Geographic Information Systems with ArcGIS Pro for Beginners Training Course



14 - 18 Dec 2026

Barcelona

5900 € (Per Person)

Ref: #CAD7676_60651

Course Introduction / Overview:

This training course is designed to equip data analysts, environmental specialists, and urban planners with the strategic and technical skills needed to master the fundamentals of GIS and cartography using ArcGIS Pro. The ability to visualize, analyze, and communicate location-based data is a critical factor for effective decision-making and planning. This program, offered by BIG BEN Training Center, provides a comprehensive framework for understanding the core principles of geospatial analysis, from various data types and mapping techniques to geodatabase management and data visualization. We will explore key concepts such as coordinate systems, projections, and the use of GIS software. The curriculum is informed by the academic work of authors like Michael N. DeMers, whose book, Fundamentals of Geographic Information Systems, provides a foundational and detailed understanding of the principles behind effective spatial data analysis. This course goes beyond a simple overview of tools to provide a deep understanding of how to implement real-world solutions that ensure data accuracy, analytical rigor, and long-term value. We prepare participants to be leaders who can build more efficient and innovative geospatial initiatives.

Target Audience / This training course is suitable for:

- Data analysts.
- Environmental scientists.
- Urban and regional planners.
- Public health professionals.
- Geologists and surveyors.
- Social scientists.
- Civil engineers.
- Government agencies and equivalents.

Target Sectors and Industries:

- Environmental Management.
- Urban and Regional Planning.
- Public Health.
- Natural Resources.
- Utilities.
- Transportation.
- Real Estate.
- Government and public administration agencies.

Target Organizations Departments:

- Data and Analytics.
- Planning and Development.
- Environmental Management.
- Public Works.
- Operations.
- Strategic Planning.
- Research and Development.
- Information Technology (IT).

Course Offerings:

By the end of this course, the participants will have able to:

- Apply foundational GIS principles.
- Create and edit a geodatabase.
- Perform basic geospatial analysis.
- Master mapping techniques and cartography.
- Understand and apply coordinate systems.
- Visualize data effectively in ArcGIS Pro.
- Manage and prepare location data.
- Produce clear and professional maps.

Course Methodology:

This training course uses a highly practical and case-study driven methodology. The program is built on real-world examples of successful GIS applications. Participants will work in teams to perform a spatial analysis for a hypothetical project, applying the tools and frameworks learned in the course. We will use interactive workshops to practice skills like data cleaning and creating a custom map layout. The curriculum is designed to be a collaborative experience where participants can share their unique challenges and innovative solutions. Our trainers, with extensive experience in the field, will provide direct feedback and guidance throughout the course. BIG BEN Training Center is committed to providing a dynamic and practical learning environment, ensuring that participants leave with the skills and confidence to effectively perform GIS tasks.

Course Agenda (Course Units):

Unit One: Foundations of GIS and Cartography

- What is GIS?
- Introduction to ArcGIS Pro.
- Understanding geospatial data.
- The principles of cartography.
- Case studies in GIS.
- The importance of data integrity.
- Navigating the software interface.

Unit Two: Data Management and Preparation

- Creating a geodatabase.
- Working with different data types.
- Importing and exporting data.
- Data cleaning and validation.
- Using attribute tables.
- Joining and relating data.
- Best practices for file management.

Unit Three: Coordinate Systems and Projections

- The importance of coordinating systems.
- Understanding latitude and longitude.
- Common projections and their uses.
- Transforming data between systems.
- On-the-fly projection.
- Selecting the correct system for a project.
- Ensuring map's accuracy.

Unit Four: Geospatial Analysis and Visualization

- Performing a basic geospatial analysis.
- Using selection tools.
- Buffering and clipping data.
- Creating and interpreting a custom map layout.
- Data visualization techniques.
- Working with symbology and color.
- Designing maps for different audiences.

Unit Five: Strategic Application and Future Trends

- Applying GIS principles.
- Workflow optimization.
- The future of GIS technology.
- Web mapping basics.
- Career pathways for GIS specialists.
- The value of location intelligence.
- Leading with data.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can a deeper understanding of GIS and cartography and a proactive approach to geospatial analysis empower professionals to move beyond simple data spreadsheets and become strategic leaders in leveraging location-based insights to drive operational efficiency and innovation?

What unique qualities does this course offer compared to other courses?

This training course is unique because it provides a dedicated, strategic focus on GIS with ArcGIS Pro for beginners. While other programs may cover general software, our curriculum is designed to empower professionals with the specific skills needed to address the unique challenges of a highly data-driven field, from creating a geodatabase to performing geospatial analysis. The program is a hands-on experience, with exercises that directly simulate the challenges and decisions involved in a real-world data project. We go beyond theoretical concepts to provide a clear, actionable roadmap for balancing the demands of a complex project with the imperative of delivering a successful and well-documented outcome. This course is for professionals who want to lead their organizations toward a more efficient, profitable, and innovative future.