



EXAM INFORMATION GUIDE

# ArcGIS Desktop Professional

19-001



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# EXAM DESCRIPTION

## Exam Details:

ArcGIS Desktop Professional 19-001

- Exam Questions: 80
- Exam Type: Core
- Exam Format: Multiple Choice
- Exam Language: English
- Exam Cost: \$250 USD

## Exam Purpose:

The ArcGIS Desktop Professional exam tests the candidate's experience applying ArcGIS concepts and processes to workflows. Qualified candidates should have four years of applied experience and should be proficient in best practices and uses of the ArcGIS Platform. Qualified candidates should demonstrate proficiency when applying advanced GIS concepts and knowledge to establish workflows, processes, troubleshooting non-routine issues, and be skilled at defining and successfully completing complex GIS projects.

- [Exam Catalog Description](#)

## Target Candidate Audience:

The ArcGIS Desktop Professional exam tests candidates' experience utilizing a broad range of tools and functionality across the ArcGIS Platform to apply advanced GIS concepts and knowledge to a project using best practices. Qualified candidates should be able to apply GIS concepts and knowledge to establish workflows, processes, and methods to define a project and use appropriate ArcGIS Desktop functionality to accomplish project objectives. Candidates should be skilled at troubleshooting non-routine issues as well as defining and successfully completing complex GIS projects across the ArcGIS platform.

- [Digital Badge Details](#)

## Eligibility Requirement:

This is a core exam, there are no eligibility requirements to register for any level of core exams. Test takers must pass a core exam before registering for a specialty exam.

## Description of Qualified Candidate:

The ArcGIS Desktop Professional exam measures a candidate's comprehension of complex ArcGIS concepts, including ArcGIS Platform competency at an advanced level. It is recommended the candidate have extensive applied experience using ArcGIS. Candidates should be able to implement principles of sharing content, performing analysis, data management, and mapping and visualization across the ArcGIS Platform at an advanced level. Passing the exam provides an opportunity for candidates to validate their professional expertise in implementing ArcGIS Desktop best practices.

# CANDIDATE QUALIFICATIONS

A qualified candidate should be able to perform the following tasks:

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- Apply and interpret fundamental spatial statistics and 2D and 3D visualization techniques
- Build a reference data set and an address locator
- Build a transportation network and apply solvers
- Implement and apply Python scripting
- Perform advanced vector and raster analysis
- Perform fundamentals of geodatabase design and operate within a multi-user geodatabase
- Perform surface modeling and analysis
- Utilize advanced modeling techniques
- Identify and resolve common workflows
- Author a mosaic dataset
- Demonstrate proficiency in desktop user interface and environment configuration
- Determine and define an appropriate coordinate system
- Manipulate data with Spatial Analyst, 3D Analyst, Image Analyst, and Network Analyst extensions
- Author and share to a web GIS portal
- Implement and apply web content or services to perform analyses
- Configure web app templates and Web AppBuilder widgets
- Author ArcGIS Pro Tasks
- Author and use Arcade Expressions

A qualified candidate should NOT be expected to perform the following tasks:

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- Deliver production quality cartographic output with specific industry solutions
- Administer a multi-user geodatabase
- Develop or administer Web sites
- Develop tools or apps using any SDK or API
- Network or systems administration
- Administer an ArcGIS Online organization

A qualified candidate should be familiar with the following tools:

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- ArcGIS Pro
- ArcGIS Online
- ArcGIS Enterprise
- ArcGIS Network Analyst
- ArcGIS Spatial Analyst
- ArcGIS 3D Analyst
- ArcGIS Image Analyst
- Python
- Arcade

## SKILLS MEASURED

The following list will familiarize candidates with the exam sections to help guide exam preparation. The relative weight of each section is provided to illustrate the approximate size of each section. Candidates should review this list and assess their knowledge of each skill. Specific preparation resources are available to assist with refreshing in areas where any knowledge gaps are found.

## Data Storage

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20%

- Given requirements for a specific project, determine how to design a geodatabase
- Select appropriate data formats for an intended use
- Determine the data, settings, and parameters for creating a complex data set
- Determine the data, settings, and parameters for creating an address locator

## Data Management

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29%

- Given a scenario, convert and aggregate data to an appropriate format
- Given a scenario, create a dataset with the necessary schema to support an operation
- Determine the best workflow to resolve data alignment issues
- Determine how to manage coordinate systems
- Given a scenario, determine the method to create a surface dataset
- Given a scenario, determine how to automate data management

## Visualization & Sharing

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27%

- Use advanced cartographic techniques across the ArcGIS platform
- Given a scenario, determine how to optimize rendering of maps across the platform
- Given a scenario, determine how to create and render 2D and 3D scenes
- Given a scenario, identify procedures to create and publish layers, maps, and apps
- Given a scenario, determine the most effective process for sharing content
- Given a scenario, determine how to automate visualization and sharing using ArcPy

## Analysis & Geoprocessing

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**24%**

- Determine how to use Python to automate a process in ArcGIS
- Determine how to create and edit ModelBuilder models to automate complex workflows
- Given user requirements, determine the best way to share a geoprocessing model, script, package, or toolbox
- Determine how to customize the ArcGIS Pro user interface
- Determine how to author Tasks in ArcGIS Pro
- Given a scenario, determine the workflow, data, tools, settings, and parameters to perform an analysis

# EXAM RESOURCES

The following training resources are available to help you prepare for your exam but are not required.

Please utilize this list of preparation resources with the list of “skills measured” topics so you can identify appropriate training options for any possible knowledge gaps.

The Esri curated Learning Plan for this exam is updated continually based on the Training Services course and content retirement schedule.

Please note that completing the recommended training courses does not guarantee that you will achieve the requirements for a specific certification exam.

## ESRI LEARNING PLAN

- [Esri ArcGIS Desktop Professional Certification 19-001](#)

## BOOKS AND ADDITIONAL SOURCES

- [The ArcGIS Book - 10 Big Ideas about Applying the Science of Where](#)
- [Getting to Know Web GIS, 3rd edition](#)
- [Getting to Know ArcGIS Pro, second edition](#)
- [The Foundation for Your GIS - ArcGIS Pro](#)
- [GeoNet - Ask ArcGIS Pro](#)