Esri Training 2020–2021
Your Location for Lifelong Learning | Instructor-Led Courses
Esri Course Catalog
Dear Colleague:

Today's ArcGIS® platform provides a geospatial infrastructure that allows organizations to leverage geographic information system (GIS) technology at scale—with rich content and advanced tools for mapping and analytics that help professionals, like yourself, solve problems holistically.

Esri instructor-led training provides the foundation you need to learn how to build a strong platform, extend it across your organization, and fully leverage your GIS investment. Courses are available to help you speed up your adoption of new technology; be more productive; and more easily share and collaborate with colleagues, decision-makers, and the public.

Staying current with the latest technology will give you a competitive edge. You will be able to help solve the challenges facing your organization and our world by applying a data-driven approach to increase understanding, collaboration, and actionable insights.

I encourage you to review Esri's learning opportunities and register for a course today.

Warm regards,

Jack Dangermond
Grow and Apply ArcGIS Skills

ArcGIS is a complete platform for mapping and spatial analytics that helps organizations unlock the full potential of their data to solve problems and improve results.

This catalog includes courses for GIS practitioners and non-GIS professionals; for administrators and developers; and for anyone who needs to use ArcGIS tools to perform their daily workflows, enhance projects with geographic context, and create information that leads to better decision-making.

New Courses—Page 8
Get ready to learn the latest technology and workflows. New ArcGIS Pro, ArcGIS Enterprise, and industry-focused courses are available to help you be productive right away.

Courses to Get Started with ArcGIS—Page 11
These courses emphasize the best practices that will prepare professionals with little or no ArcGIS Pro or ArcMap™ experience to be productive quickly.

Courses for GIS Professionals—Page 14
A GIS professional may wear many hats. Whether you are a one-person GIS team supporting the mapping needs of your entire organization or one of dozens of professionals in a large GIS department, your work involves one or more core ArcGIS capabilities.

Courses for Administrators—Page 23
IT, system, and database administrators have unique learning needs. These courses focus on best practices to manage and secure GIS infrastructure, including data, applications, servers, and users.

Courses for Developers—Page 25
These courses are for scripters and builders of geocentric applications and other apps that feature geospatial content.

Courses on Industry Workflows—Page 27
These courses are for analysts and professionals using ArcGIS to support specific missions and industry applications.

All Courses by Topic—Page 7

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
About Esri Training Options

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.

Instructor-led courses are taught online in real time and at learning centers around the United States. See the map on the inside back cover for locations. Self-paced e-Learning resources are available from the Esri Training website 24/7.

Train your team together.

When multiple staff will benefit from the same course, arranging a class to train them together can be the most cost-effective way to prepare for a new project or technology migration. We can send an instructor to your facility, or you can hold a class at one of our facilities. When team members are geographically dispersed, an instructor-led online class eliminates the need for travel and related expenses.

Get the most out of your group learning experience.

When you hold a class to train multiple staff together, you can supplement the class with one or more days of client coaching. Client coaching enhances the learning experience by providing extra time to review and practice course concepts in the context of your organization’s specific workflows with an instructor’s guidance.

To discuss arranging a class, call 1-800-447-9778, extension 1-5757, or send an email to GIStraining@esri.com. To view the latest instructor-led class schedules and self-paced training options, visit esri.com/coursecatalog.

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<tr>
<td>No travel required to attend</td>
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<td>●*</td>
</tr>
<tr>
<td>Certificate of completion awarded</td>
<td>●</td>
<td>●*</td>
</tr>
</tbody>
</table>

*Applies to some e-Learning formats
**Applies to instructor-led online classroom courses

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Plan to Achieve Your Goals

At the heart of every successful organization are people—the teams that sustain operations, generate ideas, create products, and engage with customers and constituents. Equip your people with the skills they need to achieve your organization’s strategic ArcGIS software-enabled goals.

Esri training and change management consultants have extensive experience partnering with organizations to

• Provide targeted course recommendations for individual roles.
• Create focused, short-term training plans to support upcoming projects.
• Create actionable workforce development plans tailored to your organization’s strategic goals and ArcGIS software-enabled workflows.
• Integrate people-focused change management practices into an ArcGIS project plan to accelerate technology adoption and speed up time to value.

To talk with us about your organization’s training needs, call 1-800-447-9778, extension 1-5757, or email GIStraining@esri.com.

Esri Training Pass

Build team skills and enjoy the convenience of streamlined access.

With the Esri Training Pass, purchasing and managing ArcGIS training is easy. Your organization purchases training days in advance and redeems them for classes as needed. No minimum purchase is required—an Esri training consultant will help you determine the right number of training days based on your budget, staff, and upcoming projects. The Training Pass is included on the Esri Federal GSA Schedule.

Learn more about the Training Pass at esri.com/trainingpass.

Workforce Development Benefits

• Higher Productivity
• Fewer Errors
• Better Customer Service
• Lower Turnover
• Broader Institutional Knowledge
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 applicable workplace knowledge and skills.

The course format includes the following:

- Interactive discussions with learners contributing real-world experiences
- Demonstrations and hands-on software exercises
- Activities and problem-solving scenarios that encourage peer-to-peer learning

Interactive learning is a proven approach that works well in both traditional and online classrooms. In an Esri instructor-led online course, learners participate in small group activities in virtual breakout rooms, including writing on group whiteboards, chatting, polling, and probing. 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.

High-caliber instructors are committed to learner success.

All Esri instructors have achieved Esri Technical Certification and CompTIA CTT+ certification. CompTIA CTT+ is an international certification that covers core instructor skills, including preparation, presentation, communication, facilitation, and evaluation, in both traditional and online classroom environments.

Esri instructors have the flexibility to adapt how they present course material based on the audience composition, skill level, and professional interests of each class. The course format stretches their creativity and teaching skills in a way that’s exciting and beneficial for learners.

Self-paced e-Learning supports independent, on-demand training.

E-Learning provides the flexibility and convenience to learn anytime, from anywhere. Esri’s self-paced e-Learning collection provides focused training on GIS and ArcGIS topics in multiple formats to support a variety of learning styles and preferences. Web courses, training seminars, tutorials, videos, massive open online courses (MOOCs), white papers and guides, and teacher resources are available. Hands-on software exercises and activities are designed to increase learner engagement, while conceptual material reinforces recommended workflows and ArcGIS best practices.

All Esri customers with a qualifying product that includes a current maintenance subscription receive unlimited access to self-paced e-Learning on the Esri Training website. To view the e-Learning collection, go to esri.com/coursecatalog.

“\n\n“The course content and materials seemed to provide the right balance of exercises and lecture, making the course difficulty level just right.”

Jason Reardon
Using ArcGIS for Public Safety Workflows

Course Design

Instructor-led format focuses on learner engagement.

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*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Preparing for Change
Two days (16 hours)—$1,400
Overview
As organizations deploy modern geospatial capabilities to improve their operations, a common challenge is preparing the workforce to quickly adapt to new workflows. This course guides attendees through foundational steps to conduct a successful change management initiative, with class time devoted to open discussion and focused planning. Course materials include templates that attendees can use to jump-start change management efforts immediately after class.

Who Should Attend
Managers and others who are expanding or modernizing GIS workflows

Learn How To
• Document the strategic implications of ArcGIS adoption and identify all project stakeholders.
• Establish support and sponsorship frameworks to ensure successful adoption.
• Effectively communicate technology impacts to all organizational levels.
• Build an actionable plan to prepare the workforce and accelerate technology adoption.

Prerequisite:
Attendees should identify a project that will benefit from change management prior to class.

ArcGIS Online: Essential Workflows
One day (8 hours)—$700
Overview
This course introduces web maps, apps, and other authoritative content that may be available through your ArcGIS Online organizational site. You will learn how to discover, use, create, and share content that infuses projects with geographic context, additional business intelligence, and visual impact. Course concepts also apply to ArcGIS Enterprise portals.

Who Should Attend
Knowledge workers, managers, and other professionals who have access to an ArcGIS Online organizational site.

Learn How To
• Find content on an ArcGIS Online organizational site that meets your project needs.
• Create and style a web map.
• Style and configure a web app.
• Use web maps in Microsoft Office applications.
• Share maps and other content on your ArcGIS Online organizational site.

Prerequisite:
None

“Great class, I think it’s something that more organizations need to take part of, especially as GIS grows from random silos throughout an [organization] to a centralized, more IT-driven environment.”

Roger Cleaves
Preparing for Change

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
A Small Time Investment Yields a Lot of Learning

Esri live training seminars offer one hour of real-time, expert GIS training streamed to your desktop or tablet. Seminars are interactive and free—you can request email reminders and add seminars directly to your digital calendar. All seminars are recorded in case you miss one. See the schedule of upcoming seminars at esri.com/lts.

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Image Exploitation for Defense and Intelligence
Three days (24 hours)—$2,100
Overview
This course introduces essential remote sensing and imagery concepts related to visualizing and analyzing imagery using ArcGIS Pro and ArcGIS Image Analyst software. Attendees get hands-on practice working with a variety of imagery data in the context of realistic scenarios. The course focuses on preparing attendees to apply appropriate techniques and recommended workflows to create useful information that supports mission planning and tactical operations.

Who Should Attend
Geospatial and imagery analysts in the military, intelligence, and national security communities

Learn How To
• Choose appropriate imagery datasets for a given scenario and area of interest.
• Understand factors that can impact the accuracy of imagery interpretation and apply mensuration techniques to accurately measure features on oblique and vertical imagery.
• Apply raster processing functions to enhance imagery display and perform change detection analysis.
• Perform image classification and analyze full-motion video to categorize land-cover features and identify areas and objects of interest.

Prerequisite:
Introduction to Geospatial Concepts for Intelligence

Get Started with ArcGIS GeoEvent Server
One day (8 hours)—$700
Overview
This course teaches core principles and essential skills needed to enable real-time data analytics through an ArcGIS Enterprise deployment. Learn how to connect to real-time sensors, analyze and visualize a data feed, and send updates and alerts to everyone who needs them.

Who Should Attend
IT and GIS administrators, GIS technical leads, and others who manage an ArcGIS Enterprise deployment

Learn How To
• Understand ArcGIS GeoEvent Server key capabilities, architecture, and supporting applications.
• Apply best practices to create a GeoEvent service, configure its data schema, write to a feature service, and visualize the output on a web map.
• Filter real-time data using a geofence.
• Monitor analytics in real time using a dashboard.

Prerequisite:
ArcGIS Enterprise: Administration Workflows

“First course I took with Esri or any ArcGIS course and was really impressed.”

Jeff Humphrey
ArcGIS Pro: Essential Workflows

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

Prerequisite:
None

Introduction to GIS Using ArcGIS
Two days (16 hours)—$1,400
Overview
Learn fundamental concepts that underlie GIS technology and geographic data. In this course, you will gain experience using 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.

Who Should Attend
Individuals with no prior GIS education or workplace experience with GIS

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.

Prerequisite:
None

“The class was excellent. I spent the past three days making notes on the things that I want to go back and play with to see if I can make data management and dissemination easier for my customers.”

Lisa Uhlich
Putting ArcGIS to Use across Your Organization

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog*
“Excellent class! The instructor presented the content clearly and in a way that showed us how easy it will be for us to transition to ArcGIS Pro and enhance our current workflows.”

Marcia Colby
ArcGIS Pro: Essential Workflows
ArcGIS 2: Essential Workflows
Three days (24 hours)—$2,100

Overview
Acquire skills to perform common GIS workflows using ArcMap. You will explore, manage, and analyze geographic data and create informative maps. The course covers techniques to effectively share your work with decision-makers, colleagues, and the public.

Who Should Attend
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 maintain its accuracy.
• Design an attractive page layout for maps that will be printed.
• Apply a standard workflow to analyze GIS data and solve spatial problems.
• Share maps and analysis results so they are accessible on multiple devices.

Prerequisite:
Introduction to GIS Using ArcGIS

“Excellent!! Not only was the content directly applicable, but the two full days of hands-on practice were crucial for me to feel nearly as confident in using [ArcGIS] Pro as ArcMap.”
Karen Leu
Migrating from ArcMap to ArcGIS Pro
Creating Maps and Visualizations with ArcGIS

Three days (24 hours)—$2,100

Overview
Learn fundamental cartographic design principles and a standard workflow to produce print and online maps tailored to their purpose, medium, and intended audience. This course teaches ArcGIS Pro techniques to create and share a variety of professional-quality information products including print maps, web maps, 3D scenes, charts, and infographics.

Who Should Attend
Cartographers and GIS analysts, specialists, mapping technicians, and others who need to produce maps using ArcGIS Pro software

Learn How To
• Prepare data for a mapping project.
• Design map elements that are appropriate for your data, audience, map purpose, and delivery medium.
• Apply 2D and 3D cartographic best practices to create and share print maps, web maps, and 3D scenes.
• Map change over time using animations and other cartographic techniques.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

Creating Story Maps with ArcGIS

One day (8 hours)—$700

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 teaches the concepts, best practices, and decisions that need to be made when creating and sharing a story map.

Who Should Attend
Anyone that wants to tell stories with maps

Learn How To
• Design a story map based on 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:
None

Designing Maps with ArcGIS

Two days (16 hours)—$1,400

Overview
This course, taught with ArcMap, covers how to create attractive maps that are easy to interpret and properly designed for their audience and delivery medium. You will learn how to apply a standard cartographic workflow to efficiently produce high-quality maps for print and online use.

Who Should Attend
Cartographers and GIS analysts, specialists, mapping technicians, and others who need to produce maps using ArcMap software

Learn How To
• Plan a cartographic project.
• Choose appropriate data to support cartographic needs.
• Create effective symbology, map elements, and layout designs for a given map project.
• Create labels and annotation that are easy to read by the map’s intended audience.
• Produce maps for print and web delivery.

Prerequisite:
ArcGIS 2: Essential Workflows

“This was an exciting course. The content and materials were directly related to what I needed to learn.”

Polly A. Rowe
Putting ArcGIS to Use across Your Organization

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Introduction to Esri Production Mapping

Five days (40 hours)—$3,500

Overview
In this course, you will acquire the necessary skills to use and configure Esri Production Mapping. The course covers how to enhance productivity by standardizing feature collection, editing, and data management. You will learn how to use ArcGIS Data Reviewer to find, track, and correct spatial and attribute errors in GIS data. You will work with Esri Production Mapping tools to create standard map products and manage cartographic production. Using ArcGIS Workflow Manager, you will configure workflows to streamline your repeatable production tasks.

Who Should Attend
GIS specialists, technicians, spatial data managers, project managers, and others who need to manage and publish accurate data and cartographic products using standardized and repeatable workflows

Learn How To
- Extend and configure geodatabase validation with the product library.
- Efficiently load data using the Data Loader.
- Edit attributes and features using Esri Production Mapping.
- Perform automated and visual data validation checks using ArcGIS Data Reviewer.
- Configure and use templates to create standard cartographic products.
- Store, access, manage, and configure the product library for cartographic production.
- Streamline workflows using ArcGIS Workflow Manager.

Prerequisites:
Yes, see website for details.

Introduction to Esri Defense Mapping

Five days (40 hours)—$3,500
This course is typically offered as a private class.

Overview
This course teaches the skills to track and manage end-to-end data extraction and cartographic production using Esri Defense Mapping enterprise production management tools and workflows. You will learn to use the support files provided with Esri Defense Mapping, including defense geodatabase models, topologies, feature templates, data validation rules, cartographic representations, and map templates, to ensure your products meet defense standards.

Who Should Attend
Experienced ArcGIS users who need to produce data and maps that comply with defense or military specifications and standards

Learn How To
- Use Esri Defense Mapping support files to streamline defense database and map production workflows.
- Extract features to defense specification.
- Validate defense databases using predefined batch jobs.
- Create defense cartographic products to defense specification.
- Streamline and track workflows with ArcGIS Workflow Manager.

Prerequisites:
Yes, see website for details.

Introduction to ArcGIS for Aviation: Charting

Three days (24 hours)—$2,100
This course is typically offered as a private class.

Overview
Learn how to produce and maintain aeronautical charts inside an AIXM 4.5/5.1-based Aeronautical Information System (AIS) using ArcGIS for Aviation: Charting. You will learn about data management tools as well as more advanced annotation and editing tools to support the aeronautical chart production process. Techniques for symbolizing data, working with geographic representations, and creating dynamic text and tables in a layout are also covered.

Who Should Attend
Individuals familiar with aeronautical principles and charting who create, edit, or maintain an AIS or produce aeronautical charts from a database

Learn How To
- Set up the AIS database.
- Edit attribute aeronautical features.
- Create and manage cartographic features for chart production.
- Use the aviation annotation editing tools.
- Build and configure smart aviation surround elements.
- Track and review changes in the database with Change Reporter and ArcGIS Data Reviewer.

Prerequisite:
ArcGIS 2: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Configuring ArcGIS for Aviation: Charting
Two days (16 hours)—$1,400
This course is typically offered as a private class.

Overview
This course teaches how to configure ArcGIS for Aviation: Charting to produce and maintain aeronautical charts inside an AIXM 4.5/5.1-based Aeronautical Information System (AIS). You will learn how to set up the production environment.

Who Should Attend
Individuals familiar with aeronautical principles and charting who will be involved with supporting an aeronautical charting system using ArcGIS for Aviation: Charting

Learn How To
• Set up extraction queries for cartographic feature creation.
• Build aeronautical annotation feature classes.
• Configure the Visual Specifications tool for charting products.
• Configure and manage masking rules.
• Create batch jobs for quality control.
• Configure the change detection process for ArcGIS Data Reviewer.
• Configure job types and workflows for ArcGIS Workflow Manager.

Prerequisite:
Introduction to ArcGIS for Aviation: Charting

Introduction to ArcGIS for Maritime: Charting
Three days (24 hours)—$2,100
This course is typically offered as a private class.

Overview
ArcGIS for Maritime: Charting is a data management and cartographic production application that combines cartographic editing tools, database models, nautical symbols and styles, data editing tools, validation rules, and workflow management components to enable a streamlined data editing and chart production environment for nautical users. In this course, you will learn how to use ArcGIS for Maritime: Charting to produce and maintain standards-compliant S-57 Electronic Navigational Charts (ENCs).

Who Should Attend
Individuals familiar with nautical standards who will be involved in creating and maintaining S-57-based ENCs from a database

Learn How To
• Load nautical source data.
• Edit and attribute S-57 feature objects.
• Correct data with validation checks.
• Create, maintain, export, and publish an ENC product.

Prerequisites:
Yes, see website for details.

Cartography with ArcGIS for Maritime: Charting
Three days (24 hours)—$2,100
This course is typically offered as a private class.

Overview
ArcGIS for Maritime: Charting is a data management and cartographic production application that combines cartographic editing tools, database models, nautical symbols and styles, S-57 data editing tools, validation rules, and workflow management components to enable a streamlined data editing and chart production environment for nautical users. This course teaches how to create, cartographically finish, and maintain a nautical paper chart product from start to finish.

Who Should Attend
Individuals familiar with nautical charts who will be involved in producing and maintaining nautical paper charts with ArcGIS for Maritime: Charting

Learn How To
• Create cartographic features and apply symbology.
• Manage page layout, surround elements, and marginalia.
• Create a ZOC diagram and chartlet (chart update).
• Maintain paper chart products.

Prerequisites:
Yes, see website for details.

“Great deeper dive into the tools and administrative functionality. Would recommend to others who are newer to [ArcGIS] Enterprise or want to take their system to the next level.”

David Cook
ArcGIS Enterprise: Administration
Workflowsv

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Get Started with ArcGIS Insights
One day (8 hours) — $700

Overview
This course prepares you to work with ArcGIS Insights™ 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.

Who Should Attend
GIS professionals, analysts, researchers, and others who want to dynamically visualize and analyze data

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:
Introduction to GIS Using ArcGIS is recommended but not required.

Spatial Analysis with ArcGIS Pro
Three days (24 hours) — $2,100

Overview
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™.

Who Should Attend
GIS analysts, specialists, and others who manage or conduct spatial analysis projects

Learn How To
• Prepare data and choose appropriate tools and settings for analysis.
• Examine features and distribution patterns within an area of interest and identify optimal locations using 2D and 3D analyses tools.
• 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.
• Automate an analysis workflow using a geoprocessing model.
• Share analysis results to your ArcGIS Online organizational site or on-premises portal website.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

ArcGIS 3: Performing Analysis
Two days (16 hours) — $1,400

Overview
This course for ArcMap users teaches a standard spatial analysis workflow. Working with a variety of tools and data, you will perform different types of analyses to efficiently create reliable results that support informed decision-making. This course is taught using ArcGIS Desktop Advanced (ArcMap), and some course exercises use tools provided in the ArcGIS Spatial Analyst extension.

Who Should Attend
GIS analysts, specialists, and others who manage or conduct spatial analysis projects

Learn How To
• Choose appropriate data, methods, and tools to plan, execute, and document a given analysis project.
• 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.
• Share analysis results so they are accessible and repeatable.

Prerequisite:
ArcGIS 2: Essential Workflows

“Great class, has me excited to get started in ArcGIS Pro.”

Keith Ganzenmuller
Migrating from ArcMap to ArcGIS Pro

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Working with Lidar Data in ArcGIS
One day (8 hours)—$700

Overview
This course introduces light detection and ranging (lidar) data concepts, collection methods, quality control considerations, and common applications. Techniques and best practices to manage, edit, visualize, and share lidar-derived 2D and 3D information products using ArcGIS Pro are covered.

Who Should Attend
GIS managers, data managers, analysts, specialists, and others who need to manage, create, analyze, and disseminate lidar data and lidar-derived information products

Learn How To
• Validate the quality and accuracy of lidar data.
• Edit lidar data to correct errors.
• Organize, process, visualize, and share lidar data using ArcGIS LAS datasets, mosaic datasets, and point cloud scene layers.
• Derive useful information products from lidar data, including raster surfaces, building footprints, and vegetation estimates.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

Imagery Analysis in ArcGIS Pro
Two days (16 hours)—$1,400

Overview
This course teaches best practices to extract meaningful information from satellite imagery, unmanned aerial vehicle (UAV)-collected data, and other imagery formats. Learn how to display, process, and create derived raster products using ArcGIS Pro and ArcGIS Image Analyst tools. In course exercises, you will explore common imagery applications, including disaster recovery, damage assessment, and forest canopy assessment.

Who Should Attend
GIS professionals and imagery analysts in the private sector and civilian government agencies

Learn How To
• Apply dynamic raster functions to enhance imagery display and perform change detection.
• Perform supervised, object-based image classification and assess the accuracy of results.
• Postprocess classified thematic rasters to support analysis needs.
• Work with derived information products including digital elevation models.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro
Sharing GIS Content Using ArcGIS
Two days (16 hours)—$1,400
Overview
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.

Who Should Attend
- GIS professionals who need to share maps, layers, and other GIS content to an ArcGIS Online organizational site or on-premises portal website
- Developers who want to incorporate ArcGIS services into custom apps
- Administrators who need to understand the process for publishing ArcGIS services

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.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

ArcGIS 4: Sharing Content on the Web
Three days (24 hours)—$2,100
Overview
Using ArcGIS, you can easily share geographic content so it is accessible to everyone who needs it, when they need it, however they want to access it. This course teaches how to publish your organization’s authoritative GIS data, maps, and tools as ArcGIS services that can be discovered and used on desktops, the web, and mobile devices. This course is taught using ArcMap.

Who Should Attend
- GIS professionals who need to share their authoritative content
- Developers who want to incorporate ArcGIS services into custom apps
- Administrators who need to understand the process for publishing ArcGIS services

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 data editing over the web.
- Create and publish image services to provide fast access to imagery.
- Publish geoprocessing services to share analysis workflows and results.
- Share GIS resources as stand-alone services and in web maps and apps.

Prerequisite:
ArcGIS 2: Essential Workflows

“...It was excellent. I left engaged and empowered.”

Julia Brown
Get Started with ArcGIS Insights

This best-selling book features detailed, step-by-step exercises that teach readers how to share resources online and build Web GIS apps quickly and easily.

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Managing Geospatial Data in ArcGIS
Two days (16 hours)—$1,400

Overview
This course takes you on an in-depth exploration of the geodatabase, the native data storage format for ArcGIS software. Best practices to create a geodatabase to centrally store and efficiently manage your organization’s authoritative geospatial data are covered. Using ArcGIS Pro, you will develop skills needed to configure unique geodatabase features that ensure data integrity and accuracy over time and a thorough understanding of file and enterprise geodatabase capabilities.

Who Should Attend
GIS managers, analysts, data managers, data technicians, and others who manage geographic data

Learn How To
• Create a geodatabase, explore schema options, and evaluate appropriate data models.
• Add data to a geodatabase, edit feature geometry and attributes, and create a mosaic dataset to store and disseminate imagery.
• Define data rules and relationships to simplify data editing and ensure data integrity.
• Configure access to an enterprise geodatabase and create a versioned feature class to allow multiple concurrent editors.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

Field Data Collection and Management Using ArcGIS
Two days (16 hours)—$1,400

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.

Who Should Attend
GIS managers, professionals, and field operations managers

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 a navigation map that includes custom asset data.

Prerequisite:
Putting ArcGIS to Use across Your Organization

Creating and Editing Data with ArcGIS Pro
Two days (16 hours)—$1,400

Overview
This course teaches best practices to create accurate geographic data and maintain it over time. You will get ample hands-on practice with a variety of ArcGIS Pro tools that streamline the editing process and decrease the potential for errors when updating your GIS database.

Who Should Attend
GIS technicians, specialists, and other experienced ArcGIS users who create and maintain their organization’s geographic data

Learn How To
• Apply a standard editing workflow to manage updates to geographic data.
• Configure ArcGIS Pro application and project settings to support efficient editing.
• Create, modify, and delete 2D and 3D features and attributes.
• Solve common data alignment issues and maintain spatial relationships among features when editing.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

“It was my first training experience and I really enjoyed it. My wheels kept on turning with every new app and how I could apply it to my organization.”

Greg Hornbeek
Field Data Collection and Management Using ArcGIS

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Working with Parcel Data in ArcGIS Pro
Three days (24 hours)—$2,100

Overview
This course teaches how to maintain accurate, up-to-date, and authoritative parcel data using the parcel fabric in ArcGIS Pro. You will learn a standard workflow to create a parcel fabric in a file geodatabase, add parcel data to the fabric, and edit parcels to reflect real-world changes. This course assumes familiarity with land records terminology.

Who Should Attend
GIS technicians, editors, and others who need to create and edit parcel data

Learn How To
• Create a parcel fabric in a file geodatabase and configure the parcel fabric environment.
• Choose the appropriate method to load your parcel data into a parcel fabric.
• Edit parcel geometry, measurements, attributes, and labels in a branch versioning environment.
• Track parcel history and lineage to represent land record changes over time.
• Publish a parcel fabric as a feature service to ArcGIS Enterprise so that up-to-date parcel data is available to everyone in your organization who needs it.

Prerequisite:
Creating and Editing Data with ArcGIS Pro

Editing and Maintaining Parcels Using ArcGIS
Two days (16 hours)—$1,400

Overview
This course teaches techniques to efficiently store, edit, and ensure the accuracy of land records data. Using the ArcGIS parcel fabric and Local Government Information Model, you will learn recommended workflows to perform many common parcel editing tasks. This course is taught using ArcMap.

Who Should Attend
GIS technicians, parcel editors, tax mapping professionals, and others who maintain or manage land records data

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, and create a new subdivision.
• Migrate CAD data to the parcel fabric and evaluate accuracy.
• Create a subdivision from CAD data.

Prerequisite:
ArcGIS 2: Essential Workflows

Data Editing with Esri Production Mapping
Two days (16 hours)—$1,400

Overview
This course teaches how to increase data production efficiency and maintain high-quality standards using Esri Production Mapping, an extension to ArcGIS Desktop. Working with data in a geodatabase, you will learn how to use the Esri Production Mapping editing tools to extract new features and maintain existing features to a specification. This course explains the use of Esri Production Mapping to edit features and familiarizes you with the configuration tasks needed for implementation.

Who Should Attend
GIS technicians, spatial data managers, and project managers who are responsible for updating and maintaining data to a standard using Esri Production Mapping

Learn How To
• Use the tools in Esri Production Mapping to extend ArcGIS Desktop editing workflows.
• Configure and use Product Library to enhance geodatabase validation.
• Batch-load data into a production database.
• Streamline ArcGIS Desktop workflows using Task Assistant Manager.

Prerequisite:
ArcGIS 2: Essential Workflows

“Great and informative class. I would definitely recommend it to anyone.”

Shaun A. Encarnacio
Editing and Maintaining Parcels Using ArcGIS

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Get Started with ArcGIS Data Reviewer
One day (8 hours)—$700

Overview
This course teaches how to streamline data validation to quickly identify features that do not meet your organization’s quality requirements. You will gain hands-on experience configuring and running automated data checks to holistically manage and track the status of errors throughout the quality control process. This course is taught using ArcGIS Desktop Advanced (ArcMap).

Who Should Attend
• GIS technicians, spatial data managers, and project managers who need to oversee or perform data quality checks using ArcGIS Data Reviewer
• Anyone working with Esri Production Mapping, Esri Defense Mapping, or a standalone license of ArcGIS Data Reviewer

Learn How To
• Define data quality requirements.
• Perform automated and semiautomated validation.
• Compile and track data quality results.
• Review and assess data quality.

Prerequisite:
ArcGIS 2: Essential Workflows

Introduction to ArcGIS Workflow Manager
Two days (16 hours)—$1,400

Overview
Learn how to configure ArcGIS Workflow Manager—an easy-to-use, scalable enterprise workflow management system—to automate and simplify GIS and non-GIS work. This course prepares you to deploy standardized, centralized, and repeatable workflows across your organization to drive efficiencies in business processes and data production.

Who Should Attend
Managers and others who want to develop and enforce standard, repeatable GIS workflows within their organization using ArcGIS Workflow Manager

Learn How To
• Set up the database, system tables, and security model.
• Create jobs, execute workflows, and manage job status in ArcMap or ArcGIS Pro.
• Model your business processes as ArcGIS Workflow Manager workflows.
• Publish ArcGIS Workflow Manager services and web viewers.

Prerequisite:
Introduction to GIS Using ArcGIS

“This was a very helpful class that has encouraged me to begin using ArcGIS Pro more at work.”

Dean Chauvin
Migrating from ArcMap to ArcGIS Pro
ArcGIS Enterprise: Configuring a Base Deployment
Two days (16 hours)—$1,400

Overview
Learn administration essentials to install and configure an ArcGIS Enterprise base deployment that enables individuals to securely access, create, and share geospatial resources. You will learn how to license and install the four software components of a base deployment and ensure system security and performance.

Who Should Attend
IT and GIS administrators, GIS technical leads, and others who manage an ArcGIS Enterprise deployment

Learn How To
• Install ArcGIS GIS Server, Portal for ArcGIS, ArcGIS Data Store, and ArcGIS Web Adaptor (IIS or Java Platform).
• Configure an ArcGIS Enterprise portal to manage users, groups, and content sharing privileges.
• Apply HTTPS certificates to support encrypted communication.
• Configure a suitable authentication method for your organization’s needs.

Prerequisite:
Sharing GIS Content Using ArcGIS

ArcGIS Enterprise: Administration Workflows
Three days (24 hours)—$2,100

Overview
Master techniques to configure and maintain an ArcGIS Enterprise solution that meets your organization’s business needs. You will learn about ArcGIS Enterprise architecture, server licensing roles and extensions, and the capabilities that support common GIS patterns of use. Best practices to manage servers, data, and services while ensuring system performance over time are covered.

Who Should Attend
IT and GIS administrators, GIS technical leads, and others who manage an ArcGIS Enterprise deployment

Learn How To
• Apply best practices to configure GIS resources, services, and caches.
• Use scripts to automate common administrative functions.
• Configure distributed collaboration between multiple ArcGIS Enterprise portals.
• Maintain system performance using workload separation.

Prerequisite:
ArcGIS Enterprise: Configuring a Base Deployment

Get Started with ArcGIS GeoEvent Server
One day (8 hours)—$700

Overview
This course teaches core principles and essential skills needed to enable real-time data analytics through an ArcGIS Enterprise deployment. Learn how to connect to real-time sensors, analyze and visualize a data feed, and send updates and alerts to everyone who needs them.

Who Should Attend
IT and GIS administrators, GIS technical leads, and others who manage an ArcGIS Enterprise deployment

Learn How To
• Understand ArcGIS GeoEvent™ Server key capabilities, architecture, and supporting applications.
• Apply best practices to create a GeoEvent service, configure its data schema, write to a feature service, and visualize the output on a web map.
• Filter real-time data using a geofence.
• Monitor analytics in real time using a dashboard.

Prerequisite:
ArcGIS Enterprise: Administration Workflows

“I really enjoyed the class and feel I learned important content that will help me in the implementation and support of the technology.”

Randall Booze
ArcGIS Enterprise: Configuring a Base Deployment

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Deploying and Maintaining a Multiuser Geodatabase
Two days (16 hours)—$1,400

Overview
This course prepares you to successfully deploy a multiuser geodatabase to manage your organization’s geographic data assets. You will explore the multiuser geodatabase architecture and installation options and learn how to configure the geodatabase for efficient data storage and delivery of data access and editing capabilities to many users. This course is taught using ArcMap.

Who Should Attend
Spatial database administrators and GIS data managers

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:
ArcGIS 2: Essential Workflows

Implementing Versioned Workflows in a Multiuser Geodatabase
Three days (24 hours)—$2,100

Overview
A successful multiuser editing environment requires a sound versioning workflow that minimizes disruption to editors, ensures the integrity of GIS data, and integrates well with existing business workflows—all while maintaining optimal database performance. This course explores a variety of versioned editing workflows and examines how versioning decisions impact data accuracy and database performance.

Who Should Attend
GIS database managers and administrators

Learn How To
• Deploy a versioning workflow that meets your organization’s needs.
• Efficiently load data into a versioned feature class.
• Manage multiple geodatabase versions.
• Monitor and maintain database performance in a versioned editing environment.

Prerequisites:
Yes, see website for details.

Distributing Data Using Geodatabase Replication
Two days (16 hours)—$1,400

Overview
Geodatabase replication is a powerful way to extend access to GIS data stored in a multiuser geodatabase across organizations and into the field. This course teaches how to plan for and implement geodatabase replication to support multiuser editing workflows and data sharing initiatives. You will learn best practices for protecting the integrity of your production database while meeting the needs of desktop, mobile, and online users.

Who Should Attend
GIS database managers and administrators who need to incorporate geodatabase replication into their organization’s business and versioned editing workflows.

Learn How To
• Determine the number and type of replicas needed to support your organization’s GIS workflows and applications.
• Use DBMS queries and ArcGIS tools to create and manage replicas.
• Plan and implement an efficient synchronization strategy for your data distribution architecture.

Prerequisite:
Implementing Versioned Workflows in a Multiuser Geodatabase

“Great materials, content, and I loved the option of remote training for instructor-led classes. Very nice option for local government training budgets and not having to travel to training.”

Janice Chezick
Putting ArcGIS to Use across Your Organization

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Scripting and Application Development

Creating Python Scripts for ArcGIS
Three days (24 hours)—$2,100
Overview
Time is valuable. Learn how to create scripts that will streamline your GIS work. This course teaches how to access the Python environment in ArcGIS Pro, create scripts for common data management tasks, and automate geoprocessing workflows. You will learn techniques to share your scripts so they are easily accessible both inside and outside ArcGIS Pro. This course assumes some familiarity with Python and basic programming concepts.

Who Should Attend
GIS analysts, specialists, data processors, and others who want to automate ArcGIS tasks and workflows

Learn How To
- Apply Python syntax rules, error handling techniques, and tool validation to create robust scripts in ArcGIS Pro.
- Use lists and loops to repeat geoprocessing tasks within a script to create an efficient, repeatable analysis workflow.
- Use cursors to access geospatial data, edit attributes, and create and modify features.
- Create geoprocessing packages and custom script tools to share your Python scripts with other ArcGIS users.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

Configuring Web Apps Using Web AppBuilder for ArcGIS
One day (8 hours)—$700
Overview
Learn how to 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. Course attendees receive a free e-book copy of Getting to Know Web GIS, third edition.

Who Should Attend
GIS professionals, managers, and others who are familiar with creating and sharing maps using ArcGIS Online

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

Prerequisite:
None

Introduction to Web Development Using ArcGIS API for JavaScript
Three days (24 hours)—$2,100
Overview
Learn how to create web apps that feature ArcGIS content and capabilities. Version 4 of ArcGIS API for JavaScript provides a streamlined experience for application development and new capabilities to easily incorporate 2D and 3D content. This course introduces the API classes, components, and available functionality that will help you create high-performing web applications.

Who Should Attend
GIS professionals and others with some HTML, CSS, and JavaScript experience who want to develop custom web applications

Learn How To
- Create apps that incorporate your organization’s web maps, web scenes, and layers.
- Display and render maps in both 2D and 3D.
- Provide capabilities for end users to search and query map layers.
- Develop and test application functionality.

Prerequisites:
Yes, see website for details.

“This class gave me the foundation to attempt my own projects and the basis to know how to find answers to what I need to do.”

Brian Hall
Creating Python Scripts for ArcGIS

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog*
Extending ArcGIS Pro with Add-Ins

Three days (24 hours)—$2,100

Overview
Learn how to use the ArcGIS Pro software development kit (SDK) to develop custom add-ins that support your organization’s unique workflows. This course introduces key ArcGIS Pro SDK programming patterns, the ArcGIS Pro API, and a wide range of interface customizations and custom functionality that can be deployed using add-ins.

Who Should Attend
Application developers with C# or Visual Basic .NET programming skills

Learn How To
• Develop, test, and deploy ArcGIS Pro SDK customizations using the add-in extensibility framework.
• Customize the ArcGIS Pro ribbon and apply key programming patterns.
• Create custom tools to interact with maps and scenes and select or edit geodatabase features.
• Create dock panes and other controls to work with projects, portals, items, views, layers, symbols, and renderers.

Prerequisite:
ArcGIS Pro: Essential Workflows

“I liked the nontraditional lessons where we went to work trying to solve a problem rather than going through step-by-step exercises. I am amazed how well the remote class works.”

Darin Sleight
Introduction to Web Development Using ArcGIS API for JavaScript

Training Available
24/7

Learn at your own pace when it’s convenient for you. E-Learning courses from Esri feature conceptual material, presentations, demonstrations, and hands-on exercises to support diverse learning styles.

Go to esri.com/coursecatalog for an up-to-date list of e-Learning courses.
Industry-Focused Courses

These courses teach geospatial concepts and ArcGIS best practices in the context of industry examples and data.

Working with Utility Networks in ArcGIS
Two days (16 hours)—$1,400

Overview
ArcGIS provides robust tools to model, visualize, edit, and analyze complex utility networks. This course introduces the utility network model in the enterprise geodatabase. Learn about the latest capabilities to better manage network assets, minimize network disruptions, and quickly respond to outages.

Who Should Attend
GIS professionals who need to edit and analyze electric, gas, water, or telecommunications networks

Learn How To
• Deploy a utility network solution and add rules to accurately model connectivity and data relationships.
• Apply a standard workflow to create and edit network features and components while maintaining data integrity.
• Perform network tracing to identify the source of disruption and impacted customers.
• Create and share a diagram to dynamically visualize the network.

Prerequisite:
ArcGIS Pro: Essential Workflows or Migrating from ArcMap to ArcGIS Pro

Configuring Utility Networks in ArcGIS
Two days (16 hours)—$1,400

Overview
This course prepares you to deploy the utility network to realistically model and manage your organization’s assets and infrastructure. Learn how to define the network schema and properties and load data into a utility network. Attendees can complete course exercises using electric, gas, or water utility scenarios.

Who Should Attend
GIS administrators, technical leads, and others who need to configure and deploy the utility network

Learn How To
• Build a utility network using geoprocessing tools.
• Choose a method to migrate existing features into a utility network.
• Configure customizations to enhance network diagrams and tracing and editing workflows.
• Manage utility network schema changes and release updates over time.

Prerequisite:
Working with Utility Networks in ArcGIS

“Outstanding! This course really cleared up a lot of questions regarding our impending configuration and we can better participate in these discussions now.”

James Mitchell,
ArcGIS Enterprise: Administration Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog
Industry-Focused Courses (continued)

**Introduction to Geospatial Concepts for Intelligence**
Two days (16 hours)—$1,400

**Overview**
Learn foundational geospatial concepts that support the intelligence cycle. In the context of real-world scenarios, you will get hands-on practice applying ArcGIS tools and workflows to prepare, visualize, analyze, and disseminate data that supports intelligence operations.

**Who Should Attend**
Professionals in the military, intelligence, and national security communities who have minimal or no geospatial experience and who specialize in intelligence planning, geospatial intelligence, all-source intelligence, imagery exploitation, or intelligence production.

**Learn How To**
- Identify and prepare geospatial data and other content for visualization and analysis.
- Organize, create, and manage geospatial data stored in a geodatabase.
- Display geospatial data and imagery on a map.
- Create and disseminate information products to support mission planning and intelligence operations.

**Prerequisite:**
Experience working on a desktop personal computer and with Microsoft Office applications.

**Using ArcGIS for Geospatial Intelligence Analysis**
Two days (16 hours)—$1,400

**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. This course is taught using ArcGIS Pro, ArcGIS 3D Analyst, and ArcGIS Spatial Analyst.

**Who Should Attend**
Professionals in the military, intelligence, and national security communities who specialize in intelligence planning, geospatial intelligence, all-source intelligence, imagery exploitation, or intelligence production.

**Learn How To**
- Evaluate and prepare geospatial data to support intelligence planning and analysis activities.
- Analyze potential threats to identify patterns, hot spots, and clusters.
- Use Military Tools for ArcGIS and ArcGIS LocateXT to support production workflows, analysis, visualization, and information dissemination.
- Create and share operational map products that include military symbology.

**Prerequisite:**
Introduction to Geospatial Concepts for Intelligence

**Image Exploitation for Defense and Intelligence**
Three days (24 hours)—$2,100

**Overview**
This course introduces essential remote sensing and imagery concepts related to visualizing and analyzing imagery using ArcGIS Pro and ArcGIS Image Analyst software. Attendees get hands-on practice working with a variety of imagery data in the context of realistic scenarios. The course focuses on preparing attendees to apply appropriate techniques and recommended workflows to create useful information that supports mission planning and tactical operations.

**Who Should Attend**
Geospatial and imagery analysts in the military, intelligence, and national security communities.

**Learn How To**
- Choose appropriate imagery datasets for a given scenario and area of interest.
- Understand factors that can impact the accuracy of imagery interpretation and apply mensuration techniques to accurately measure features on oblique and vertical imagery.
- Apply raster processing functions to enhance imagery display and perform change detection analysis.
- Perform image classification and analyze full-motion video to categorize land-cover features and identify areas and objects of interest.

**Prerequisite:**
Introduction to Geospatial Concepts for Intelligence

“I felt like the course content was excellent, and it really covered a lot of the topics and analysis tools that I can and will use in my research work in the future.”

*Samantha Allen*
Spatial Analysis with ArcGIS Pro

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Using ArcGIS for Public Safety Workflows
Two days (16 hours)—$1,400

Overview
This course introduces ArcGIS Pro 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 and 3D scenes to effectively disseminate that information. This course uses realistic public safety scenarios.

Who Should Attend
Emergency management, law enforcement, fire and rescue, and emergency call taking and dispatch professionals who have minimal experience with GIS

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.

Prerequisites:
Basic familiarity with GIS concepts is recommended. Experience with Windows-based software for basic file management and browsing is required.

ArcGIS Analysis Workflows for Public Safety
Two days (16 hours)—$1,400

Overview
Explore realistic scenarios as you learn a standard analysis workflow that will provide deeper insight into how location impacts public safety incidents, trends, and operations. Working primarily with ArcGIS Pro, you will explore tools and techniques to visualize and quantify public safety data, then share your analysis results using easy-to-understand maps and apps.

Who Should Attend
Crime analysts and other public safety professionals in law enforcement, homeland security, emergency management, and related fields

Learn How To
• Evaluate and prepare data from a variety of sources to support an analysis project.
• Apply spatial statistics tools to identify patterns, hot spots, and clusters.
• Apply analytical techniques to predict behavior and impact of public safety phenomena.
• Share analysis results with decision-makers and stakeholders.

Prerequisite:
Using ArcGIS for Public Safety Workflows

Arc Hydro: GIS for Water Resources
Three days (24 hours)—$2,100

Overview
Explore the Arc Hydro data model and tools using a series of real-world examples. You will learn the basic principles of the Arc Hydro data model, how to extend it, and about the Arc Hydro tools that help you efficiently manage and use the data model and perform water resource analyses. This course is taught using ArcMap.

Who Should Attend
GIS professionals and others interested in ArcGIS water resource applications who want to implement the Arc Hydro data model and tools

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.
• Perform watershed modeling and analysis.

Prerequisites:
Yes, see website for details

“I can definitely see some of the topics being applied in the very near future to our analyses. The course answered several questions I had going in.”

Joe Etter
Using ArcGIS for Public Safety Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog 29
Hydrologic and Hydraulic Analyses Using ArcGIS
Two days (16 hours)—$1,400
Overview
Learn GIS techniques for terrain analysis, hydrologic and hydraulic (H&H) characteristics extraction, numerical model input and output, modeling process automation, and result mapping. The class will take full advantage of ArcGIS and its extensions to support requirements that H&H analyses pose to GIS technology. You will gain hands-on experience developing HMS and RAS model inputs and analyzing and mapping model results. Utilization of GIS infrastructure for support of other H&H models will also be discussed. The focus of this class is on the functionality that GIS provides to H&H modeling, not on performing H&H analyses. Opportunities for using GIS for postmodel analyses such as mapping and flood damage estimation will be discussed. This course is taught using ArcMap.

Who Should Attend
H&H and GIS professionals who support H&H analyses

Learn How To
• Implement GIS as a spatial and temporal integrator.
• Use hydrologic statistical modeling (NSS and StreamStats).
• Develop hydrologic (HMS and GeoHMS) and hydraulic (RAS and GeoRAS) physical models.
• Perform floodplain mapping.

Prerequisites:
Yes, see website for details.

Introduction to ArcGIS Pipeline Referencing
Two days (16 hours)—$1,400
Overview
The ArcGIS Pipeline Referencing extension to ArcGIS provides advanced linear referencing capabilities to pipeline operators. Using real-world examples, this course teaches essential concepts and workflows to map and visualize pipeline data, define behavior for events and route associations, and maintain accurate pipeline data over time. Familiarity with pipeline referencing terminology is assumed.

Who Should Attend
GIS professionals in the pipeline industry

Learn How To
• Apply best practices to streamline your organization's pipeline data management workflows.
• Configure and manage linear referencing networks and events.
• Apply common pipeline workflows such as rerouting, retirement, splitting and merging centerlines, and event maintenance.

Prerequisites:
Yes, see website for details.

“This class will be very useful in implementing mobile apps. The diagrams helped me understand the basic steps in the configuration workflow ... and I really like the capstone project at the end as a way to see the dashboard in action. Great class!”

Annalisa Saqui
Field Data Collection and Management Using ArcGIS

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Esri Technical Certification

The Esri Technical Certification program supports the global community of qualified individuals who are proficient in best practices using Esri software. Exams validate expertise in desktop, developer, and enterprise use of ArcGIS. View detailed exam information at esri.com/certification.

Enhance your professional potential and reap the personal rewards that come with achieving a goal.

The commitment to prepare for and earn a certification hones time management, analytical, and problem-solving skills. Together with proven technical expertise, these skills help individuals differentiate themselves in a competitive job market and increase their credibility with decision-makers. An Esri certification amplifies your potential to earn more responsibility, expand your professional network, and advance your career.

Does your organization rely on Esri technology? A workforce certified in Esri best practices is a strategic asset.

An engaged, skilled workforce is essential to deliver innovative geospatial products that earn the confidence of your customers and constituents. Certification simplifies the hiring process by helping you quickly identify qualified candidates for key technical positions. By supporting development paths for a variety of staff roles, certification is a valuable tool to motivate and retain talented professionals.

In the world of GIS, Esri is recognized as the global standard for not only its software but also its groundbreaking approach to GIS as science and an industry. Esri Technical Certification exams are a great way to showcase your knowledge of the ever-evolving world of GIS!

Adrien Hafner
Esri-Certified ArcGIS Desktop Associate, Enterprise Geodata Management Associate, and Enterprise Administration Associate

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog*
Registration Information for Instructor-Led Training

1 Select Your Course
Go to esri.com/coursecatalog to view schedules for instructor-led courses taught in Esri training centers and online. For more information on course availability or for advice, please contact an Esri training consultant at GIStraining@esri.com or 1-800-447-9778, extension 1-5757.

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 Register and complete the online registration form. You will be asked to submit payment information through our secure online system.
- By Fax or Mail—Download and complete a registration application, which you can fax or mail to Esri. Directions are on the form.

Online registrations will be acknowledged within 2 business days. Phone, mail, and fax registration applications will be acknowledged via email. Registrations will not be confirmed until payment is received. Classes will be confirmed a minimum of 10 business days prior to the scheduled start date. Please keep this in mind when purchasing nonrefundable airline tickets.

3 Payment
To complete your registration, proof of payment is required. Payment can be made by check (payable to Esri), credit card, preexisting contract, federal government training request, or purchase order. Cash is not accepted. Purchase orders for less than $800 will be accepted only from United States federal, state, and local government agencies; United States educational institutions; and Fortune 500 companies. Mail payment and a copy of your registration form to Esri, File #54630, Los Angeles, CA 90074-4630.

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. Requests to cancel, transfer, or substitute a class registration must be received at least three business days in advance of the class start date. Please refer to Training Terms and Conditions found at esri.com/legal.

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, including, but not limited to, airfare, lodging, or transportation to and from the training site, due to schedule changes. Training location maps, including local hotels and airports, are provided to registrants. Meals are not provided by Esri. Students can access a training location map with a list of area hotels at esri.com/trainingmaps.

Course Materials
Instructor-led courses include a student workbook and exercise data. Esri provides all software and hardware that is used in class unless otherwise noted in a course description.

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
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Esri Learning Centers

Esri offers training at the following Esri regional offices. For more information, visit esri.com/trainingmaps or call 1-800-447-9778, extension 1-5757.

Esri Regional Offices

- Olympia, 360-754-4727
- St. Louis, 636-949-6620
- Minneapolis, 651-454-0600
- Boston, 978-777-4543
- Washington, DC, 703-506-9515
- Charlotte, 704-541-9810
- Sacramento, 909-793-2853 ext. 1-1906
- Miami, 305-446-9786
- San Antonio, 210-499-1044
- Denver, 303-449-7779
- Redlands, 909-793-2853 ext. 1-3247
- Honolulu, 808-947-0993
- Philadelphia, 610-644-3374

Find Out More about Esri Training

For the latest class schedules and detailed course descriptions and to register, visit esri.com/coursecatalog.
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Esri Course Catalog

Is your staff equipped to confidently use ArcGIS applications and content?

What knowledge and skills are needed to meet project goals?

Do you have a plan of action to achieve the full business benefits of GIS?

Helping your workforce develop the knowledge and skills they need to perform at a high level is a proven approach to achieving strategic business objectives.

Esri training consultants can partner with you to provide course recommendations to support individual learning needs, short-term training plans for teams and projects, workforce development plans that support your strategic objectives, and people-focused change management activities that speed up ArcGIS adoption.

To talk with an Esri training consultant, call 1-800-447-9778, extension 1-5757, or email GIStraining@esri.com.