Google Cloud

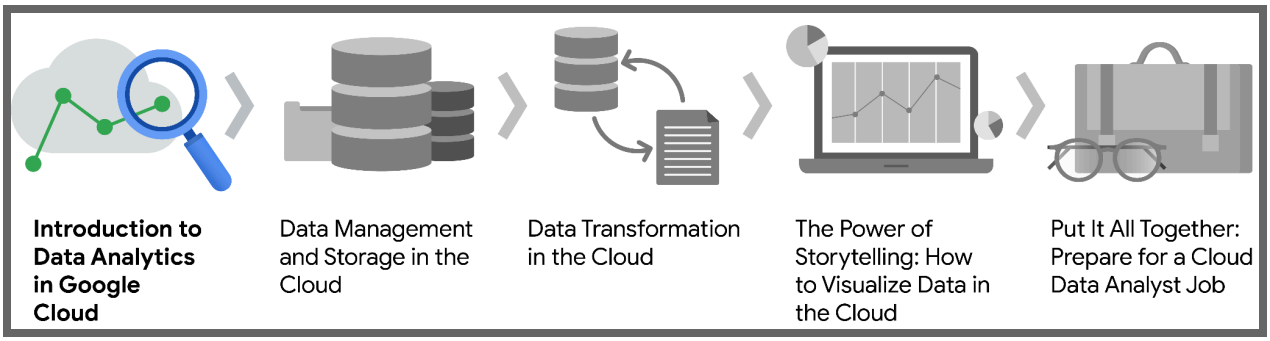
Course 1 overview

Hello and welcome to **Introduction to Data Analytics in Google Cloud**, the first course in the Google Cloud Data Analytics Certificate.

In this course, you'll develop a greater understanding of the certificate program, what you can expect moving forward, and how to successfully complete lessons. First, you'll explore the basics of cloud computing, including its components, and learn the differences between cloud and traditional computing. You'll also learn more about data management, the data lifecycle, and how these topics relate to the cloud data analyst's role. Then, you'll explore how cloud data professionals collaborate on projects to generate key business solutions. Finally, you'll be introduced to key tools in the cloud data analyst's toolbox, and learn the importance of process management in cloud computing.

Certificate program progress

The Google Cloud Data Analytics Certificate program has five courses. **Introduction to Data Analytics in Google Cloud** is the first course.



1. **Introduction to Data Analytics in Google Cloud** (current course) — In this course, you'll explore the foundations of cloud data analysis practices. Then, you'll learn more about the roles and responsibilities of a cloud data analyst, including data acquisition, storage, processing, and visualization.

2. Data Management and Storage in the Cloud — In this course, you'll learn more about how data is structured and organized. You'll also gain hands-on experience with data lakehouse architecture and cloud components like BigQuery, Google Cloud Storage, and DataProc to learn how to efficiently store, analyze, and process large datasets.

3. Data Transformation in the Cloud — In this course, you'll use data discovery and profiling methods to examine data quality and validity. You'll also use data mapping to establish relationships between different data sources, and explore transformation using various methods. Then, you'll apply data governance and security best practices to keep PII data safe, and learn how to implement a data transformation strategy for an organization.

4. The Power of Storytelling: How to Visualize Data in the Cloud — In this course, you'll develop skills in the five key stages of visualizing data in the cloud: storytelling, planning, exploring data, building visualizations, and collaborating with data. Then, you'll explore UI/UX skills to wireframe interactive and impactful cloud-native visualizations. You'll also work with cloud-native data visualization tools to explore datasets, create reports, and build dashboards that drive decisions and foster collaboration.

5. Put It All Together: Prepare for a Cloud Data Analyst Job — In this course, you'll combine and apply the foundational knowledge and skills from previous courses to create a capstone project that focuses on the full data lifecycle. You'll also practice using cloud-based tools to acquire, store, process, analyze, visualize, and communicate data insights effectively. Then, you'll update your resume and practice interview techniques to prepare to apply and interview for jobs.

Course 1 content

Each course in this certificate program is broken into modules. You can complete courses at your own pace, but the breakdowns are designed to help you finish the entire Google Cloud Data Analytics Certificate in about 3-6 months if you complete about 1-2 modules per week.

What's to come? Here's a quick overview of the skills you'll learn in each module of this course.

Module 1: Introduction to cloud computing

In this module, you'll be introduced to the Google Cloud Data Analytics Certificate, and investigate the question, "What is cloud computing?" by exploring its history and key elements. You'll also access the certificate program's resources, plans, and expectations to assist you in successfully completing the certificate.

Module 2: Data analytics in the cloud

In this module, you'll explore the difference between traditional data analysis and cloud data analysis, along with its impact on cloud data analytics. You'll also examine various billing models in cloud computing and Google's Cloud Architecture Framework.

Module 3: The data lifecycle

In this module, you'll be introduced to the stages of the data lifecycle, from data entry to data destruction. Then, you'll learn the benefits of lifecycle management, including data protection and disaster recovery. You'll also learn how lifecycle management relates to cost control, compliance, and governance considerations.

Module 4: The role of a cloud data analyst

In this module, you'll explore the key differences and similarities between data analytics on-premises and data analytics in the cloud. You'll also be introduced to the role a data analyst plays in an organization, who they interact with, and key aspects of process management for answering business data questions.

What to expect

Each course offers many types of learning opportunities:

- **Videos** led by Google instructors teach new concepts, introduce the use of relevant tools, offer career support, and provide inspirational personal stories.
- **Readings** build on the topics discussed in the videos, introduce related concepts, share useful resources, and describe case studies.
- **Activities** and **labs** give you hands-on practice in applying the skills you're learning, and allow you to assess your own work by comparing it to a completed example.
- **Glossaries** provide a list of key terms for you to review to prepare for quizzes.
- **Practice quizzes** allow you to check your understanding of key concepts, and provide you with valuable feedback.

- **Graded quizzes** allow you to demonstrate your understanding of the main concepts of a course. You must score 80% or higher on each graded quiz to obtain a certificate. You can take a graded quiz multiple times to achieve a passing score.

Note: Some learning item types may not be included in every course.

Tips for success

- It's strongly recommended that you go through the items in each lesson in the order they appear because new information and concepts build on previous knowledge.
- Participate in all learning opportunities to gain as much knowledge and experience as possible.
- If something is confusing, don't hesitate to replay a video, review a reading, or repeat an activity.
- When you encounter useful links in this course, bookmark them so you can refer to the information later for study or review.