

Get started with the certificate program

- Video: Welcome to the Google Advanced Data Analytics Certificate 5 min
- Reading: Google Advanced Data Analytics Certificate overview 10 min
- Reading: Course 1 overview 20 min
- Video: Introduction to Course 1 2 min
- Ungraded Plugin: Commit to completing the program 5 min
- Reading: Helpful resources and tips 20 min
- Video: Cassie: A lifelong love of data 3 min
- Ungraded Plugin: Your Advanced Data Analytics Certificate roadmap 15 min
- Discussion Prompt: Connect with your classmates 10 min

Careers in data science

Program plan and expectations

Review: Introduction to data science concepts

Course 1 overview

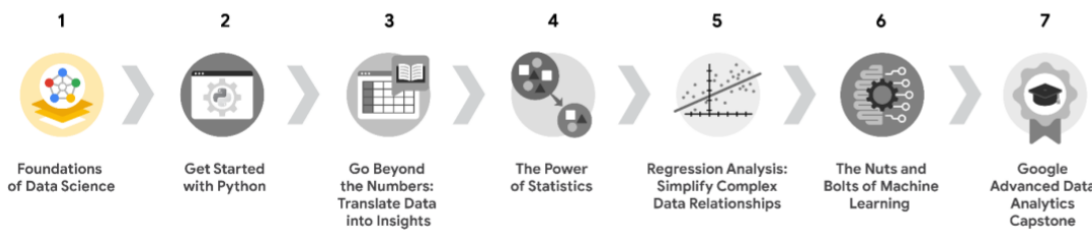
WELCOME to Course 1

Hello, and welcome to **Foundations of Data Science**, the first course in the Google Advanced Data Analytics Certificate. You're starting an exciting journey!

In this course, you will be introduced to the basic concepts of data science. You will discover how data professionals operate in the workplace and how different roles contribute to an organization's vision of the future. You will also begin to explore the data workflow PACE, which stands for plan, analyze, construct, and execute. The PACE workflow will help you better understand how to navigate the technical and workplace expectations of this career space.

Course descriptions

The Google Advanced Data Analytics Certificate has seven courses. **Foundations of Data Science** is the first course.



- Foundations of Data Science** — *(current course)* Learn how data professionals operate in the workplace and how different roles in the field of data science contribute to an organization's vision of the future. Then, explore data science roles, communication skills, and data ethics.
- Get Started with Python** — Discover how the programming language Python can power your data analysis. Learn core Python concepts, such as data types, functions, conditional statements, loops, and data structures.
- Go Beyond the Numbers: Translate Data into Insights** — Learn the fundamentals of data cleaning and visualizations and how to reveal the important stories that live within data.
- The Power of Statistics** — Explore descriptive and inferential statistics, basic probability and probability distributions, sampling, confidence intervals, and hypothesis testing.
- Regression Analysis: Simplify Complex Data Relationships** — Learn to model variable relationships, focusing on linear and logistic regression.
- The Nuts and Bolts of Machine Learning** — Learn unsupervised machine learning techniques and how to apply them to organizational data.
- Google Advanced Data Analytics Capstone** — Complete a hands-on project designed to demonstrate the skills and competencies you acquire in the program.

Course 1 content

Each course of this certificate program is broken into weeks. You can complete courses at your own pace, but the weekly breakdowns are designed to help you finish the entire Google Advanced Data Analytics Certificate in about six months.

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



Week 1: Introduction of data science concepts

You will find out what's in store for Course 1 and the whole certificate program. You'll explore the Coursera platform, procedures, and content types, and meet other learners in the program. Then, you'll learn about data science fundamentals, and investigate the question "What is data science?" by examining elements of its history, and tracing its current defining characteristics. Finally, you'll learn some tips for embarking on careers in this field.

Week 2: The impact of data today

In this part of the course, you will explore examples of the ways data-driven insights impact different industries. You'll learn how data analytics professionals are transforming organizations and discover how data professionals are approaching data stewardship. Then, you'll consider the trajectory of data analytics and forecast the future of data fields.

Week 3: Your career as a data professional

You will learn what it means to have a career as a data professional. In this section, you'll examine the required skills of a data analyst and compare it to many other data professional roles. Then you'll discover how data professionals operate within cross-functional teams and how they serve their organizations.

Week 4: Data applications and workflow

You will find out how to structure your work as a data analyst and learn about the PACE workflow, which will guide you as you learn how to think like a data professional. You'll also investigate what it means to be a successful communicator and how communication can help drive data analysis through the PACE workflow.

Week 5: Course 1 end-of-course project

You will work on a project that will help develop your resume and refine your ability to think like a data professional. You'll end the course by reflecting on your learning journey, and then you will get a preview of the next course.

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.
- Discussion prompts** explore course topics for better understanding and allow you to chat and exchange ideas with other learners in the **discussion forums**.
- Self-review activities** and **labs** give you hands-on practice in applying the skills you are learning and allow you to assess your own work by comparing it to a completed example.
- Interactive plug-ins** encourage you to practice specific tasks and help you integrate the knowledge you have gained in the course.
- In-video quizzes** help you check your comprehension as you progress through each video.
- Practice quizzes** allow you to check your understanding of key concepts and provide valuable feedback.
- Graded quizzes** demonstrate your understanding of the main concepts of a course. You must score 80% or higher on each graded quiz to obtain a certificate, and you can take a graded quiz multiple times to achieve a passing score.

Tips for success

- It is 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 a self-review activity.
- Use the additional resources that are referenced in this course. They are designed to support your learning. You can find all of these resources in the **Resources** tab.
- When you encounter useful links in this course, bookmark them so you can refer to the information later for study or review.
- Understand and follow the **Coursera Code of Conduct** to ensure that the learning community remains a welcoming, friendly, and supportive place for all members.

Mark as completed