Preparing Students for a Cloud-First World

Google Cloud Learning in Higher Education

Google Cloud

Last updated: April 2023
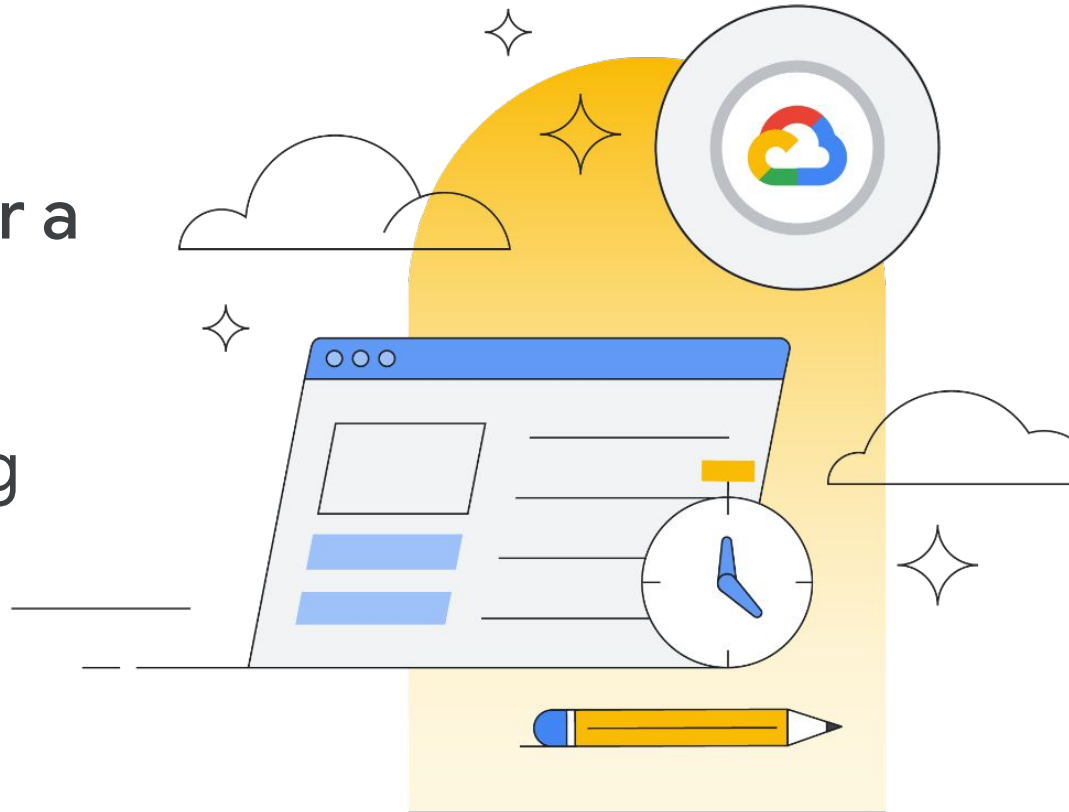
What's Inside

In-demand skills for a cloud-first job market

Faculty-facilitated Cloud learning

Faculty and student benefits

Get started

Google
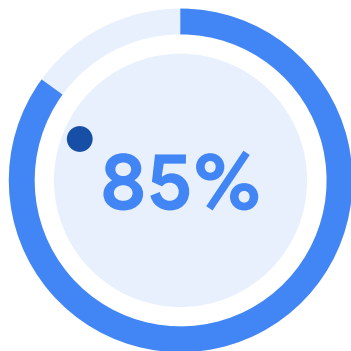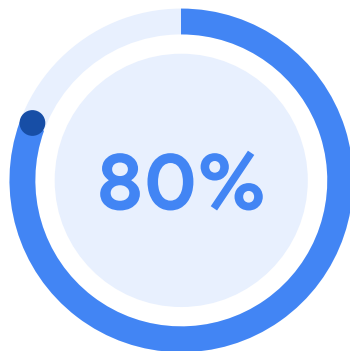
In-demand skills for a cloud-first job market

Google Cloud

Skills to meet the demands of a cloud-first job market

85%

Of enterprises will adopt a cloud first principle by 2025[1]

80%

Of IT leaders feel that they have a lack of skills and knowledge among their employees.[2]

1/3

More than ⅓ of tech leaders said professionals with cloud skills are the most challenging to find.[3]

1 Source - Gartner®, Gartner says Cloud will be the Centerpiece of the New Digital Experience, Laurence Goasduff, November 10, 2021
2 Germain, J. M. (2020, November 3). Skills shortage rains on cloud advances. TechNewsWorld. Retrieved March 29, 2022, from https://www.technewsworld.com/story/skills-shortage-rains-on-cloud-advances-86906.html
3 Source: Robert Half survey of more than 1,500 senior technology managers in the US, March 30, 2022
https://www.roberthalf.com/blog/job-market/cloud-hiring-trends-for-2022

Google Cloud

Challenges facing faculty and instructors

Maintaining curriculum

Developing and maintaining curriculum for rapidly evolving technologies can be time-consuming.

Resource constraints

Resources, including faculty capacity, TA availability, and classroom space, are stretched thin.

Expanding CS enrollments

Enrollments are expanding rapidly due to high demand for computer science courses from CS majors and non-majors.

Learning programs that support students on a path to credentials and certification

Learn

Access to on-demand courses and curriculum pathways designed to prepare students for role-based learning.

Practice

Skill badge credentials provide job-ready cloud experience with hands-on labs in the Google Cloud console. These credentials demonstrate cloud proficiency in high-demand skills.

Prepare

Ready to become certified? Google Cloud has exam guides, sample questions, and case studies available to help students best prepare for the exam.

Certify

Students can pursue the Cloud Digital Leader and/or Associate Cloud Engineer certification. Proctored certification exams are available to take at home or in a testing center.

Ongoing Learning

Students can continue to sharpen and evolve their skills and validate their abilities with access to Google Cloud Skills Boost.
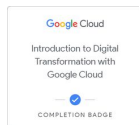
dential

Google Cloud career readiness

A cohort-based learning program that blends faculty-facilitated and on-demand content.

Cloud

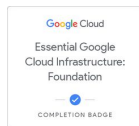# Google Cloud Credentials & Certifications

Cloud Digital Leader

Introduction to Digital Transformation with Google Cloud — COMPLETION BADGE

4 Completion Badges

Cloud Digital Leader — GOOGLE CLOUD CERTIFIED

Google Cloud Certification

Associate Cloud Engineer

Essential Google Cloud Infrastructure: Foundation — COMPLETION BADGE

6 Completion Badges

Create and Manage Cloud Resources — Infrastructure Modernization — SKILL BADGE · INTRODUCTORY

4 Skill Badges

Cloud Engineer — GOOGLE CLOUD CERTIFIED ASSOCIATE

Google Cloud Certification

Data Analyst

Big Data and Machine Learning Fundamentals — COMPLETION BADGE

7 Completion Badges

Perform Foundational Data, ML, and AI Tasks in Google Cloud — Smart Analytics — SKILL BADGE · INTRODUCTORY
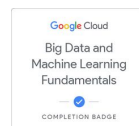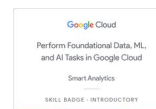
8 Skill Badges

Google Cloud Computing Foundations*

Google Cloud Computing Foundations: Cloud Computing Fundamentals — COMPLETION BADGE

4 Completion Badges

Create and Manage Cloud Resources — Infrastructure Modernization — SKILL BADGE · INTRODUCTORY
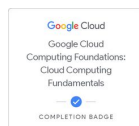
4 Skill Badges

* Customizable end-to-end curriculum package

Google Cloud

Cloud Digital Leader learning path

Audience

The core audience for this track are student learners who wish build cloud literacy and learn to distinguish and evaluate the capabilities of Google Cloud and how it can be used to achieve business goals.

This knowledge can be applied to any role where understanding the purpose and application of Google Cloud is needed.

Duration

10 hours

Prerequisites

- None

Faculty-facilitated, on-demand learning program

Students will

- Gain 6-month access to the Cloud Digital Leader Learning Path on Google Cloud Skills Boost
- Earn a series of Google Cloud credentials upon completion
- Prepare for the Cloud Digital Leader certification exam, with access a curated Student Preparation Guide.

Students who complete the entire Learning Path are eligible for a 50% exam discount (faculty facilitators who complete the program are eligible for 100% discount).

Apply at g.co/edu/cloudready

Google Cloud

Associate Cloud Engineer learning path

Audience

The core audience for this track include learners who wish to build expertise in **cloud infrastructure** and prepare for careers in a hybrid cloud world. A **Cloud Engineer** plans, configures, sets up, and deploys cloud solutions.

Duration

~65 hours

Prerequisites

Learners should be familiar with:

- Operating systems
- File systems
- The IP networking stack
- How web browsers and web servers communicate
- Databases
- Programming
- Working with Linux at the command line
- Editing text files from the Linux command line

Apply at g.co/edu/cloudready

Faculty-facilitated, on-demand learning program

Students will

- Gain 6-month access to the Cloud Engineer Learning Path on Google Cloud Skills Boost
- Earn a series of Google Cloud credentials upon completion (skill badges and completion)
- Prepare for the Associate Cloud Engineer certification exam, with access a curated Student Preparation Guide.

Students who complete the entire Learning Path are eligible for a 50% exam discount (faculty facilitators who complete the program are eligible for 100% discount).

Google Cloud

Data Analyst learning path

Audience

The core audience for this track are student learners who wish to explore careers in data analytics, business intelligence, data engineering, and data science.

Duration

~90 hours

Prerequisites

Students should be familiar with:

- Statistics
- ANSI SQL

Faculty-facilitated, on-demand learning program

Students will

- Gain 6-month access to the Data Analyst Learning Path on Google Cloud Skills Boost
- Earn a series of Google Cloud credentials upon completion (skill badges and completion badges)

Apply at g.co/edu/cloudready

Google Cloud Computing Foundations
Customizable curriculum and on-demand content

Audience

The curriculum enables learners to develop technical proficiency in cloud computing and launch or pivot to careers in a cloud-first world.

This course is an ideal foundation for diverse career paths including those in IT infrastructure, data analytics, and cloud-native application development.

Duration

30-40 hours

Prerequisites

Learners should:

● Have basic IT knowledge and be interested in learning more about the cloud and ML.

● Have competency in at least one language (such as Python, Java).

● Be familiar with the basics of shell scripting, SQL.

Faculty-led and on-demand learning program

Faculty will

● Receive access to curriculum resources (Slides, Instructor Guide, Lesson Plans, Assessment Questions)
● Facilitate student access to on-demand cohort

Students will

● Gain 6-month access to the Google Cloud Computing Foundation Learning Path on Google Cloud Skills Boost
● Earn a series of Google Cloud credentials upon completion (skill badges and completion)

Learn more and apply at cloud.google.com/edu/curriculum

Google Cloud

Faculty and Student Benefits

Google Cloud education credits and resources that can be used to enhance and augment your existing programs.

Google Cloud

Google Cloud Education Credits

Access free Google Cloud credits for use in academic courses

Teaching Credits

Teaching credits provide **direct access** to **Google Cloud console**:

- ✓ Request $50 in Google Cloud credits per student, per course
- ✓ No credit card required
- ✓ Credits are good for 12 months
- ✓ Projects are turned off after credits expire (no accidental billing)

Apply at g.co/edu/teachwithcloud.

Training Credits

Training credits provide access to the **Google Cloud Skills Boost** learning platform:

- ✓ Request 5000 credits to distribute to your students
- ✓ Share credits via a Share Group and get insights into your students' progress
- ✓ No credit card required

Apply at edu.google.com/programs/credits/training.

Limited to eligible institutions in countries where the program is available.
Teaching Credits Help Center
Training Credits Help Center

Google Cloud

Big Data Resources

Explore and access free data sets for use in project-based learning

BigQuery Sandbox | Free access to use the BigQuery web UI in the Cloud Console without providing a credit card.

Kaggle | Jupyter Notebooks environment access to free GPUs and community-published data and code.

Google Colab | Free Jupyter notebook environment that requires no setup and runs entirely on the Cloud.

Public Datasets | Over 190 datasets in BigQuery/Cloud Storage.

Explore public datasets at
cloud.google.com/public-datasets.

Google Cloud

Ready to get started?

Apply today!

Apply to facilitate a Google Cloud career readiness learning path

g.co/edu/cloudready

Apply to deliver Google Cloud Computing Foundations curriculum

cloud.google.com/edu/curriculum

Check out additional faculty benefits
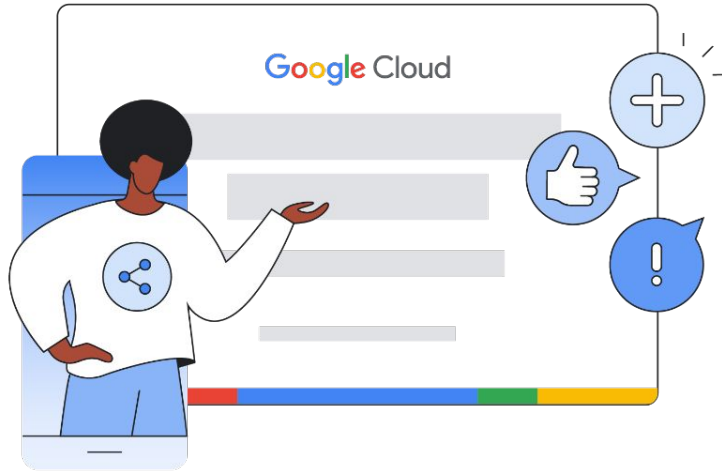
g.co/cloudforedu

**Thank you.**

Appendix

Google Cloud
Skills Boost

Skill badge holders feel more confident in their cloud skills and professional endeavors

83% feel more confident in their cloud skills

78% feel more confident in their professional future

78% can prove cloud skill competency to recruiters for in-demand jobs

Data comes from Skill Badge Impact Report.

GALLUP® | Google Cloud

Students can earn industry-recognized skill badge credentials that boost employability
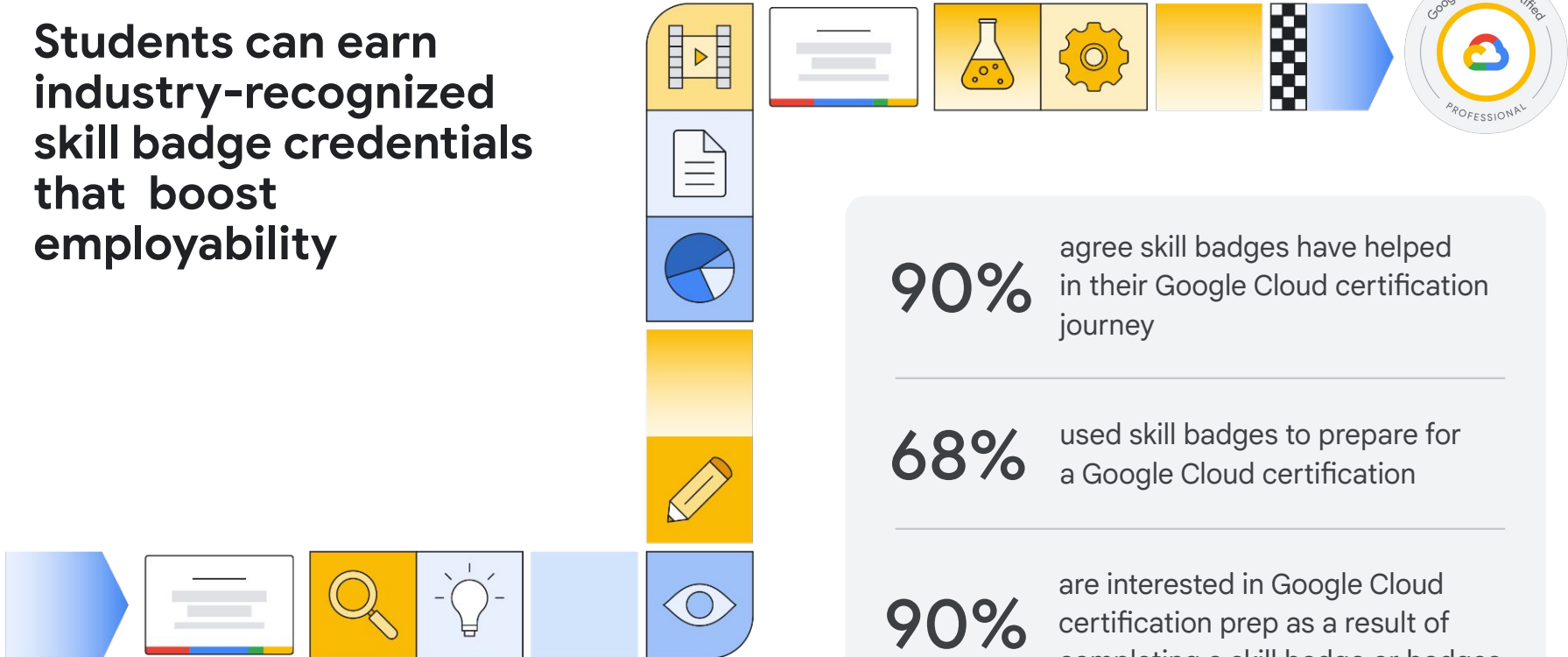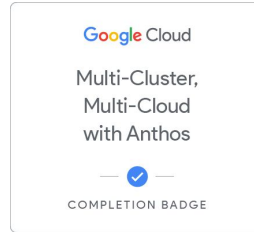
90% agree skill badges have helped in their Google Cloud certification journey

68% used skill badges to prepare for a Google Cloud certification

90% are interested in Google Cloud certification prep as a result of completing a skill badge or badges

Google Cloud Certified
PROFESSIONAL

Data comes from Skill Badge Impact Report.

GALLUP | Google Cloud
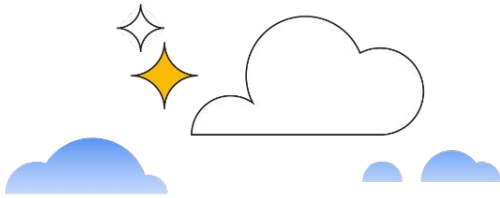
Earn Google Cloud credentials and certifications

Google Cloud

Multi-Cluster, Multi-Cloud with Anthos

COMPLETION BADGE

Completion badges

Reward learner for engagement and completion of learning activities and courses

Google Cloud

Create ML Models with BigQuery ML

Machine Learning and AI Skill

SKILL BADGE · INTERMEDIATE

Skill badge credentials

Recognize learner's knowledge and hands-on skills with Google Cloud demonstrated by the completion of learning and assessment

Cloud Engineer

GOOGLE CLOUD CERTIFIED · ASSOCIATE
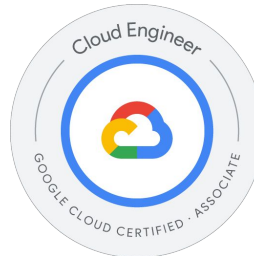
Certifications

Validate mastering the knowledge and skills at performing an end-to-end job role using Google Cloud technology

Google Cloud

Which Google Cloud certification is right for me?

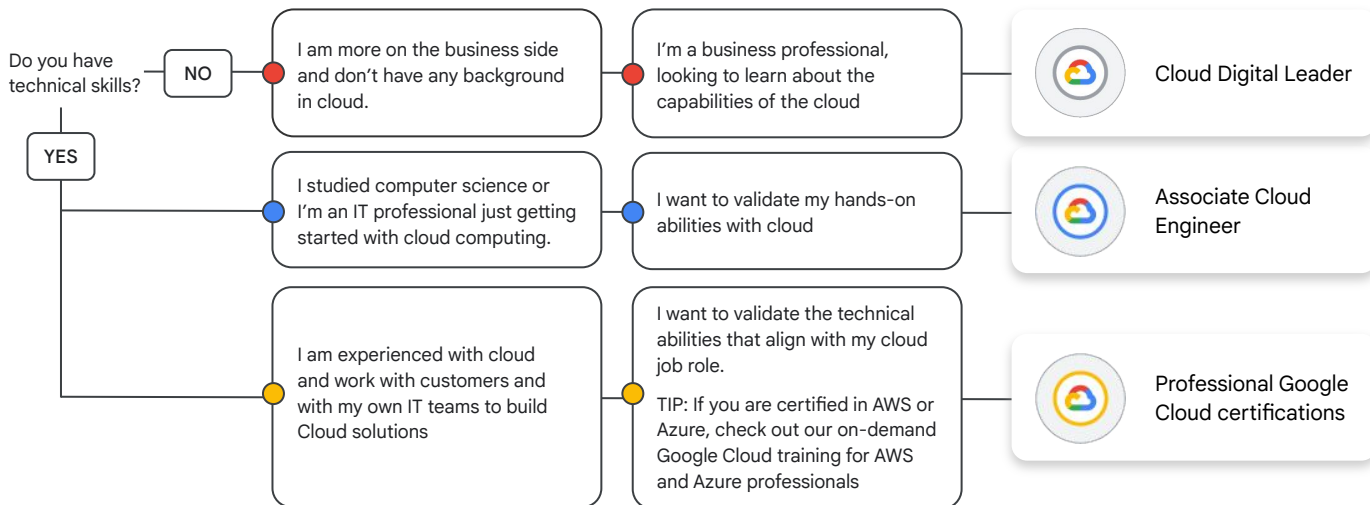Do you have technical skills?

NO ●

YES

I am more on the business side and don't have any background in cloud. ●

I'm a business professional, looking to learn about the capabilities of the cloud ●

Cloud Digital Leader

I studied computer science or I'm an IT professional just getting started with cloud computing. ●

I want to validate my hands-on abilities with cloud ●

Associate Cloud Engineer

I am experienced with cloud and work with customers and with my own IT teams to build Cloud solutions ●

I want to validate the technical abilities that align with my cloud job role. ●

TIP: If you are certified in AWS or Azure, check out our on-demand Google Cloud training for AWS and Azure professionals

Professional Google Cloud certifications

!

Check out our exam guide to get a sense of what topics might be covered on the exam and the experience needed.

Google Cloud certifications are not meant to be taken sequentially. Each certification is meant for different job roles and skill sets.

How do I prepare for my certification exam?

Access on-demand training through Google Cloud Skills Boost

Earn completion badges when you complete an on-demand curse

Earn skill badges for technical individuals, by completing a series of hand-on labs

Test your knowledge with sample questions along the way

Feeling ready?

Schedule your exam to be taken remotely or in-person at a testing center.

Google Cloud