records data?

Using the ArcGIS parcel-fabric and local government information model, this course uses recommended workflows to perform and automate many common parcel-editing tasks.

Learn how to:

- Apply the local government information model

to an existing parcel fabric to enable automated editing workflows
- Join new parcels to an existing parcel fabric, split and merge parcels, adjust boundary lines, create an easement and a new subdivision.
- Migrate data to the parcel fabric and evaluate accuracy
- Create a subdivision from CAD data

Prerequisite

- Familiarity with land records terminology and practices is required
- Completion of ArcGIS 2; Essential Workflows or equivalent knowledge
- Completion of building geodatabases or equivalent knowledge is recommended

Who should attend

- GIS technicians, parcel editors, tax mapping professionals, and others who maintain or manage land records.

Editing Data with ArcGIS Desktop

Three days

Overview

To produce GIS maps and analysis results that support informed decision-making, accurate data is essential. This course teaches methods to accurately create and maintain data stored in a geodatabase. You will learn a recommended workflow for data automation and practice with tools and techniques that help ensure data integrity during editing.

Learn how to:

- Apply a standard editing workflow to manage updates to your GIS database.
- Efficiently create and edit feature geometry and attributes.
- Solve common data alignment issues.
- Maintain accurate spatial relationships among features using topology.

Prerequisite

- ArcGIS II: Essential Workflows or equivalent knowledge

Who Should Attend

- GIS technicians, specialists, and other experienced ArcGIS users who create and maintain their organization's geographic data

Field Data Collection and Management using ArcGIS

Three days

Overview

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.

Collector for ArcGIS

Now anyone in your organization can easily capture and update data in the field, right from their smartphone or tablet. Using the Collector for ArcGIS app, included with ArcGIS organizational accounts, your organization can maintain accurate and up-to-date GIS data while increasing the productivity of its mobile workforce.

Operations Dashboard for ArcGIS

Monitor activities and events, track your field workforce, and assess the status and performance of your daily operations. Create focused executive dashboards that integrate maps, charts, and graphs.

Survey123

Survey123 for ArcGIS is about you allowing your field crew to collect data efficiently in the field and using that information to make better decisions.

One can design surveys, collect data in the field, and migrate that data into ArcGIS Online and ArcGIS desktop

Workforce for ArcGIS

Maximizing the efficiency of your field workforce is key to a successful mobile strategy. With the introduction of Workforce for ArcGIS now you can plan, monitor and streamline field to office workflows using the ArcGIS platform.

Navigator for ArcGIS

Navigator for ArcGIS is a mobile app that gets your field workforce where it needs to be, unlocking efficiency and improving reliability. Use the data provided or your own data to search and navigate directly to your organization's assets. Interact seamlessly with Collector for ArcGIS, Survey123 for ArcGIS, Workforce for ArcGIS,

and other apps, and get reliable directions even when disconnected.

Learn how to:

- 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 executive dashboards that integrate maps, lists, charts, and gauges for real-time operation views.
- Create a navigation map that includes custom asset data.

Prerequisite

- Putting ArcGIS to use across your organization

Who Should Attend

- Anyone, New Users, Educators, Data Editors, GIS Technical Leads, GIS Mobile Application Developers, GIS Web Application Developers and GIS Managers

Managing Geospatial Data in ArcGIS

Three days

Learn essential geodatabase concepts and develop the skills needed to create a geodatabase, add data to it, and efficiently manage your organization's geographic data over time. You will learn how to take advantage of the unique geodatabase features that help ensure your organization's data integrity. This course is taught using ArcGIS Pro.

- Design a geodatabase schema to store your organization's data.
- Load data from a variety of formats into a geodatabase.
- Create subtypes and domains to simplify editing and increase the accuracy of feature attributes.
- Create a geodatabase topology to ensure spatial integrity during data editing.
- Share data to your ArcGIS Online organizational site or on-premises portal website.

Prerequisite

- ArcGIS Pro: Essential Workflows

Configuring Web Apps using ArcGIS Web AppBuilder

Three days

Overview

Learn how to easily create intuitive, focused web apps that are accessible on desktop and mobile devices—without writing any code. This course shows how to take advantage of existing web maps, themes, and widgets to build apps that feature your organization's branding and deliver the functionality your users require.

Learn how to:

- Plan a web app's design based on the audience and required functionality.
- Configure themes and widgets to meet web app requirements.
- Evaluate web app design and functionality on virtual devices.
- Publish a web app.

Prerequisite

- Completion of **Creating and Sharing GIS Content with ArcGIS Online** or equivalent knowledge.

Who should Attend

- GIS Professionals, GIS Managers

Introduction to Geo-Processing Scripts Using Python

Four days

Overview

Reduce the time spent on complex and repetitive workflows, so you can focus on GIS work that can't be automated. This course teaches how to create Python scripts for key ArcGIS workflows and share them so they are accessible to others.

Learn how to:

- Manage and update attribute data and features with cursors and objects.
- Automate geoprocessing and map production operations.
- Ensure your script syntax is valid and errors are properly handled.
- Share scripts using custom script tools and geoprocessing packages.

Prerequisite

- Completion of ArcGIS 3: Performing Analysis or equivalent knowledge is required.
- Knowledge of python syntax and experience creating python scripts is required. For those new to python, python for everyone is strongly recommended.
- Basic programming skills including using loops and conditional statements, are required

Who should Attend

- GIS analysts, specialists, data processors, and others who want to automate ArcGIS tasks and workflows

Developing Web Apps Using ArcGIS API for JavaScript

Three Days

Overview

This course teaches how to use ArcGIS API for JavaScript to efficiently build high performing, engaging web applications that meet the needs of the intended audience.

Learn how to:

- Build, test and deploy a web application using ArcGIS API for JavaScript.
- Add tasks and widgets to allow end users to search, geo-code and output directions.
- Incorporate ready to use content and online service that allows end users to query, visualize, analyze and edit data.
- Apply best practice to ensure high performance and proper communication between the client application and web server.

Prerequisite

- JavaScript and HTML programming experience is required.
- Completion of ArcGIS 4: Sharing content on the web or equivalent knowledge.
- Completion of the **Introduction to the ArcGIS for server REST API** version 10.1 or equivalent knowledge is recommended.

Who Should Attend

- JavaScript developers who want to create applications that include ArcGIS services and functionality.

Image Analysis with ArcGIS

Three days

Overview

Learn best practices and workflows to enhance visualization and extract meaningful information from satellite imagery, LIDAR, and other remotely sensed data. This course covers dynamic raster processing options available in ArcGIS and takes you on an in-depth exploration of image classification.

Learn how to:

- Learn how to apply dynamic raster processing functions to enhance raster display, prepare data for analysis and
- quickly create multiple products from a single data source.

- Create a time-series mosaic dataset to visually identify and document areas of change.
- Support change detection, risk assessment, and other types of analysis by performing unsupervised, supervised and object-oriented classification.
- Allows users to assess the accuracy of classification results.

Prerequisite

- ArcGIS 2: Essential Workflows

Who should Attend

- GIS analysts, Specialists and others who manage or conduct GIS analysis projects

Introduction to ENVI Analytics

Three days

Overview

Do you need to quickly get up-to-speed on the full-featured functionality offered by ENVI, the premier remote sensing exploitation package?

As an Image Analyst ENVI's workflows and tools is very essential for your image analysis.

Learn how to:

- Perform feature extraction and the object-oriented classification workflow.
- Perform Image display concepts and raster data management.
- Work with vector data in ENVI.

- Perform Image to Map registration and Principal component analysis.
- Extend ENVI using batch processing, Band and Spectral Math, and incorporating your own programs.

Prerequisite

- Basic knowledge of Remote Sensing

Who should Attend

- Image scientists, Image analysts, and GIS Professionals

Advanced ENVI Spectral Analytics

Three days

Overview

Discover the power of the spectral analysis tools that make ENVI the industry leader in hyperspectral imagery exploitation. Hyperspectral data analysis allows the identification of materials on the Earth's surface due to the detailed sampling of the electromagnetic spectrum by hyperspectral sensors. This intensive three-day course focuses first on understanding the theory behind hyperspectral imaging, and then challenges the student to apply the theory with ENVI's advanced analysis and mapping algorithms.

Learn how to:

- Perform analysis and derive different results for decision making.
- Perform whole pixel and sub-pixel based analysis.
- Use hyperspectral data to perform analysis.
- Use different methods for Image mosaicking.
- Detect change from different images. Use regions of interest and classification.
- Work with spectral libraries.
- Preprocess data before using it in any application.

Prerequisite

- Introduction to ENVI Analytics, this is an advanced ENVI Class and a working knowledge of ENVI is desirable.

Who should Attend

- Image Scientists, Image Analysts, GIS Professionals, Remote Sensing Specialists and Cartographers.

Extracting Information from LiDAR Data

Two days

Overview

This course focuses on using the ENVI FX module to display 3-D point cloud imagery and manipulating the data. ENVI FX supports most common LiDAR formats such as LAS, Binary, ASCII, and NITF LiDAR. ENVI FX automatically extracts 3D features from LiDAR point clouds such as buildings, trees, power lines, and power poles.

Learn how to:
- Use the FX module to generate elevation products such as Digital Surface Models (DSMs), Digital Elevation Models (DEMs), and digital elevation contours
- Use the ENVI FX module to display 3-D point cloud imagery and manipulate the data.

Prerequisite

- A basic understanding of LiDAR data is useful but not necessary. Some experience with remote sensing and/or GIS software is useful but not necessary.

Who should Attend
- Image Scientists, Image Analysts, GIS Professionals and Remote Sensing Specialists.
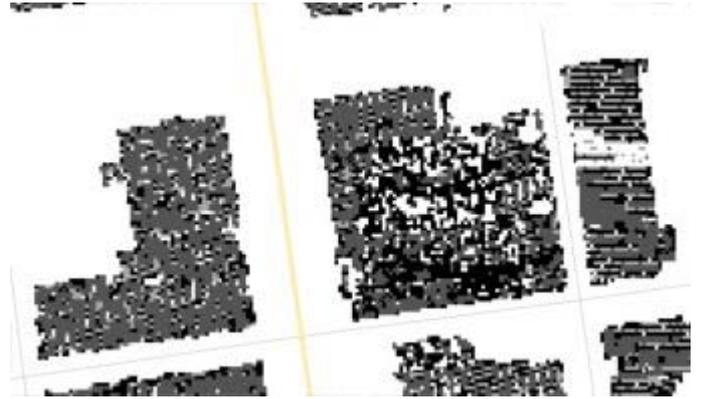
Working with Geometric Networks for Utilities

Three days

Overview

This course teaches how to accurately model a utility network so that your organization can more efficiently manage network assets, quickly respond to network outages, and deliver better customer service. Working with realistic electric, gas, and water/wastewater data, you will create and edit geometric networks and perform common analysis tasks.

Learn how to:

- Create a geometric network and master the fundamental concepts required
- Model utilities features using a geometric network stored in a geodatabase.
- Create network rules, assign network weights, and validate network connectivity.
- Analyze flow along a geometric network.
- Update network features and create new rules as needed.

Prerequisite

- Completion of ArcGIS II: Essential Workflows or equivalent knowledge

- Completion of building geodatabases is recommended.

Who Should Attend

- GIS Analysts, GIS Technical Leads and GIS Database Designers

Arc Hydro: GIS for Water Resources

Three days

Overview

This course presents the Arc Hydro data model and tools and shows how to implement them using a series of real-world examples. You will learn the basic principles of the Arc Hydro data model, how to extend it, and how the Arc Hydro tools manage and use the data model.

Learn how to:

- Combine Arc Hydro data structure and tools to solve realistic water resource problems.
- Extend Arc Hydro tools to create custom functionality.
- Integrate external models into Arc Hydro.

Prerequisite

- Completion of ArcGIS II: Essential Workflows or equivalent knowledge

Who Should Attend

- GIS Analysts, GIS Technical Leads and GIS Database Designers

Using ArcGIS for Geospatial Intelligence

Four days

Overview

This course teaches geospatial concepts and recommended workflows that support the production of timely, accurate, and actionable intelligence.

Using relevant scenarios and operational problems, you will learn how to manage, analyze, and visualize geospatial data, then share your work by producing mission-specific products aligned with industry best practices.

Learn how to:

- Evaluate and prepare geospatial data.
- Evaluate potential threats and identify patterns, hot spots, and clusters.
- Evaluate suitability of multiple locations for tactical operations.
- Create and share operational map products.

Prerequisite

- Completion of Geospatial Concepts for Intelligence Operations or ArcGIS 1: Introduction to GIS or equivalent knowledge.

Who Should Attend

- GIS Analysts

Portal for ArcGIS: User Workflows (for Defense and Intelligence)

Three days

Overview

This course prepares you to efficiently work with content on your organization's geospatial content portal to support intelligence production and dissemination. Through realistic scenarios and hands-on exercises, you will master the essentials of discovering, using, making, and sharing web maps, apps, and other content.

Learn how to:

- Find resources for geospatial content.
- Create and configure web maps.
- Share intelligence through web map presentations, configured apps, story maps, and 3D web scenes.
- Use your organization's portal content in ArcMap and share it out in other formats.

Prerequisite

- Completion of ArcGIS 1: Introduction to GIS

Who Should Attend

- GIS Users, GIS Analysts, GIS Technical Leads and Imagery Analysts.

ArcGIS Analysis Workflows for Public Safety

Four days

This course uses realistic scenarios to teach a standard analysis workflow that will provide deeper insight into how locationimpacts public safety incidents, trends, and operations. You will explore techniques to visualize and quantify public safety data, then share your analysis results using easy-to understand maps and apps. This course is taught using ArcGIS Pro.

Learn how to:

- Evaluate and prepare data from a variety of sources for an analysis project.
- Apply spatial statistics tools to identify patterns, hot spots, and clusters.
- Apply analysis tools to predict behavior and impact of public safety phenomena.
- Create models to automate analysis workflows.
- Share analysis results with stakeholders.

Prerequisite:

- Using ArcGIS for Public Safety Workflows

Who Should Attend

- Crime analysts and others in law enforcement, homeland security, emergency management, and related fields

Using ArcGIS for Public Safety Workflows

Three days

Overview

This course introduces ArcGIS software and a geographic approach that complements and enhances typical public safety workflows. You will work with tools to map and visualize public safety data, identify patterns, create actionable information, and produce dynamic maps to effectively disseminate that information. Course exercises use realistic public safety scenarios and ArcMap software.

Learn how to:

- Display data stored in tables and spreadsheets as features on a map.
- Visualize trends and patterns in your data.
- Apply spatial analysis techniques to derive new information from your data.
- Edit GIS data to ensure responders, decision makers, and stakeholders have access to up-to-date data.

Prerequisite

- Completion of Getting Started with GIS or equivalent knowledge is recommended. Experience with Windows-based software for basic file management and browsing is required.

Who Should Attend

- New Users, Data Editors, Managers.
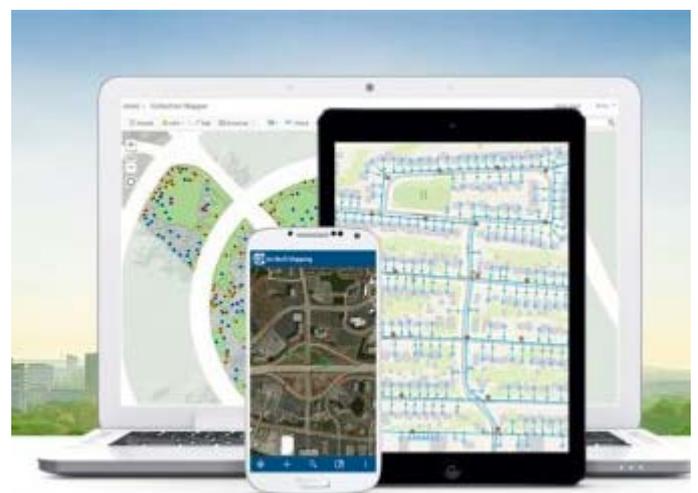
Exploring Enterprise GIS: A Workshop for Leaders

One day

Overview

Get the key information you need as a leader to understand how your organization can deploy an Enterprise GIS on the ArcGIS platform to full advantage!

The instructor will discuss common business patterns that drive GIS adoption and the ArcGIS platform capabilities that yield strategic insights and better decision making. Examples of how organizations achieve value through enterprise utilization of ArcGIS tools, content, and workflows are presented.

Learn how to:

- Identify common GIS patterns of use that apply to your organization.
- Identify specific ways your organization could benefit from insights produced by spatial analysis.
- Evaluate the use cases for deploying ArcGIS platform components.
- Identify opportunities to use ArcGIS in new ways.

Who Should Attend

GIS Professionals, Managers, and Executives

## User Workflows for ArcGIS Online Organizations

One day

This workshop introduces web maps, apps, and other authoritative content that may be available through your ArcGIS Online organizational site. You will see how this content helps you infuse your projects with geographic context, additional business intelligence, and visual impact. The instructor shows how to create and share web maps on an organizational site and from within Microsoft Excel. Concepts also apply to organizational sites created using Portal for ArcGIS.

Learn how to:

- Create and style a web map.
- Use templates to style and configure a web app.
- Use web maps in Microsoft Office applications.
- Share maps and other content on your ArcGIS Online organizational site.

Who Should Attend

- GIS Professionals GIS Users Web Administrators Application Developers Managers
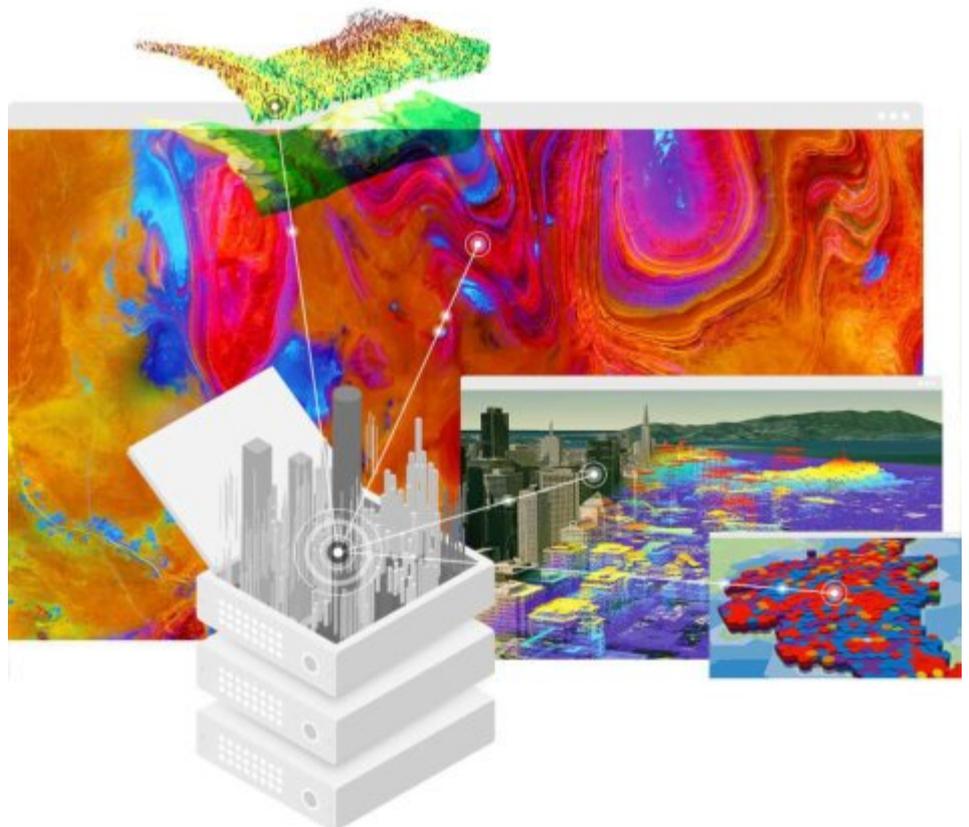
Esri Technical Certification

The Esri Technical Certification Program is designed to create a community of qualified individuals who are proficient in best practices using Esri software. Whether you're new to the job market, a seasoned GIS professional, an application developer, or an enterprise system administrator, an Esri technical certification validates your expertise and enhances your professional credibility. For organizations, certification offers a competitive advantage, simplifies the hiring process by helping to quickly identify qualified candidates, and supports the professional development of key technical staff

Taking an Exam

Pearson VUE, Esri's global testing partner, offers exams at more than 5,000 locations around the world. Exams are computer-based and take approximately two hours to complete. Exams are currently offered in English only. To view detailed information for each exam, visit esri.com/certification. To register for an exam, visit https://home.pearsonvue.com/

Preparing for an Exam

Skills and knowledge acquired on the job are the best preparation for a certification exam. Candidates should carefully review the detailed exam information on the Esri Technical Certification website to determine if their skills align with the skills measured by an exam. Esri offers no-cost sample question e-Learning courses to help candidates prepare for an exam. To access sample question courses, visit https://www.esri.com/training/catalog/

Registration Information

1. Select Your Course
Go to esriea.com/coursecatalog to view schedules for instructor-led courses taught in the traditional classroom. For more information on course availability or for advice, please contact an Esri training consultant at training@esriea.com or 254 (0) 20 2713630/1/2 extension.

2. Register
A registration application is required for each student. We recommend that you register at least one month prior to the class, since applications are processed on a first come, first served basis.
- Esri Training Website—Once you've selected your course, click Registration and complete the online registration form. You will be asked to submit the form after completion.

- By Mail—Send an email to training@esriea.com with the courses you are interested in. A customer information form (CIF)with all the registration information required will be sent to you. Online registrations will be acknowledged within two business days. Phone and mail, applications will be acknowledged via email. Registrations will not be confirmed until payment is received. Classes are confirmed a minimum of 10 business days prior to the scheduled start date.

3. Pricing
Training is charged on an individual at our Esri Authorized learning centre in Kenya or Arusha. VAT of 16% will be added to any training conducted within Kenya and 18% for Training at our Learning Centre in Arusha.

4. Payment
To complete your registration, proof of payment is required. Payment can be made by check (payable to Esri Eastern Africa) or purchase order. Cash is accepted.

5. Meals
Lunch and refreshments will be provided at no charge for training conducted at our Esri Authorized Centre in Upper Hill, Nairobi and in Arusha, Tanzania.

Transfers and Substitutions

A student may transfer to another class up to two times without charge, after which an administrative fee will be assessed for each transfer. Student substitutions (filling a student's place with another person from the same organization) are allowed under certain conditions. Please refer to Training Terms and Conditions available upon registration

Schedule Changes and Cancellations

It is sometimes necessary to change the dates on which a class is offered or to cancel a class. In this case, students will be notified by phone and email as soon as possible and not less than 10 days prior to the scheduled start of the class

Travel, Lodging, and Meals

Esri is not responsible for student travel arrangements and assumes no responsibility for losses from nonrefundable travel arrangements

Course Materials

Instructor-led courses include a student workbook and exercise data. Esri Eastern Africa provides all software and hardware that is used in class, unless otherwise noted in a course description. Instructor-led workshops include a student resource book.

Courses	Instructor-led	Self-paced	Duration	Price in US$ (Excl. of VAT)
ArcGIS 1: Introduction to GIS	√	√	3	450
ArcGIS 2: Essential Workflows	√	√	4	600
ArcGIS 3: Performing Analysis	√		3	450
ArcGIS 4: Sharing Content on the web	√		4	600
Building 3D Cities with Esri CityEngine	√		3	450
Designing maps with ArcGIS	√		3	450
Introduction to ArcGIS pro for GIS Professionals	√		3	450
ArcGIS Pro: Essential Workflows	√		4	600
Migrating from ArcMap to ArcGIS Pro	√		2	300
Putting ArcGIS to use Across your Organization	√		4	600
Creating Story Maps using ArcGIS				
Deploying and Maintaining a Multiuser Geodatabase	√		4	600
Implementing Versioned Workflows in a Multiuser Geodatabase	√		4	600
Distributing Data using Geodatabase Replication	√		3	450
ArcGIS for Server: Site Configuration and Administration	√		4	600
Deploying Portal for ArcGIS	√		3	450
System Architecture Design Strategies	√		4	600
Building Geodatabases	√		4	600
Editing and Maintaining Parcels using ArcGIS	√		4	600
Editing Data with ArcGIS Desktop	√		3	450
Field Data Collection and Management	√		3	450
Managing Geospatial Data in ArcGIS	√		3	450
Field to office Workflow	√		2	300
Mobile Mapping using ArcGIS	√		2	300
Configuring Web Apps using ArcGIS Web AppBuilder	√		3	450
Introduction to Geoprocessing Scripts using Python	√		4	600
Developing Web Apps using API for JavaScript	√		4	600
Image Analysis with ArcGIS	√		3	450
Introduction to ENVI Analytics	√		3	450
Advanced ENVI Spectral Analytics	√		3	450
Extracting Information from LiDAR Data	√		2	300
Working with Geometric Networks for Utilities	√		3	450
ArcHydro: GIS for Water Resources	√		3	450
Using ArcGIS for Geospatial Intelligence	√		3	450
Portal for ArcGIS: User Workflows (for Defense and Intelligence)	√		3	450
ArcGIS Analysis for Public Safety Workflows	√		3	450
Using ArcGIS for Public Safety Workflows	√		3	450
Exploring Enterprise GIS: A Workshop for Leaders	√		1	150
User Workflows for ArcGIS Online Organizations	√		1	150
ArcGIS Technical Certification: Desktop Associate	√		3	750

esri Eastern Africa
THE SCIENCE OF WHERE™