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, and workforce development plans that support your strategic objectives.

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

The latest release of ArcGIS® brings new contextual tools for 2D and 3D mapping and spatial analytics to help you explore data, apply geographic science, and share location-based insight. ArcGIS is a completely integrated platform—a system of systems—that I believe will transform how geographic information is accessed and managed by professionals, like yourself, and organizations.

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 geographic information system (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 and help you find creative solutions to the social, economic, business, and environmental issues that our world faces.

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

Warm regards,

Jack Dangermond
Get Started with ArcGIS

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 the ArcGIS platform to support 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.

ArcGIS Foundation Courses—Page 11
ArcGIS foundation courses emphasize the best practices that will prepare professionals with diverse GIS experience and workplace responsibilities to be productive and get the results they need from the ArcGIS platform.

Courses for GIS Professionals—Page 12
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 among dozens of professionals in a large GIS department, your work involves one or more core ArcGIS capabilities.

Courses for Administrators—Page 21
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 23
These courses are for scripters and builders of geocentric applications and other apps that feature geospatial content.

Courses on Industry Workflows—Page 25
These courses are for analysts and professionals using ArcGIS to support specific missions and industry applications.

Instructor-Led Workshops—Page 29

All Courses by Topic—Page 7
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.

<table>
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<tr>
<td>Esri software provided for use during class</td>
<td>●</td>
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<tr>
<td>Use of your local installation of Esri software</td>
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<td>●*</td>
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<tr>
<td>Software demonstrations showing real-world application of course concepts</td>
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<td>●*</td>
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<tr>
<td>Course workbook (to review and practice concepts and workflows after class)</td>
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<tr>
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<tr>
<td>Real-time interaction with instructor and other students</td>
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<tr>
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<td>Accessible 24/7 from anywhere</td>
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<tr>
<td>Short, focused learning on specific tasks</td>
<td>●</td>
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<tr>
<td>No travel required to attend</td>
<td>●**</td>
<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

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.
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 consultants and specialists have extensive experience partnering with organizations to

• Provide targeted course recommendations for individual roles.
• Create short-term training plans for teams and upcoming projects.
• Create actionable workforce development plans tailored to your organization’s strategy, timelines, and workflows.

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

Esri Training Pass

Secure the Right Training at the Right Time to Support Your ArcGIS Software-Enabled Workflows

With the Esri Training Pass, purchasing and managing ArcGIS training has never been easier. 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 available for single-year and multiyear terms and is included on the Esri Federal GSA Schedule.

Learn more about the Training Pass at esri.com/trainingpass.
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 individual exercises
- Facilitated group 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 a traditional and online classroom environment.

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 when and where you want. Esri’s collection of self-paced e-Learning resources provides focused training on GIS and ArcGIS concepts in multiple formats to support a variety of learning styles and preferences. Web courses, training seminars, lessons, 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 all self-paced e-Learning resources on the Esri Training website. To view the e-Learning collection, go to esri.com/coursecatalog.

“The information presented and the delivery of content were relevant to real-world applications. Great to participate in a classroom environment with discussion about scenarios and questions, allowing feedback and collaboration.”

Atonja Allen
ArcGIS 3: Performing Analysis
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New Courses

Get ready to learn the latest technology and workflows. New ArcGIS Pro, ArcGIS Enterprise, and industry-focused courses will help you be productive right away.

Migrating from ArcMap to ArcGIS Pro
Two days (16 hours)—$1,130
Overview
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.

Who Should Attend
Experienced ArcMap users

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

Available in Early 2018
ArcGIS Enterprise: Configuring a Base Deployment
Two days (16 hours)—$1,130
Overview
Learn how to install and configure an ArcGIS Enterprise base deployment to enable individuals to securely access, create, and share geospatial resources across your organization. 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 administrators; GIS web administrators; and others who install, manage, or support an ArcGIS Enterprise system

Learn How To
• Install ArcGIS Server, Portal for ArcGIS, ArcGIS Data Store, and ArcGIS Web Adaptor (IIS).
• Configure a portal website to manage users, groups, and content-sharing privileges.
• Apply Secure Sockets Layer (SSL) certificates to deploy encrypted security.
• Configure a suitable authentication method for your organization’s needs.

Prerequisite:
ArcGIS 4: Sharing Content on the Web

Creating Story Maps with ArcGIS
One day (8 hours)—$565
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 who wants to tell stories with maps

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:
None

Get Started with Insights for ArcGIS
One day (8 hours)—$565
Overview
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 insight across the enterprise.

Who Should Attend
GIS analysts, specialists, technical leads, and managers and non-GIS professionals who are experienced ArcGIS users

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:
Familiarity with GIS concepts is recommended.

“I really enjoyed the class and felt that the course content was helpful in gaining a working knowledge of ArcGIS. The workbook provided was an excellent source of learning and easy to follow along.”

Stephen King
ArcGIS 2: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Available in Early 2018
Managing Geospatial Data in ArcGIS
Two days (16 hours)—$1,130
Overview
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.

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

Learn How To
• 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

Spatial Analysis with ArcGIS Pro
Two days (16 hours)—$1,130
Overview
Learn a standard workflow and best practices 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.

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

Learn How To
• Find, evaluate, and prepare data for an analysis project.
• Perform suitability analysis to identify optimal locations based on project criteria.
• Apply spatial statistics tools to examine distribution patterns, clusters, and hot spots.
• 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

Field Data Collection and Management Using ArcGIS
Two days (16 hours)—$1,130
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 the ArcGIS apps to meet your data collection needs. This course is taught using ArcGIS Pro.

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 using Workforce for ArcGIS.
• Create a navigation map that includes custom asset data for use with Navigator for ArcGIS.
• Create and configure a web map to support data collection using Collector for ArcGIS.
• Create a survey using Survey123 for ArcGIS.
• Configure an operations dashboard to monitor data collection progress in real time.

Prerequisite:
Putting ArcGIS to Use Across Your Organization is recommended.

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.

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
ArcGIS Analysis Workflows for Public Safety
Two days (16 hours)—$1,130
Overview
This course uses realistic scenarios to teach a standard analysis workflow that will provide deeper insight into how location impacts 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.

Who Should Attend
Crime analysts and others in law enforcement, homeland security, emergency management, and related fields

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

Available in Early 2018
Sharing GIS Content Using ArcGIS Pro
Three days (24 hours)—$1,695
Overview
Learn recommended workflows and best practices to publish your authoritative GIS data, maps, layers, tools, and other content so that they are easily discoverable on your organization’s public or on-premises ArcGIS portal.

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
• Publish web maps, web scenes, and scene layers.
• Share vector tile packages.
• Share analysis results.
• Share ArcGIS Pro tasks.

Prerequisite: ArcGIS Pro: Essential Workflows

Configuring Web Apps Using Web AppBuilder for ArcGIS
One day (8 hours)—$565
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.

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’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: None

Extending ArcGIS Pro with Add-Ins
Three days (24 hours)—$1,695
Overview
Learn how to use ArcGIS Pro SDK for the Microsoft .NET Framework to develop custom add-ins that support your organization’s unique workflows. This course introduces key ArcGIS Pro SDK for .NET 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
Experienced Microsoft Visual Basic .NET and C# developers

Learn How To
• Develop, test, and deploy ArcGIS Pro SDK for .NET 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

“As always, a great experience. As a new GIS specialist, I look forward to many more trainings.”

Mike Rodriguez
Implementing Versioned Workflows in a Multiuser Geodatabase

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Available in Early 2018

**Introduction to GIS Using ArcGIS**
Two days (16 hours)—$1,130

**Overview**
Master fundamental GIS concepts and work with GIS maps to visualize real-world features, discover patterns, obtain information, and communicate that information to others. This course is taught using ArcGIS Online or an on-premises portal website.

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

**Learn How To**
- Find data and other content to support a GIS mapping project.
- Accurately display features on a GIS map and access information about them.
- Perform spatial analysis to answer questions and create new information.
- Share GIS maps and analysis results so they are easily accessible to colleagues, decision-makers, and the public.

**Prerequisite:**
None

**Putting ArcGIS to Use Across Your Organization**
Three days (24 hours)—$1,695

**Overview**
In this course, you explore the entire ArcGIS platform—the apps used for mapping and visualization, data collection and management, spatial analytics, and collaboration and sharing. Discover how ArcGIS helps organizations address common business challenges and apply location-based insight to streamline operations and improve decision-making.

**Who Should Attend**
GIS professionals, managers, and others who need a comprehensive introduction to ArcGIS platform components and capabilities

**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.

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**ArcGIS Pro: Essential Workflows**
Three days (24 hours)—$1,695

**Overview**
This course focuses on common workflows and best practices to map, manage, analyze, and share geographic data and resources. You will acquire the essential skills you need to be productive with ArcGIS Pro.

**Who Should Attend**
Individuals with an introductory-level knowledge of GIS concepts and limited ArcGIS experience

**Learn How To**
- Combine data to create informative maps.
- Symbolize features on 2D and 3D maps.
- Organize, create, and edit geographic data to keep it accurate and up-to-date.
- Design an attractive layout for printed maps.
- Analyze GIS data to create new information.
- Share maps, analysis results, and geoprocessing models.

**Prerequisite:**
Introduction to GIS Using ArcGIS

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**ArcGIS 2: Essential Workflows**
Three days (24 hours)—$1,695

**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 an 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

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*[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
Creating Story Maps with ArcGIS
One day (8 hours)—$565

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 who wants to tell stories with maps

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:
None

Designing Maps with ArcGIS
Two days (16 hours)—$1,130

Overview
This course teaches 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 ArcGIS 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

Introduction to Esri Production Mapping
Five days (40 hours)—$2,825

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 for Desktop 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 and attribute features using Esri Production Mapping.
- Perform automated and visual data validation checks using ArcGIS Data Reviewer for Desktop.
- 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.

Prerequisite:
Yes, see website for details.

“Instructor, content, and materials were great.”

Scott Kraushaar
ArcGIS Pro: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Cartography with Esri Production Mapping
Two days (16 hours)—$1,130
Overview
Esri Production Mapping provides cartographic tools for managing map products, creating high-quality, high-volume map products, and generating reference grids based on product specifications. In this course, you will learn how to create and manage map documents with the product library, symbolize data with Views and the Visual Specifications tool, work with cartographic representations, and create dynamic tables in the layout.

Who Should Attend
GIS technicians, spatial data managers, and project managers who need to create cartographic products using Esri Production Mapping

Learn How To
• Manage cartographic production with the product library.
• Create cartographic data such as grids and graticule layers.
• Symbolize data using Views and the Visual Specifications tool.
• Edit cartographic features using representations.
• Create and manage layouts and elements such as dynamic tables.
• Print, publish, and export cartographic products.
• Maintain cartographic products.

Prerequisite:
Yes, see website for details.

Introduction to Esri Defense Mapping
Five days (40 hours)—$2,825
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.

Prerequisite:
Yes, see website for details.

Introduction to ArcGIS for Aviation: Charting
Three days (24 hours)—$1,695
Overview
This course teaches how to produce and maintain aeronautical charts inside an Aeronautical Information Exchange Model (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 and attribute aeronautical features.
• Create and manage cartographic features for chart production.
• Use the aviation annotation editing tools.
• Build and configure smart aviation surrounding elements.
• Track and review changes in the database with Change Reporter and ArcGIS Data Reviewer for Desktop.

Prerequisite:
ArcGIS 2: Essential Workflows

“Really enjoyed the scenarios used in the exercises; provided a much greater awareness of the usefulness of ArcGIS.”

Claire Lyte-Graham
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)—$1,130

**Overview**
This course teaches how to configure ArcGIS for Aviation: Charting to produce and maintain aeronautical charts inside an Aeronautical Information Exchange Model (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 for Desktop.
- Configure job types and workflows for ArcGIS Workflow Manager.

**Prerequisite:**
Introduction to ArcGIS for Aviation: Charting

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**Introduction to ArcGIS for Maritime: Charting**

Three days (24 hours)—$1,695

**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.
- Create a new ENC product.
- Compile different data types in a staging database.
- Edit and attribute S-57 feature objects.
- Correct data with validation checks.
- Export and publish ENCs.
- Maintain ENC products with updates.

**Prerequisite:**
Yes, see website for details.

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**Cartography with ArcGIS for Maritime: Charting**

Three days (24 hours)—$1,695

**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**
- Manage map documents that contain multiple data frames.
- Generate reference grids.
- Manage labels and create annotation.
- Create cartographic features and perform cartographic edits.
- Manage page layout, surround elements, and marginalia.
- Create a source diagram.
- Export to various raster formats.
- Maintain a paper chart product.
- Create a chartlet.

**Prerequisite:**
Yes, see website for details.

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“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
**Spatial Analytics**

**ArcGIS 3: Performing Analysis**
Two days (16 hours)—$1,130

**Overview**
This course teaches a standard workflow you can apply to any spatial analysis project. Working with a variety of ArcGIS 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

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**Get Started with Insights for ArcGIS**
One day (8 hours)—$565

**Overview**
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 insight across the enterprise.

**Who Should Attend**
GIS analysts, specialists, technical leads, and managers and non-GIS professionals who are experienced ArcGIS users

**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:**
Familiarity with GIS concepts is recommended.

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**Market Analysis Using Esri Business Analyst**
Two days (16 hours)—$1,130

This course is offered as a private class.

**Overview**
This course teaches how to use the Esri Business Analyst™ system and its extensive data package to increase understanding of your customers, competitors, and market opportunities. You will learn a process to visualize key demographic, consumer, and business data; perform analytics to uncover patterns and trends that impact your business; and create trade areas based on multiple criteria. You will also learn how to share your data-backed insight using custom reports and maps.

**Who Should Attend**
Market analysts and other business professionals with some GIS experience

**Learn How To**
- Visualize and explore market data to gain an in-depth understanding of a study area.
- Evaluate trade area potential based on existing customer and site locations.
- Perform different types of market analyses to find optimal locations for new sites.
- Target ideal customers based on the criteria that matter for your business.
- Optimize sales and service territories based on customer locations.

**Prerequisite:**
Introduction to GIS Using ArcGIS

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**Available in Early 2018**

**Spatial Analysis with ArcGIS Pro**
Two days (16 hours)—$1,130

**Overview**
Learn a standard workflow and best practices 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.

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

**Learn How To**
- Find, evaluate, and prepare data for an analysis project.
- Perform suitability analysis to identify optimal locations based on project criteria.
- Apply spatial statistics tools to examine distribution patterns, clusters, and hot spots.
- 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

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"Great format, good technology."

Jeff DeWitt

**Introduction to Web Development Using ArcGIS API for JavaScript**

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*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit [esri.com/coursecatalog].*
Image Analysis with ArcGIS
Two days (16 hours)—$1,130

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. You will use three classification methods to categorize land-cover features and learn how to determine which method is appropriate for a given project and dataset. This course is taught using ArcMap.

Who Should Attend
GIS professionals, image analysts, and others who work with imagery for mapping and analysis. Those working in the forestry, hydrology, environmental management, urban planning, defense, intelligence, and mining industries may find the course of particular benefit.

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.
• Assess the accuracy of classification results.

Prerequisite:
ArcGIS 2: Essential Workflows or Using ArcGIS for Geospatial Intelligence

Building 3D Cities Using Esri CityEngine
Three days (24 hours)—$1,695

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.

Who Should Attend
GIS professionals, urban planners, landscape architects, architects, entertainment professionals, and others who want to create 3D city models and urban landscapes.

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
Collaboration and Sharing

ArcGIS 4: Sharing Content on the Web
Three days (24 hours)—$1,695

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

Available in Early 2018
Sharing GIS Content Using ArcGIS Pro
Three days (24 hours)—$1,695

Overview
Learn recommended workflows and best practices to publish your authoritative GIS data, maps, layers, tools, and other content so that they are easily discoverable on your organization’s public or on-premises ArcGIS portal.

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
• Publish web maps, web scenes, and scene layers.
• Share vector tile packages.
• Share analysis results.
• Share ArcGIS Pro tasks.

Prerequisite:
ArcGIS Pro: Essential Workflows

“The course challenged me, and I learned a lot.”

Dave McMillan
Introduction to Geoprocessing Scripts Using Python

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Data Collection and Management

Building Geodatabases
Three days (24 hours)—$1,695

Overview
Master the essential concepts and skills needed to efficiently create a geodatabase, add data to it, and realistically model the real-world spatial relationships inherent to your data. You will learn about unique geodatabase features that help ensure data integrity over time and why the geodatabase is the preferred format for storing and managing geographic data in ArcGIS. Course concepts apply to file-based and multiuser geodatabases. This course is taught using ArcGIS Desktop Advanced (ArcMap).

Who Should Attend
• GIS data managers, analysts, specialists, data 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

Learn How To
• Access GIS data stored in file-based geodatabases, multiuser geodatabases, and GIS servers.
• Create an appropriate geodatabase structure to organize data for efficient storage, display, and editing.
• Add rules and behaviors to ensure the spatial and attribute integrity of geographic data.
• Jump-start geodatabase design using a template data model.
• Create a geodata service to share a geodatabase with desktop, web, and mobile users.

Prerequisite:
ArcGIS 2: Essential Workflows

Editing and Maintaining Parcels Using ArcGIS
Two days (16 hours)—$1,130

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.

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

Editing Data with ArcGIS for Desktop
Two days (16 hours)—$1,130

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.

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 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 2: Essential Workflows

“I especially liked the final project tying everything together. The material in the final project section first lays out a skeletal exercise, followed by the same exercise with more detailed instructions. Very helpful!”

Gael Cunningham
Building Geodatabases

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Field Data Collection and Management Using ArcGIS
Two days (16 hours)—$1,130

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 the ArcGIS apps to meet your data collection needs. This course is taught using ArcGIS Pro.

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 using Workforce for ArcGIS.
• Create a navigation map that includes custom asset data for use with Navigator for ArcGIS.
• Create and configure a web map to support data collection using Collector for ArcGIS.
• Create a survey using Survey123 for ArcGIS.
• Configure an operations dashboard to monitor data collection progress in real time.

Prerequisite:
Putting ArcGIS to Use Across Your Organization is recommended.

Data Editing with Esri Production Mapping
Two days (16 hours)—$1,130

Overview
This course teaches how to increase data production efficiency and maintain high-quality standards using Esri Production Mapping, an extension to ArcGIS for 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 for Desktop editing workflows.
• Configure and use Product Library to enhance geodatabase validation.
• Batch-load data into a production database.
• Streamline ArcGIS for Desktop workflows using Task Assistant Manager.

Prerequisite:
ArcGIS 2: Essential Workflows

“This is a good introductory class; I would recommend it to anyone who is starting off or has minimal experience with the software.”

Troy G. McNall
ArcGIS 2: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Quality Control Using ArcGIS Data Reviewer for Desktop
Two days (16 hours)—$1,130
Overview
This course teaches how to use ArcGIS Data Reviewer for Desktop to manage and automate the quality control review process. After exploring fundamental components of quality control, you will practice techniques to discover and document data quality requirements. You will gain hands-on experience configuring and running automated data checks, then performing a systematic visual review. Techniques to maintain a historical record of your quality control review and methods for reporting your results are also covered.

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

Learn How To
• Document quality requirements.
• Automate data validation.
• Perform a systematic visual review.
• Centrally document and manage data issues.
• Track the entire error life cycle.

Prerequisite:
ArcGIS 2: Essential Workflows

Understanding ArcGIS Workflow Manager
Three days (24 hours)—$1,695
Overview
This course introduces you to the ArcGIS Workflow Manager extension, its architecture and available configuration options, and the importance of job management in your organization. You will learn how to use the tools included with ArcGIS Workflow Manager and how to configure the system to meet your business requirements.

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
• Describe and set up database and system tables.
• Query, create, assign, locate, and edit jobs.
• Execute workflows and track job status and feature modification history.
• Set up the ArcGIS Workflow Manager security model.
• Model your business processes into ArcGIS Workflow Manager workflows.
• Publish ArcGIS Workflow Manager services and deploy web viewers.

Prerequisite:
Introduction to GIS Using ArcGIS

Working with CAD Data in ArcGIS for Desktop
One day (8 hours)—$565
Overview
Like GIS data, CAD data is commonly used in design, engineering, and planning workflows. In this course, you will learn how to efficiently display CAD data with GIS layers in ArcGIS, use CAD data directly in ArcGIS geoprocessing and analysis operations, and import CAD data into a geodatabase. Techniques and best practices for data conversion to support integrated CAD/GIS workflows are covered. This course is taught using ArcMap.

Who Should Attend
• GIS specialists, technicians, data managers, and other experienced ArcGIS users
• Experienced CAD users who have basic ArcGIS skills

Learn How To
• Accurately display and symbolize CAD data in ArcMap.
• Convert a CAD feature class to a geodatabase feature class.
• Prepare geodatabase feature classes for export to a complex CAD drawing file that contains attributed CAD entities.
• Automate common CAD workflows.

Prerequisite:
ArcGIS 2: Essential Workflows

“I wish I had this course a long time ago. The instructor answered questions I had about ArcMap and files (particularly shapefiles and personal geodatabases). He knew the material in-depth and was able to connect with the students.”

Kenneth Vail
ArcGIS 3: Performing Analysis

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
Deploying and Maintaining a Multiuser Geodatabase
Two days (16 hours)—$1,130
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.

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)—$1,695
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.

Prerequisite:
Yes, see website for details.

Distributing Data Using Geodatabase Replication
Two days (16 hours)—$1,130
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 database management system (DBMS) queries and ArcGIS tools to create and manage replicas.
• Plan and implement an efficient synchronization strategy for your data distribution architecture.

Prerequisite:
Yes, see website for details.

Available in Early 2018
ArcGIS Enterprise: Configuring a Base Deployment
Two days (16 hours)—$1,130
Overview
Learn how to install and configure an ArcGIS Enterprise base deployment to enable individuals to securely access, create, and share geospatial resources across your organization. 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 administrators; GIS web administrators; and others who install, manage, or support an ArcGIS Enterprise system

Learn How To
• Install ArcGIS Server, Portal for ArcGIS, ArcGIS Data Store, and ArcGIS Web Adaptor (IIS).
• Configure a portal website to manage users, groups, and content-sharing privileges.
• Apply Secure Sockets Layer (SSL) certificates to deploy encrypted security.
• Configure a suitable authentication method for your organization’s needs.

Prerequisite:
ArcGIS 4: Sharing Content on the Web

“Instructors were VERY engaging and willing to answer questions related to my work as well as the exercises in the book. Great instruction!”

Daniel Jones
ArcGIS Pro: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
ArcGIS for Server: Site Configuration and Administration
Three days (24 hours)—$1,695

Overview
This course teaches how to successfully install, configure, and manage an ArcGIS for Server system that enables GIS content sharing across the enterprise or on the web. You will explore the ArcGIS for Server architecture and apply recommended workflows to configure ArcGIS Server sites and manage GIS services, applications, data, and users. Techniques and best practices to ensure performance, security, and reliability are emphasized. This course applies to ArcGIS 10.3 and ArcGIS 10.4.

Who Should Attend
IT administrators, system administrators, GIS web administrators, and others who install, manage, or support an ArcGIS for Server system.

Learn How To
• Successfully install ArcGIS for Server and create an ArcGIS Server site.
• Configure the ArcGIS Web Adaptor (IIS) component to integrate your ArcGIS server with a web server.
• Publish services that have the capabilities required for your applications.
• Plan, create, and update a cache for high-performing map and image services.
• Tune and monitor services to ensure high performance.
• Implement security for your site and services that meets the needs of your organization.

Prerequisite:
ArcGIS 4: Sharing Content on the Web

Deploying Portal for ArcGIS
Two days (16 hours)—$1,130

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. This course introduces Portal for ArcGIS components and architecture models that support web GIS workflows. Techniques to ensure portal security and high availability are covered. This course is taught using ArcGIS 10.4.

Who Should Attend
ArcGIS for Server administrators who need to set up and configure a private organizational portal that provides secure access to geospatial data, maps, and apps.

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

System Architecture Design Strategies
Three days (24 hours)—$1,695

Overview
This course covers GIS architecture design strategies and infrastructure architecture alternatives that support successful enterprise operations. You will learn comprehensive guidelines for planning and selecting a system solution that meets your organization’s needs. This course also covers performance validation and system capacity planning techniques for enterprise GIS deployments.

Who Should Attend
• Senior architecture consultants and software architects who need to increase their knowledge of enterprise GIS system design.
• GIS managers, project managers, and software developers who need to understand system architecture and hardware capacity planning criteria.
• IT and system administrators and consultants who need to understand, identify, and troubleshoot performance problems with existing GIS environments.

Learn How To
• Identify and define user workflow requirements for an enterprise GIS.
• Describe software deployment patterns appropriate for each identified user workflow.
• Recognize system design factors that impact GIS software performance and scalability.
• Identify network bandwidth requirements and remote client performance expectations.
• Describe platform architecture deployment patterns for meeting your system non-functional deployment requirements.
• Select platform technology that will satisfy ArcGIS performance and capacity needs.
• Apply best practices for incorporating security throughout system design and deployment.
• Identify a target IT platform and network solutions that satisfies your peak system performance needs.

Prerequisite:
Yes, see website for details.

Written by System Architecture Design Strategies course author Dave Peters, this Esri Press book complements the course in helping organizations efficiently implement, integrate, and scale up a GIS.
Configuring Web Apps Using Web AppBuilder for ArcGIS
One day (8 hours)—$565

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.

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’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: None

Extending ArcGIS Pro with Add-Ins
Three days (24 hours)—$1,695

Overview
Learn how to use ArcGIS Pro SDK for the Microsoft .NET Framework to develop custom add-ins that support your organization’s unique workflows. This course introduces key ArcGIS Pro SDK for .NET 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
Experienced Microsoft Visual Basic .NET and C# developers

Learn How To
• Develop, test, and deploy ArcGIS Pro SDK for .NET 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

Introduction to Geoprocessing Scripts Using Python
Three days (24 hours)—$1,695

Overview
Python scripts reduce the time spent on complex or repetitive tasks, enabling GIS staff to be more productive. This course teaches how to create Python scripts to automate tasks related to data management, feature editing, geoprocessing and analysis, and map production using ArcGIS. You will also learn how to share your Python scripts so your key GIS workflows are accessible to others. This course is taught using ArcMap.

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

Learn How To
• Choose a Python scripting environment that meets your needs.
• Incorporate cursors, describe objects, and list objects into scripts to manage and update data.
• Use ArcPy™ classes and geometry objects to create and update features and perform geoprocessing operations.
• Use the ArcPy mapping module to automate map document and layer management.
• Apply techniques to ensure valid script syntax and error handling.
• Create custom script tools and geoprocessing packages to share your scripts.

Prerequisite:
Yes, see website for details.

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 listing of e-Learning courses.

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Introduction to Web Development Using ArcGIS API for JavaScript
Three days (24 hours)—$1,695

Overview
This course reviews basic concepts of web development and introduces ArcGIS API for JavaScript. You will explore API classes, widgets, and available functionality as you work with high-performing web applications that incorporate ArcGIS content and services. You will gain experience with the API by querying, visualizing, and analyzing 2D and 3D data.

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

Learn How To
• Develop and test web application functionality based on ArcGIS API for JavaScript.
• Programmatically render ArcGIS services to support map visualization needs.
• Include capabilities for application end users to view 2D maps and 3D scenes, query map layers, and perform spatial analysis and geoprocessing operations.

Prerequisite:
Yes, see website for details.

Developing Web Apps with ArcGIS API for JavaScript
Three days (24 hours)—$1,695

Overview
This course teaches how to use ArcGIS API for JavaScript to efficiently build high-performing, engaging web applications that meet the needs of their intended audience. You will learn about the classes available in the API, how to use them in a JavaScript-based web application, and how to incorporate ArcGIS services and ArcGIS Online content to enhance your applications.

Who Should Attend
Experienced JavaScript developers who want to create applications that include ArcGIS services and functionality

Learn How To
• Build, test, and deploy a web application using ArcGIS API for JavaScript.
• Use the ArcGIS platform to incorporate ready-to-use content and online services that allow end users to visualize, query, and edit data.
• Configure API components to meet user requirements.
• Apply best practices to ensure high performance and proper communication between the client application and web server.

Prerequisite:
Yes, see website for details.

Learn a Lot in 60 Minutes
Esri live training seminars offer GIS training by a technical expert, streamed directly to your desktop. These one-hour seminars are live, interactive, and free. You can even request that we e-mail you reminders for upcoming seminars. All seminars are recorded and available shortly after the live event, in case you miss one. See the schedule of upcoming seminars at esri.com/lts.

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

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

Geospatial Concepts for Intelligence Operations
Three days (24 hours)—$1,695
Overview
This course teaches foundational geospatial concepts that apply to data, maps, and analysis workflows widely used for intelligence production, planning, and operations. You will work with the ArcGIS platform as you explore techniques to efficiently visualize, create, and analyze geospatial data for use in intelligence. This course is taught using ArcGIS for Desktop Advanced, and some course exercises use tools provided in the ArcGIS Spatial Analyst extension.
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 appropriate geospatial data for visualization and analysis.
- Organize, create, and manage geospatial data stored in a geodatabase.
- Accurately and effectively display a variety of content, including imagery, on a map.
- Create products for dissemination that support mission planning and intelligence operations.
Prerequisite:
Experience working on a desktop personal computer and with Microsoft Office applications.

Using ArcGIS for Geospatial Intelligence
Three days (24 hours)—$1,695
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.
Who Should Attend
Entry- to mid-level professionals in the military, intelligence, and national security communities who specialize in intelligence planning, geospatial intelligence, all-source intelligence, terrain analysis, imagery exploitation, intelligence production, or collection management.
Learn How To
- Evaluate and prepare geospatial data for use in geospatial intelligence (GEOINT) fusion, analysis, and intelligence products.
- Perform different types of geospatial analyses (including terrain, raster-based, viewshed, and temporal) to evaluate potential threats and identify patterns, hot spots, and clusters.
- Evaluate suitability of multiple locations for tactical operations.
- Create operational map products that include military grids, operational overlays, and military standard symbology.
- Disseminate geospatial products and information using map packages, GeoPDFs, web maps, and KML/KMZ files.
Prerequisite:
Geospatial Concepts for Intelligence Operations

“Everything was very convenient. I liked how the class started off with basics—always good to review and get everyone on the same page.”

Erin Robbins
Geospatial Concepts for Intelligence Operations

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
Portal for ArcGIS: User Workflows (for Defense and Intelligence)
Two days (16 hours)—$1,130
Overview
Portal for ArcGIS provides all the productivity and collaboration benefits of a web GIS, while meeting an organization’s requirement for an on-premises or private cloud infrastructure. This course prepares you to efficiently work with content on your organization’s 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 geospatial content.

Who Should Attend
Professionals specializing in all-source intelligence, imagery analysis, open-source intelligence analysis, signals intelligence analysis, geospatial analysis, geospatial engineering, or mission planning

Learn How To
• Discover geospatial resources that you can exploit for intelligence production.
• Create web maps and quickly configure them to meet your customers’ needs.
• Disseminate intelligence through web map presentations, configured apps, story maps, and 3D web scenes.
• Efficiently share a collection of intelligence products to a single, group-accessible location.
• Consume your organization’s portal content in ArcMap and share it out in other formats.

Prerequisite:
Geospatial Concepts for Intelligence Operations

Using ArcGIS for Public Safety Workflows
Two days (16 hours)—$1,130
Overview
This course introduces ArcGIS software and a geographic approach that complements and enhances typical public safety workflows. You will work with ArcGIS tools to map and visualize public safety data, identify patterns, create actionable information, and produce dynamic maps to effectively disseminate that information. This course uses realistic public safety workflows and scenarios and is taught using ArcMap.

Who Should Attend
Emergency management, law enforcement, fire and rescue, and emergency call taking and dispatch professionals who have minimal experience with GIS and ArcGIS for Desktop (ArcMap) software

Learn How To
• Organize data and prepare it to be mapped.
• Accurately display data stored in tables and spreadsheets as features on a map.
• Create queries to quickly visualize trends and patterns that may be present in your data.
• Edit GIS data to ensure responders, decision-makers, and stakeholders have access to up-to-date data.
• Apply spatial analysis techniques to derive new information from your data.
• Create a map to visualize and share public safety information.

Prerequisite:
Experience with Windows-based software for basic file management and browsing is required. Familiarity with basic GIS concepts is recommended.

“I like the shared interface and ability to annotate the drawings and chat features. I think the overall experience is similar to what you would get in a live classroom. Good job!”

Jon Berg
ArcGIS 2: Essential Workflows

“This was one of the best courses I’ve taken with Esri. The instructor was engaging, and the material was very relevant to what I expected.”

James R. Schell
Implementing Versioned Workflows in a Multiuser Geodatabase

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.*
ArcGIS Analysis Workflows for Public Safety
Two days (16 hours)—$1,130

Overview
This course uses realistic scenarios to teach a standard analysis workflow that will provide deeper insight into how location impacts 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.

Who Should Attend
Crime analysts and others in law enforcement, homeland security, emergency management, and related fields

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

Using ArcGIS for Water Utility Workflows
Two days (16 hours)—$1,130

Overview
This course teaches how to leverage the ArcGIS platform and focused solutions to efficiently manage water utility assets, analyze a network, streamline field data collection, monitor field operations, disseminate information across an organization, and share information with the public to deliver better customer service. Familiarity with water utilities terminology is assumed. This course is taught using ArcMap.

Who Should Attend
GIS analysts, specialists, technicians, and others who work for water, wastewater, or stormwater utilities

Learn How To
• Identify the ArcGIS water utility solutions that support common workflows.
• Add and edit features to maintain the accuracy of network data.
• Analyze network flow to identify valves, lines, and customers impacted by a break, leak, or other network disruption.
• Create and publish a web map to support hydrant inspection using a mobile device.
• Configure a dashboard view for field managers to monitor hydrant inspections in progress.
• Create and share web layers, web maps, and web apps to disseminate information within your organization and with the public.

Prerequisite:
ArcGIS 2: Essential Workflows

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

Esri instructor-led and self-study courses qualify for educational achievement points awarded by the GIS Certification Institute (GISCI). After completing an Esri training course, you may submit your course completion certificate to GISCI for verification.

For more information about GISCI, visit www.gisci.org.
Industry-Focused Courses (continued)

**Working with Geometric Networks for Utilities**
One day (8 hours)—$565

**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. You will learn fundamental concepts of a geometric network and the workflow to create one. Working with realistic electric, gas, and water/wastewater data, you will create and edit geometric networks and perform common analysis tasks.

**Who Should Attend**
Spatial data managers and GIS technicians who work in the electric, gas, or water/wastewater industries

**Learn How To**
- 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:**
ArcGIS 2: Essential Workflows

All attendees of Working with Geometric Networks for Utilities receive a free copy of the Esri Press book *Modeling Electric Distribution with GIS*.

**Hydrologic and Hydraulic Analyses Using ArcGIS**
Two days (16 hours)—$1,130

**Overview**
This course presents GIS techniques used for terrain analysis, hydrologic and hydraulic (H&H) characteristics extraction, numerical model input/output, modeling process automation, and result mapping. The course focus is the functionality that GIS provides to H&H modeling, not on performing H&H analyses.

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

**Learn How To**
- Use triangulated irregular networks (TINs) and Esri Grids to represent terrain surfaces.
- Implement GIS as a spatial and temporal integrator.
- Use hydrologic statistical modeling—National Stream Statistics (NSS) and StreamStats.
- Develop hydrologic physical models—Hydrologic Modeling System (HMS) and Geospatial Hydrologic Modeling System (GeoHMS) extension.
- Develop hydraulic models—River Analysis System (RAS) and Geospatial River Analysis System (GeoRAS) extension.
- Perform floodplain mapping.
- Implement GIS process automation and integration.

**Prerequisite:**
Yes, see website for details.

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

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

Instructor-led workshops present conceptual material, demonstrations, and best practices on a focused technology topic. Taught online in real time by an expert Esri instructor, a workshop is an ideal way to get up to speed quickly without leaving the office. Workshops include ample time for questions and answers, downloadable resource materials, and a certificate of completion.

Exploring Enterprise GIS: A Workshop for Leaders
Four Hours—$185
Get the context needed to understand how enterprise GIS supports daily operations and spurs innovation. You will explore common business patterns that drive initial GIS adoption and the unique ArcGIS platform capabilities that yield strategic insight and better decision-making. Examples of how organizations in a variety of industries achieve value through enterprise utilization of ArcGIS tools, content, and workflows are presented.

Who Should Attend
C-level executives; IT and GIS managers; system architects; and decision-makers in business, government, education, and nonprofit organizations

Prerequisite:
None

User Workflows for ArcGIS Online Organizations
Four Hours—$185
This workshop introduces you to web maps, apps, and other authoritative content that may be available through your ArcGIS Online organizational site. You will see how this content can help you infuse 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 and PowerPoint. Workshop concepts also apply to organizational sites created using Portal for ArcGIS.

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

Prerequisite:
None

“I thought that the content of the class and supporting materials/lessons were perfect for providing a broad overview of ArcGIS Pro capabilities. I got out of this class everything I was hoping to, and more.”

Darren Cook
ArcGIS Pro: Essential Workflows

*For up-to-date course descriptions, prerequisites, pricing, and schedules, visit esri.com/coursecatalog.
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 www.pearsonvue.com/esri.

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 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 the traditional classroom 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 two business days. Phone, mail, and fax registration 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. 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. 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. Instructor-led workshops include a student resource book.
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Dear Colleague:

The latest release of ArcGIS® brings new contextual tools for 2D and 3D mapping and spatial analytics to help you explore data, apply geographic science, and share location-based insight. ArcGIS is a completely integrated platform—a system of systems—that I believe will transform how geographic information is accessed and managed by professionals, like yourself, and organizations.

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 geographic information system (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 and help you find creative solutions to the social, economic, business, and environmental issues that our world faces.

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

Warm regards,

Jack Dangermond
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, and workforce development plans that support your strategic objectives.

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