Get Started with go certificate program

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Welcome to the Google Cybersecurity Certificate

Hello and welcome to
the Google Career Certificate focused on cybersecurity.
I'm so excited that you're here!
My name is Toni, and I am
a Security Engineering Manager at Google.
I'll be your instructor for
the first course of this certificate program.
By starting this course,
you've already taken a big step towards
building new skills that will help you in your career.

Cybersecurity may seem daunting at first,
but you'd be surprised by
the different backgrounds many of us have.
I worked as an intelligence analyst before I
got my first job in the security industry,
and I'm excited to be
your instructor as you begin your journey into security.

The demand for security professionals
is growing at an incredible rate.
By 2030, the U.S. Bureau of Labor Statistics
expects security roles to grow by more than 30%,
which is higher than
the average growth rate for other occupations.

Global access to the internet is expanding.
Every day, more people and
organizations are adopting new digital technologies.
Having a diverse community of
security professionals with unique backgrounds,
perspectives, and experiences is
essential for protecting and serving different markets.

Working in security has allowed me to
work with people from all around the world.
Working with people who have
diverse backgrounds ensures that our teams get
to ask lots of questions
and come up with more creative solutions.

The main objective in security is to
protect organizations and people.
This line of work allows you to
support and interact with people across the globe.

There are many openings for
entry-level security analysts,
and employers are struggling to find
enough candidates with the right expertise.
This program is designed to give you the knowledge and
skills you need to start
or advance in the security profession.
No matter your current skill level,
by the time you finish this certificate program,
you'll be prepared to find
a security-related job or expand your career in security.

You may be wondering,
what do security professionals actually do?
Have you ever had to update your password
online to include a number or a special symbol?
If so, then you're already familiar with
basic security measures, like password management.
And if you've ever received a notification from
a service provider about stolen data or a software hack,
then you have first-hand experience
with the impact of a security breach.
If you've ever asked yourself
how organizations safeguard data,
then you already have
two important traits that are necessary
to thrive in this industry: curiosity and excitement.

Security analysts help minimize
risks to organizations and people.
Analysts work to proactively guard against incidents
while continuously monitoring systems and networks.
And, if an incident does occur,
they investigate and report their findings.
They are always asking
questions and looking for solutions.

One of the best things about the security industry
is the many paths and career options it exposes you to.
Each option involves a unique set
of skills and responsibilities.

No matter what your background is,
you'll probably find that you
already have some relevant experience.
If you enjoy collaborating with and helping others,
solving puzzles, and are motivated by challenges,
then this is the career for you.

For example, my background as
an intelligence analyst had
nothing to do with cybersecurity.
However, having
strong critical thinking skills and communication skills
provided a solid foundation for
my success when I decided to pursue a career in security.

If you're not sure what direction you want to
take in the security industry, that's okay.
This program will give you an overview of
many different types of available jobs.
It will also let you explore
certain specialized skill sets to help
you figure out where you want to take your career.

The Google Career Certificates are designed by
industry professionals with decades
of experience here at Google.
You'll have a different expert from
Google guide you through each course in the certificate.
We'll share our knowledge in videos,
provide practice opportunities with hands-on activities,
and take you through real scenarios
that you might encounter on the job.

Throughout this program, you'll gain
hands-on practice with detecting
and responding to attacks,
monitoring and protecting networks,
investigating incidents,
and writing code to automate tasks.

The program is made up of several courses that are
designed to help you land an entry-level job.
You'll learn about topics like: core security concepts;
security domains; network security;
computing basics, including Linux and SQL;
along with understanding assets,
threats, and vulnerabilities.

Our goal is to help you reach
your goal of joining the security industry.

You'll learn about incident detection and
response, as well as how to use
programming languages, like Python,
to accomplish common security tasks.
You'll also gain valuable job
search strategies that will benefit you
as you begin to find and
apply for jobs in the security profession.

Completing this Google Career Certificate
will help you develop skills and learn how
to use tools to prepare you for
a job in a fast-growing, high-demand field.

The certificate is designed to prepare you for a job in
3-6 months if you work on the certificate part-time.
Once you graduate, you can
connect with over 200 employers
who are interested in hiring
Google Career Certificate graduates, like you.
Whether you're looking to switch jobs,
start a new career,
or level up your skills,
this Google Career Certificate can
open doors to new job opportunities.

You don't need prior experience or knowledge in
the security field because
this certificate program will begin with the basics.
I'll be by your side throughout this first course,
making sure that you're learning
the foundational knowledge needed
to succeed in the field.
This program is also flexible.
You can complete all of
the courses in this certificate on
your own terms and at your own pace, online.

We've gathered some amazing instructors to support
you on your journey, and
they'd like to introduce themselves now:

Hi! My name is Ashley,
and I'm a Customer Engineering Enablement

Lead for Security Operations Sales at Google.
I'll take you through security domains,
frameworks and controls,
as well as common security threats,
risks, and vulnerabilities.
You'll also be introduced to
common tools used by security analysts.
I can't wait to get started!

Hi there! My name is Chris,
and I'm the Chief Information Security Officer
for Google Fiber.
I'm excited to talk to
you about the structure of a network,
network protocols, common network attacks,
and how to secure a network.

Hi there! My name is Kim,
and I'm a Technical Program Manager at Google.
I will guide you through foundational computing skills
that support the work of a security analyst.
We'll also learn about operating systems,
the Linux command line, and SQL.

Hi! My name is Da'Queshia,
and I'm a Security Engineer at Google.
Together we'll explore protecting
organizational assets through a variety of
security controls and develop
a deeper understanding of risks and vulnerabilities.

Hi! My name is Dave,
and I'm a Principal Security Strategist at Google.
In our time together, we'll learn about
detecting and responding to security incidents.
You'll also have the chance to monitor and analyze
network activity using powerful security tools.

Hello! I'm Angel,
and I'm a Security Engineer at Google.
We'll explore foundational Python programming concepts
to help you automate common security tasks.

Hello! I'm Dion.
I'm a Program Manager at Google.
I'm your instructor for
the first portion of the final course of the program.

There, we'll discuss how to escalate
incidents and communicate with stakeholders.

And my name is Emily. I'm a Program Manager at Google.
I'll guide you through the final portion of
the program and share ways that you can
engage with the security community
and prepare for your upcoming job search.

And, as you already know,
I'll guide you through the first course of this program.
This is such a great time to
grow your career in the field of security.
Sound exciting? Let's get started!

Google Cybersecurity Certificate overview

Why are skills in cybersecurity in such high demand? The world is undergoing a digital transformation. Every day, global access to the internet is expanding, introducing more devices, more applications, and an even larger amount of data to the World Wide Web. As a result, threats, risks, and vulnerabilities are expanding and causing a significant amount of harm to organizations and people. Cybersecurity professionals are in high demand to help keep organizations, people, and data safe.

Throughout the program, you will have multiple opportunities to develop your cybersecurity knowledge and skills. You will explore concepts and scenarios to learn what an entry-level cybersecurity analyst must know and be able to do to thrive in the cybersecurity profession.

Google Cybersecurity Certificate courses

The Google Cybersecurity Certificate has eight courses that focus and build upon core concepts and skills related to the daily work of cybersecurity professionals, including foundational cybersecurity models and frameworks that are used to mitigate risk; protecting networks and data; using programming to automate tasks; identifying and responding to security incidents; and communicating and collaborating with stakeholders. Additionally, you will apply what you've learned in each course by completing portfolio projects that can be used to showcase your understanding of essential cybersecurity concepts to potential employers. The courses of the program are as follows:

1. **Foundations of Cybersecurity** *(current course)*

2. **Play It Safe: Manage Security Risks**

3. **Connect and Protect: Networks and Network Security**

4. **Tools of the Trade: Linux and SQL**

5. **Assets, Threats, and Vulnerabilities**

6. **Sound the Alarm: Detection and Response**

7. **Automate Cybersecurity Tasks with Python**

8. **Put It to Work: Prepare for Cybersecurity Jobs**

Eight icons show courses sequentially from left to right

Benefits for job seekers

After completing all eight courses, Google Cybersecurity Certificate graduates have access to job search resources, courtesy of Google. You'll have the opportunity to:

- Build your resume, participate in mock interviews, and receive job search tips through Big Interview, a job-training platform that's free for program graduates.

- Improve your interview technique with Interview Warmup, a tool built by Google with certificate graduates in mind. Access cybersecurity-specific practice questions, transcripts of your responses, and automatic insights that help you grow your skills and confidence.

- Access thousands of job postings and free one-on-one career coaching with Career Circle. (You must be eligible to work in the U.S. to join.)

- Claim your Google Cybersecurity Certificate badge, and share your achievement on LinkedIn® professional networking services to stand out among other candidates to potential employers.

- Prepare for the CompTIA Security+ exam, the industry-leading certification for cybersecurity roles. You'll earn a dual credential when you complete both the Google Cybersecurity Certificate and the CompTIA Security+ exam.

Congratulations on taking this first step to build your skills for a career in cybersecurity. Enjoy the journey!

Course 1 overview

Image update

Cybersecurity Certificate. You've begun an exciting journey!

In this course, you will learn the primary job responsibilities and core skills of those who work in the field of cybersecurity. You will explore the eight Certified Information Systems Security Professional (CISSP) security domains, various security frameworks and controls, as well as a foundational security model called the confidentiality, integrity, and availability (CIA) triad. You will also be introduced to some common tools used by security analysts that help protect organizations and people alike.

Certificate program progress

The Google Cybersecurity Certificate program has eight courses. **Foundations of Cybersecurity** is the first course.

Eight icons show courses sequentially from left to right with course 1 highlighted.

1. **Foundations of Cybersecurity** — *(current course)* 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.

2. **Play It Safe: Manage Security Risks** — Identify how cybersecurity professionals use frameworks and controls to protect business operations, and explore common cybersecurity tools.

3. **Connect and Protect: Networks and Network Security** — Gain an understanding of network-level vulnerabilities and how to secure networks.

4. **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.

5. **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.

6. **Sound the Alarm: Detection and Response** — Understand the incident response lifecycle and practice using tools to detect and respond to cybersecurity incidents.

7. **Automate Cybersecurity Tasks with Python** — Explore the Python programming language and write code to automate cybersecurity tasks.

8. **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 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 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: Welcome to the exciting world of cybersecurity

Five icons show the course followed by the four weeks sequentially from left to right with week 1 highlighted.

Begin your journey into cybersecurity! You'll explore the cybersecurity field, and learn about the job responsibilities of cybersecurity professionals.

Week 2: The evolution of cybersecurity

Five icons show the course followed by the four weeks sequentially from left to right with week 2 highlighted.

You will explore how cybersecurity threats have appeared and evolved alongside the adoption of computers. You will also understand how past and present cyber attacks have influenced the development of the security field. In addition, you'll get an overview of the eight security domains.

Week 3: Protect against threats, risks, and vulnerabilities

Five icons show the course followed by the four weeks sequentially from left to right with week 3 highlighted.

You will learn about security frameworks and controls, which are used to mitigate organizational risk. You'll cover principles of the CIA triad and various National Institute of Standards and Technology (NIST) frameworks. In addition, you'll explore security ethics.

Week 4: Cybersecurity tools and programming languages

Five icons show the course followed by the four weeks sequentially from left to right with week 4 highlighted.

You’ll discover common tools used by cybersecurity analysts to identify and eliminate risk. You'll learn about security information and event management (SIEM) tools, network protocol analyzers, and programming languages such as Python and SQL.

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.

Welcome to week 1

Hi again! Now that you have some idea of what to expect from the program as a whole, let's discuss more about what you'll learn in this course.

This course will introduce you to the world of security and how it's used to protect business operations, users, and devices, so you can contribute to the creation of a safer internet for all.

In this section, we'll cover foundational security concepts. First, we'll define security. Then, we'll explore common job responsibilities of security analysts. Building on that, we'll cover core skills a security analyst may have. Finally, we'll discuss the value of security for protecting organizations and people.

Later on, we'll cover eight security domains. Then, we'll cover common security frameworks and controls. Finally, we'll wrap up the course by discussing common tools and programming languages that entry-level security analysts may use.

Coming up, we'll go over some resources that will allow you to get the most out of this program. I'm really excited for you to start this journey--let's begin!

English

Helpful resources and tips

(They made me type my name and some reason to commit, par the usual, I am your god, and i suffer for you, i am your lord and saviour NaruZKurai)

As a learner, you can choose to complete one or multiple courses in this program. However, to obtain the Google Cybersecurity Certificate, you must complete all the courses. This reading describes what is required to obtain a certificate and best practices for you to have a good learning experience on Coursera.

Course completion to obtain a certificate

To submit graded assignments and be eligible to receive a Google Cybersecurity Certificate, you must:

- Pay the course certificate fee or apply and be approved for a Coursera scholarship.

- Pass all graded quizzes in the eight courses with a score of at least 80%. Each graded quiz in a course is part of a cumulative grade for that course.

Healthy habits for course completion

Here is a list of best practices that will help you complete the courses in the program in a timely manner:

- **Plan your time:** Setting regular study times and following them each week can help you make learning a part of your routine. Use a calendar or timetable to create a schedule, and list what you plan to do each day in order to set achievable goals. Find a space that allows you to focus when you watch the videos, review the readings, and complete the

activities.

- **Work at your own pace:** Everyone learns differently, so this program has been designed to let you work at your own pace. Although your personalized deadlines start when you enroll, feel free to move through the program at the speed that works best for you. There is no penalty for late assignments; to earn your certificate, all you have to do is complete all of the work. You can extend your deadlines at any time by going to **Overview** in the navigation panel and selecting **Switch Sessions**. If you have already missed previous deadlines, select **Reset my deadlines** instead.

- **Be curious:** If you find an idea that gets you excited, act on it! Ask questions, search for more details online, explore the links that interest you, and take notes on your discoveries. The steps you take to support your learning along the way will advance your knowledge, create more opportunities in this high-growth field, and help you qualify for jobs.

- **Take notes:** Notes will help you remember important information in the future, especially as you're preparing to enter a new job field. In addition, taking notes is an effective way to make connections between topics and gain a better understanding of those topics.

- **Review exemplars:** Exemplars are completed assignments that fully meet an activity's criteria. Many activities in this program have exemplars for you to validate your work or check for errors. Although there are often many ways to complete an assignment, exemplars offer guidance and inspiration about how to complete the activity.

- **Chat (responsibly) with other learners:** If you have a question, chances are, you're not alone. Use the discussion forums to ask for help from other learners taking this program.

You can also visit Coursera's Global Online Community. Other important things to know while learning with others can be found in the Coursera Honor Code and Code of Conduct.

- **Update your profile:** Consider updating your profile on Coursera with your photo, career goals, and more. When other learners find you in the discussion forums, they can click on your name to access your profile and get to know you better.

Documents, spreadsheets, presentations, and labs for course activities

To complete certain activities in the program, you will need to use digital documents, spreadsheets, presentations, and/or labs. Security professionals use these software tools to collaborate within their teams and organizations. If you need more information about using a particular tool, refer to these resources:

- Microsoft Word: Help and learning: Microsoft Support page for Word
- Google Docs: Help Center page for Google Docs
- Microsoft Excel: Help and learning: Microsoft Support page for Excel
- Google Sheets: Help Center page for Google Sheets

- Microsoft PowerPoint: Help and learning: Microsoft Support page for PowerPoint

- How to use Google Slides: Help Center page for Google Slides

- Common problems with labs: Troubleshooting help for Qwiklabs activities

Weekly, course, and certificate glossaries

This program covers a lot of terms and concepts, some of which you may already know and some of which may be unfamiliar to you. To review terms and help you prepare for graded quizzes, refer to the following glossaries:

- **Weekly glossaries**: At the end of each week's content, you can review a glossary of terms from that week. Each week's glossary builds upon the terms from the previous weeks in that course. The weekly glossaries are not downloadable; however, all of the terms and definitions are included in the course and certificate glossaries, which are downloadable.

- **Course glossaries**: At the end of each course, you can access and download a glossary that covers all of the terms in that course.

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Certificate glossary: The certificate glossary includes all of the terms in the entire certificate program and is a helpful resource that you can reference throughout the program or at any time in the future.

You can access and download the certificate glossaries and save them on your computer. You can always find the course and certificate glossaries through the course's Resources section. To access the **Cybersecurity Certificate glossary**, click the link below and select *Use Template*.

- Cybersecurity Certificate glossary

OR

- If you don't have a Google account, you can download the glossary directly from the attachment below.

Google Cybersecurity Certificate glossary
DOCX File

Course feedback

Providing feedback on videos, readings, and other materials is easy. With the resource open in your browser, you can find the thumbs-up and thumbs-down symbols.

- Click **thumbs-up** for materials you find helpful.

- Click **thumbs-down** for materials that you do not find helpful.

If you want to flag a specific issue with an item, click the flag icon, select a category, and enter an explanation in the text box. This feedback goes back to the course development team and isn't visible to other learners. All feedback received helps to create even better certificate programs in the future.

For technical help, visit the Learner Help Center.