

Get started with the course

- Video:** Introduction to Course 7
3 min
- Reading:** Course 7 overview
10 min
- Video:** Angel: My personal career journey
3 min
- Reading:** Helpful resources and tips
10 min

Introduction to Python programming in cybersecurity
Core Python components
Conditional and iterative statements
Review: Introduction to Python

Course 7 overview



Hello, and welcome to **Automate Cybersecurity Tasks with Python**, the seventh course in the Google Cybersecurity Certificate. You're on an exciting journey!

By the end of this course, you will develop a greater understanding of computer programming in Python and how Python can be effectively used to automate security-related tasks. You will start with key foundational concepts in Python, including data types, variables, conditional statements, and iterative statements. You'll then develop functions in Python and work with string and list data in a variety of ways. Finally, you'll explore algorithms that involve importing and parsing files.

Certificate program progress

The Google Cybersecurity Certificate program has eight courses. **Automate Cybersecurity Tasks with Python** is the seventh course.



- Foundations of Cybersecurity** — Explore the cybersecurity profession, including significant events that led to the development of the cybersecurity field and its continued importance to organizational operations. Learn about entry-level cybersecurity roles and responsibilities.
- Play It Safe: Manage Security Risks** — Identify how cybersecurity professionals use frameworks and controls to protect business operations, and explore common cybersecurity tools.
- Connect and Protect: Networks and Network Security** — Gain an understanding of network-level vulnerabilities and how to secure networks.
- Tools of the Trade: Linux and SQL** — Explore foundational computing skills, including communicating with the Linux operating system through the command line and querying databases with SQL.
- Assets, Threats, and Vulnerabilities** — Learn about the importance of security controls and developing a threat actor mindset to protect and defend an organization's assets from various threats, risks, and vulnerabilities.
- Sound the Alarm: Detection and Response** — Understand the incident response lifecycle and practice using tools to detect and respond to cybersecurity incidents.
- Automate Cybersecurity Tasks with Python** — *(current course)* Explore the Python programming language and write code to automate cybersecurity tasks.
- Put It to Work: Prepare for Cybersecurity Jobs** — Learn about incident classification, escalation, and ways to communicate with stakeholders. This course closes out the program with tips on how to engage with the cybersecurity community and prepare for your job search.

Course 7 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 Cybersecurity Certificate in about six months.

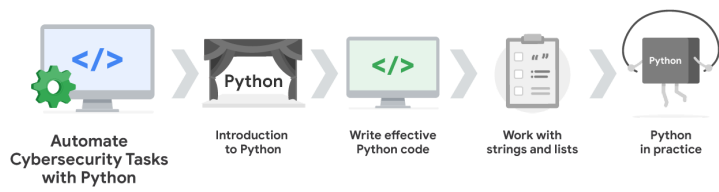
What's to come? Here's a quick overview of the skills you'll learn in each week of this course.

Week 1: Introduction to Python



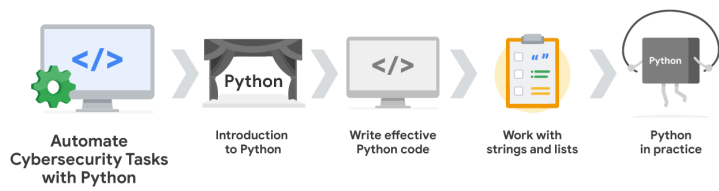
You will get an introduction to the Python programming language and how Python is used in cybersecurity. You'll also explore foundational Python concepts, including data types, variables, conditional statements, and iterative statements.

Week 2: Write effective Python code



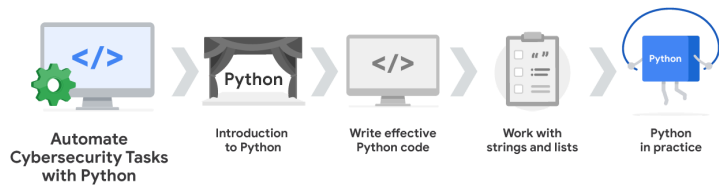
You will expand your ability to work with Python. You'll learn about prebuilt and user-defined Python functions. You'll also explore how modules help provide access to reusable code. Finally, you'll focus on code readability.

Week 3: Work with strings and lists



You will learn more options for working with strings and lists in Python, and you will discover methods that can be applied to these data types. You'll apply this knowledge to write a short algorithm. Finally, you'll use regular expressions to search for patterns in strings.

Week 4: Python in practice



You will put Python into practice and focus on automating cybersecurity-related tasks. You'll be introduced to opening and reading files. Then, you'll learn to parse files and structure their contents. Finally, you'll focus on strategies for debugging code.

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 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