

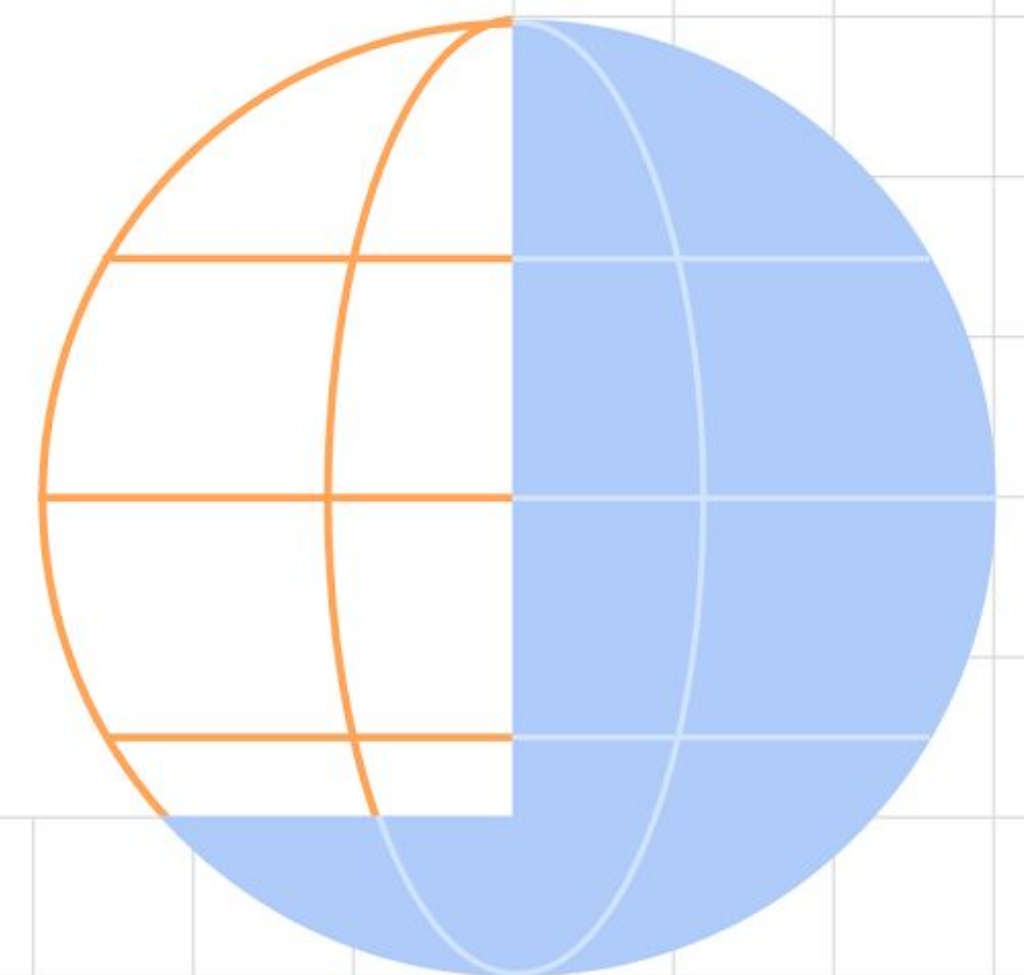


Teaching with Qwiklabs and Coursera.

[Learn and Study]



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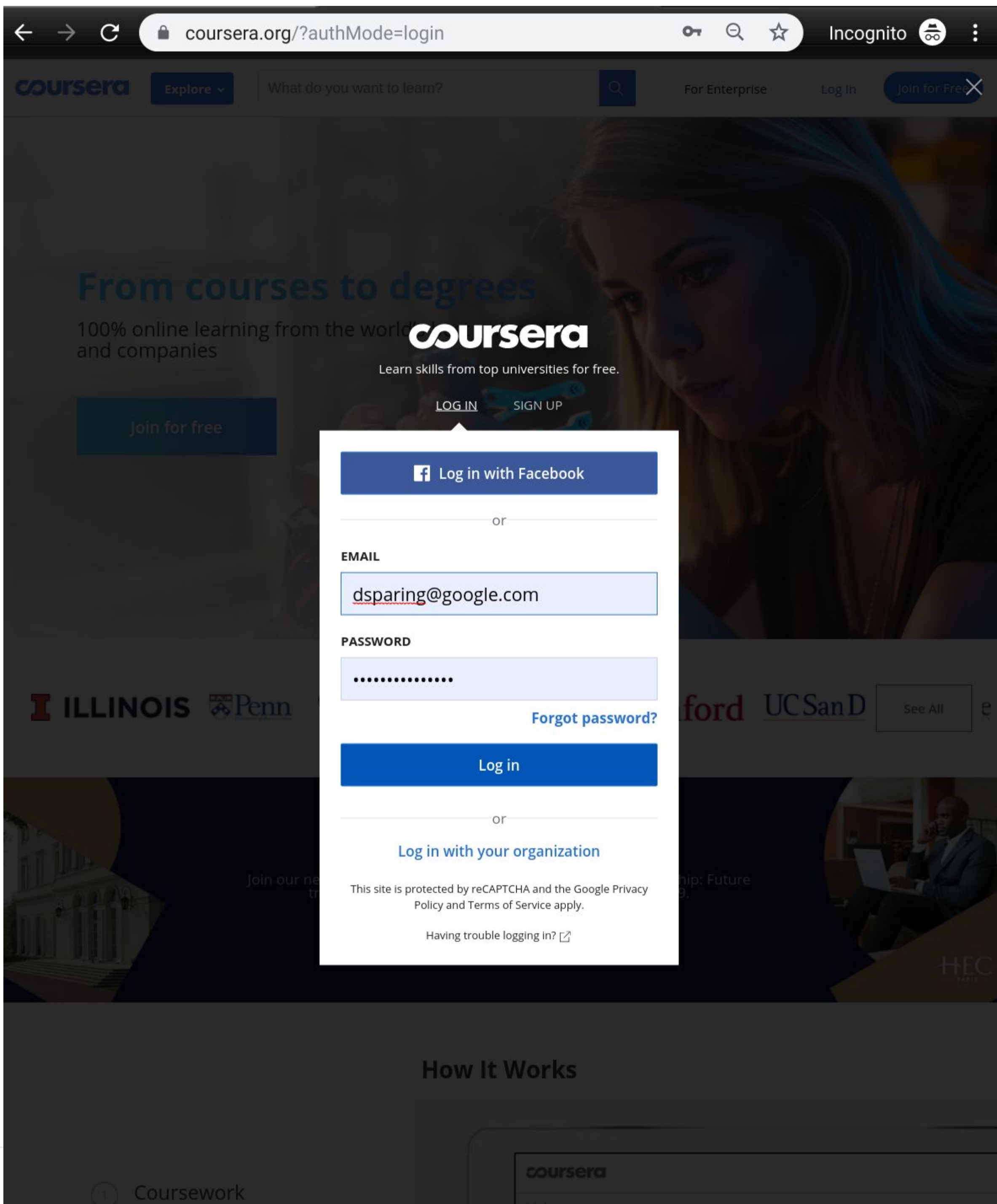


Online Training



Coursera

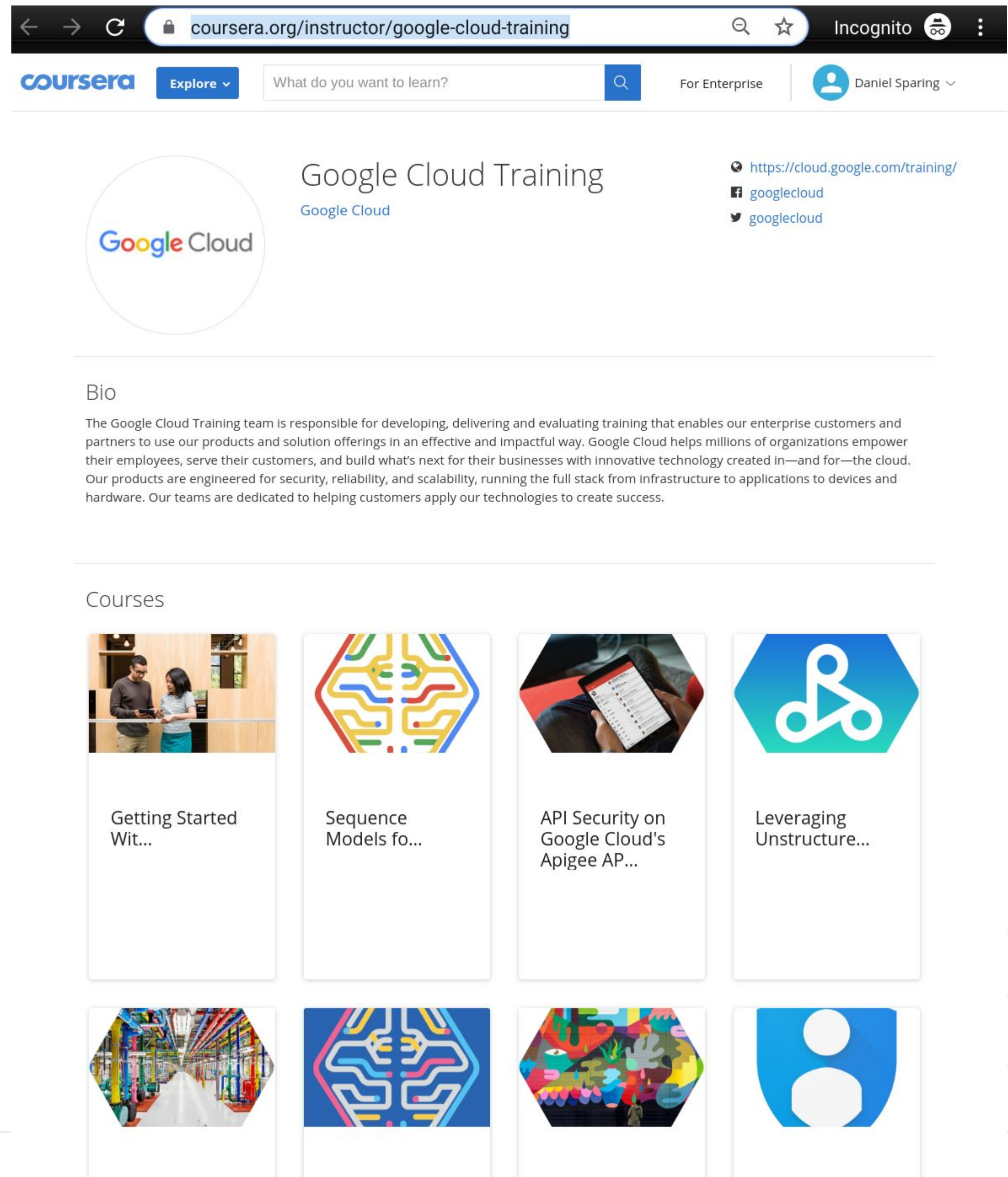
- Coursera is a MOOC platform co-founded by Xoogler and ML superhero Andrew Ng, who also teaches the course *Machine Learning* as well as the set of courses *deeplearning.ai*
- Coursera is the main MOOC partner of Google Cloud
 - (some other Google-flavored courses, such as TensorFlow, are available on other platforms such as *Udacity* and *Fast.ai*)
- Sign-up is required (Google Account SSO is not supported), many GCP courses are free (in Audit Mode), some GCP courses are only available for paid accounts.



GCP courses are under

<https://coursera.org/instructor/google-cloud-training>

(there is also a google.com hosted training catalog with this and more content at cloud.google.com/training)



The screenshot shows the Coursera website in an Incognito browser window. The address bar displays coursera.org/instructor/google-cloud-training. The Coursera logo and an "Explore" button are in the top left. A search bar with the placeholder "What do you want to learn?" is in the top center. On the top right, it says "For Enterprise" and shows a user profile for "Daniel Sparing".

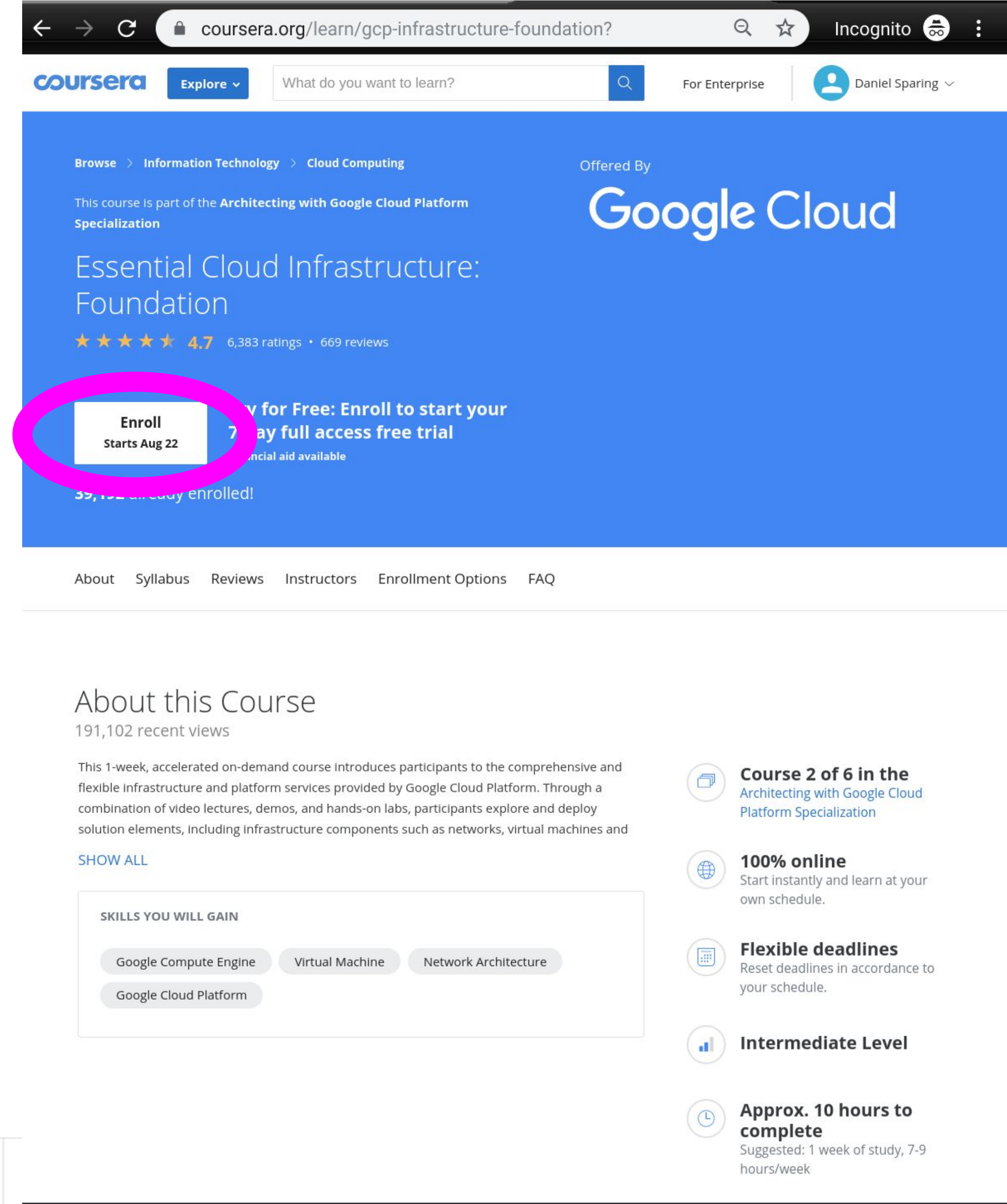
The main content area features the Google Cloud Training logo (a circular icon with the Google Cloud logo) and the text "Google Cloud Training" with "Google Cloud" underneath. To the right of the logo are social media links for Google Cloud Training on YouTube, Facebook, and Twitter, all pointing to <https://cloud.google.com/training/>.

Below the header is a "Bio" section. The text reads: "The Google Cloud Training team is responsible for developing, delivering and evaluating training that enables our enterprise customers and partners to use our products and solution offerings in an effective and impactful way. Google Cloud helps millions of organizations empower their employees, serve their customers, and build what's next for their businesses with innovative technology created in—and for—the cloud. Our products are engineered for security, reliability, and scalability, running the full stack from infrastructure to applications to devices and hardware. Our teams are dedicated to helping customers apply our technologies to create success."

Below the bio is a "Courses" section displaying a grid of course cards. The first row shows four cards: "Getting Started Wit...", "Sequence Models fo...", "API Security on Google Cloud's Apigee AP...", and "Leveraging Unstructure...". The second row shows four more cards with various colorful abstract icons.

Many GCP courses are free (in Audit Mode), some GCP courses are only available for paid accounts:

- Some courses you can 'audit' (without receiving a certificate) for free.
- Some other courses require a paid account (even though trial offers are available)
 - Your organization might already have a Coursera institutional account, or reach out to Google Cloud Training.



← → ↺ coursera.org/learn/gcp-infrastructure-foundation? Incognito

coursera Explore ▾ What do you want to learn? 🔍 For Enterprise Daniel Sparing ▾

Browse > Information Technology > Cloud Computing

Offered By **Google Cloud**

This course is part of the **Architecting with Google Cloud Platform Specialization**

Essential Cloud Infrastructure: Foundation

★★★★★ 4.7 6,383 ratings • 669 reviews

Enroll
Starts Aug 22

Try for Free: Enroll to start your 7-day full access free trial
Financial aid available

39,122 already enrolled!

About Syllabus Reviews Instructors Enrollment Options FAQ

About this Course

191,102 recent views

This 1-week, accelerated on-demand course introduces participants to the comprehensive and flexible infrastructure and platform services provided by Google Cloud Platform. Through a combination of video lectures, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as networks, virtual machines and

[SHOW ALL](#)

SKILLS YOU WILL GAIN

- Google Compute Engine
- Virtual Machine
- Network Architecture
- Google Cloud Platform

Course 2 of 6 in the Architecting with Google Cloud Platform Specialization

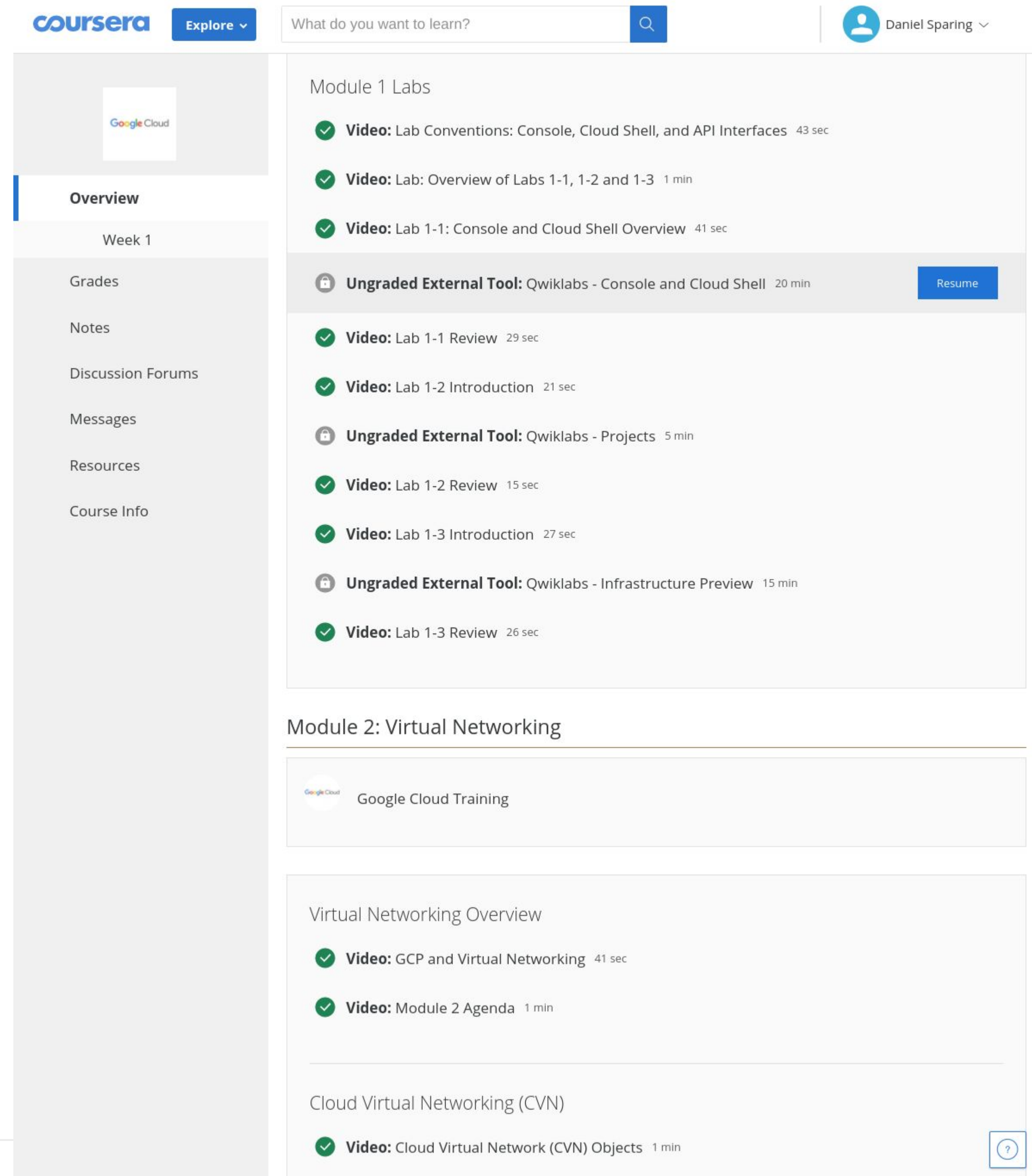
100% online
Start instantly and learn at your own schedule.

Flexible deadlines
Reset deadlines in accordance to your schedule.

Intermediate Level

Approx. 10 hours to complete
Suggested: 1 week of study, 7-9 hours/week

- The courses typically contain:
 - Self-containing videos
 - There is also a Coursera mobile app allowing you to view the videos on mobile
 - Labs, externally hosted on Google Codelabs or Qwiklabs
 - (some Qwiklabs are in fact invisible from the Qwiklabs catalog except via the deep link from Coursera)



Google Cloud

Overview

Week 1

Grades

Notes

Discussion Forums

Messages

Resources

Course Info

Module 1 Labs

- ✓ **Video:** Lab Conventions: Console, Cloud Shell, and API Interfaces 43 sec
- ✓ **Video:** Lab: Overview of Labs 1-1, 1-2 and 1-3 1 min
- ✓ **Video:** Lab 1-1: Console and Cloud Shell Overview 41 sec
- 🔒 **Ungraded External Tool:** Qwiklabs - Console and Cloud Shell 20 min [Resume](#)
- ✓ **Video:** Lab 1-1 Review 29 sec
- ✓ **Video:** Lab 1-2 Introduction 21 sec
- 🔒 **Ungraded External Tool:** Qwiklabs - Projects 5 min
- ✓ **Video:** Lab 1-2 Review 15 sec
- ✓ **Video:** Lab 1-3 Introduction 27 sec
- 🔒 **Ungraded External Tool:** Qwiklabs - Infrastructure Preview 15 min
- ✓ **Video:** Lab 1-3 Review 26 sec

Module 2: Virtual Networking

Google Cloud Training

Virtual Networking Overview

- ✓ **Video:** GCP and Virtual Networking 41 sec
- ✓ **Video:** Module 2 Agenda 1 min

Cloud Virtual Networking (CVN)

- ✓ **Video:** Cloud Virtual Network (CVN) Objects 1 min

- (coursera live walkthrough)

How to teach with Coursera

Coursera is a self-containing course environment, not an auxiliary tool. Hence choose:

- 1) Use specific small components of Coursera courses live on your class, or
- 2) Ask your class weeks in advance to complete a course, and use a live workshop as a study group to walk through hands-on labs and address questions

Hands-on Labs

Qwiklabs

- Qwiklabs is a multi-cloud hands-on lab (sandbox environment) platform acquired by Google and part of Google Cloud
- Qwiklabs is the main hands-on lab environment of GCP. Related alternatives are:
 - Google Colaboratory (runs on GCP but it is an almost GCP-agnostic Notebook environment)
 - Codelabs (part of the Google Developers portal, not providing sandbox GCP environments, but useful with one's own GCP account and often in parallel with Qwiklabs labs)
- Sign-up is required (Google Account SSO is supported but not required), your Googler contact may be able to provide you with vouchers that allows you to access labs at no cost.

Qwiklabs Troubleshooting

- While the created GCP environment is ephemeral, the running browser needs to be compatible, so latest Chrome browser or other modern browser preferred, and firewalls should allow access to `console.cloud.google.com` .
 - In particular, the Cloud Shell is known to stall at load time if a (corporate) firewall is too restrictive. Sometimes the workaround is to ask (non-Googler) participants to use personal laptops as opposed to restricted corporate devices (but the network can restrict too).

Qwiklabs Troubleshooting

- A whole classroom accessing GCP and possibly transferring files uses considerable bandwidth and number of devices, so a wifi connection barely enough to check emails / social media is not sufficient for a decent sized class. If available, a Google office is preferred to a venue with unknown wifi capacity/reliability.

Qwiklabs Troubleshooting

- Sometimes during the ephemeral Google Account sign-on process, for anti-fraud purposes a valid phone number is requested. Unfortunately I am unaware of a workaround without providing a phone number. This can still be the same as one linked to a real Google Account though. Alternatively reach out to the Qwiklabs Support Hangouts group.

Qwiklabs Troubleshooting

- There is a large number of accounts:
 - Your pre-existing Google Accounts, **do not use them on the GCP console**
 - Your (new) Qwiklabs account (You can use Google SSO)
 - Ephemeral Google Account (and password), student-xxxxxxx@qwiklabs.net . This is what you should use within the GCP console.

Qwiklabs Troubleshooting

- So to summarize, you should have `qwiklabs.com` open, logged in with a `qwiklabs` account on your name, and `console.cloud.google.com` open, logged in with a `sandbox` account, not on your name.

The image displays two browser windows side-by-side. The left window shows the Qwiklabs interface for a lab titled 'Classify Images of Clouds in the Cloud with AutoML Vision'. It features a timer at 00:57:12, a 'My Account' button, and a user profile for Daniel Sparing (dspacing@google.com, Trainer) with 4883 credits. The right window shows the Google Cloud Platform 'Getting started' page. It features a 'Welcome, student' message and a user profile for 'student-1261eb0fcd4c' (student-1261eb0fcd4c@qwiklabs.net). Both user profiles are circled in pink. An arrow points from the text 'Not your name, on google.com' to the pink circle around the student account in the Google Cloud Platform window.

Classify Images of Clouds in the Cloud with AutoML Vision

1 hour Free ★★★★★ Rate Lab

GSP223

Google Cloud Platform

Top Products

- Compute Engine: Scalable, high-performance virtual machines
- Cloud Storage: A powerful, simple and cost effective object storage service
- Cloud SQL: A fully-managed MySQL/PostgreSQL database service

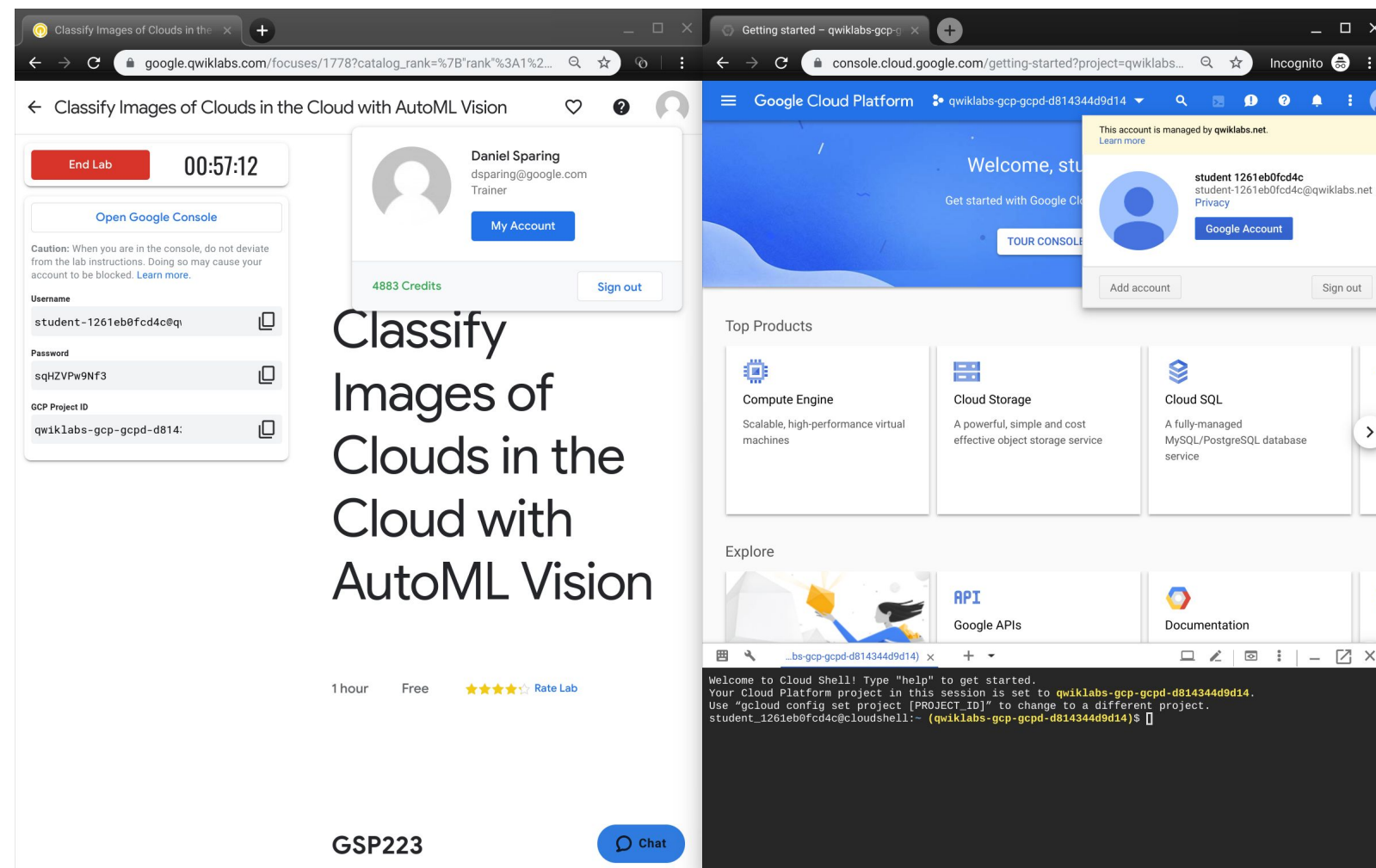
Explore

- API: Google APIs
- Documentation

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to qwiklabs-gcp-gcpd-d814344d9d14.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
student_1261eb0fcd4c@cloudshell:~ (qwiklabs-gcp-gcpd-d814344d9d14) $
```

- Not your name, on google.com

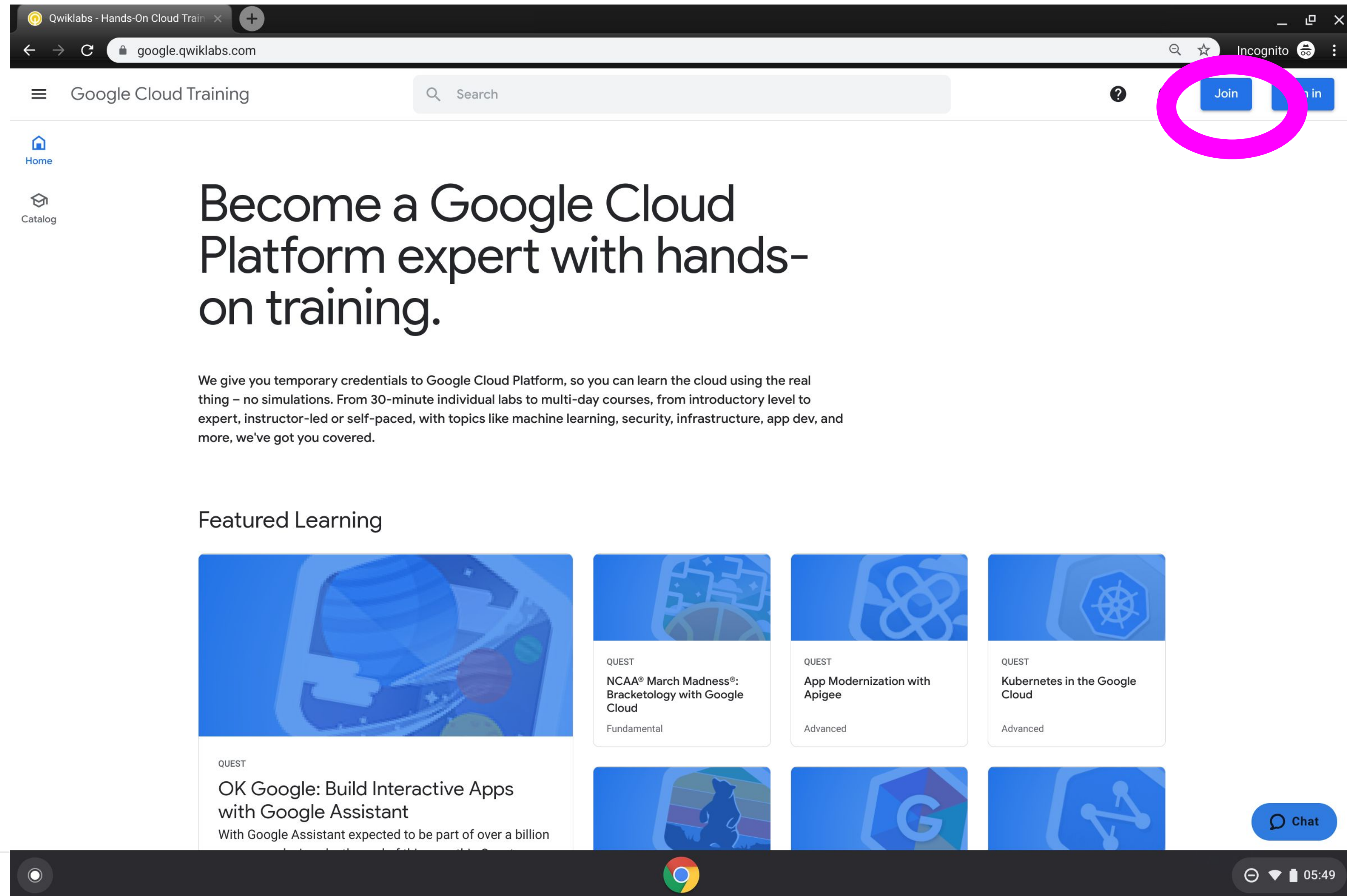
Qwiklabs Troubleshooting



- Consider using Incognito/private mode for the GCP console
- Consider using a second display if available

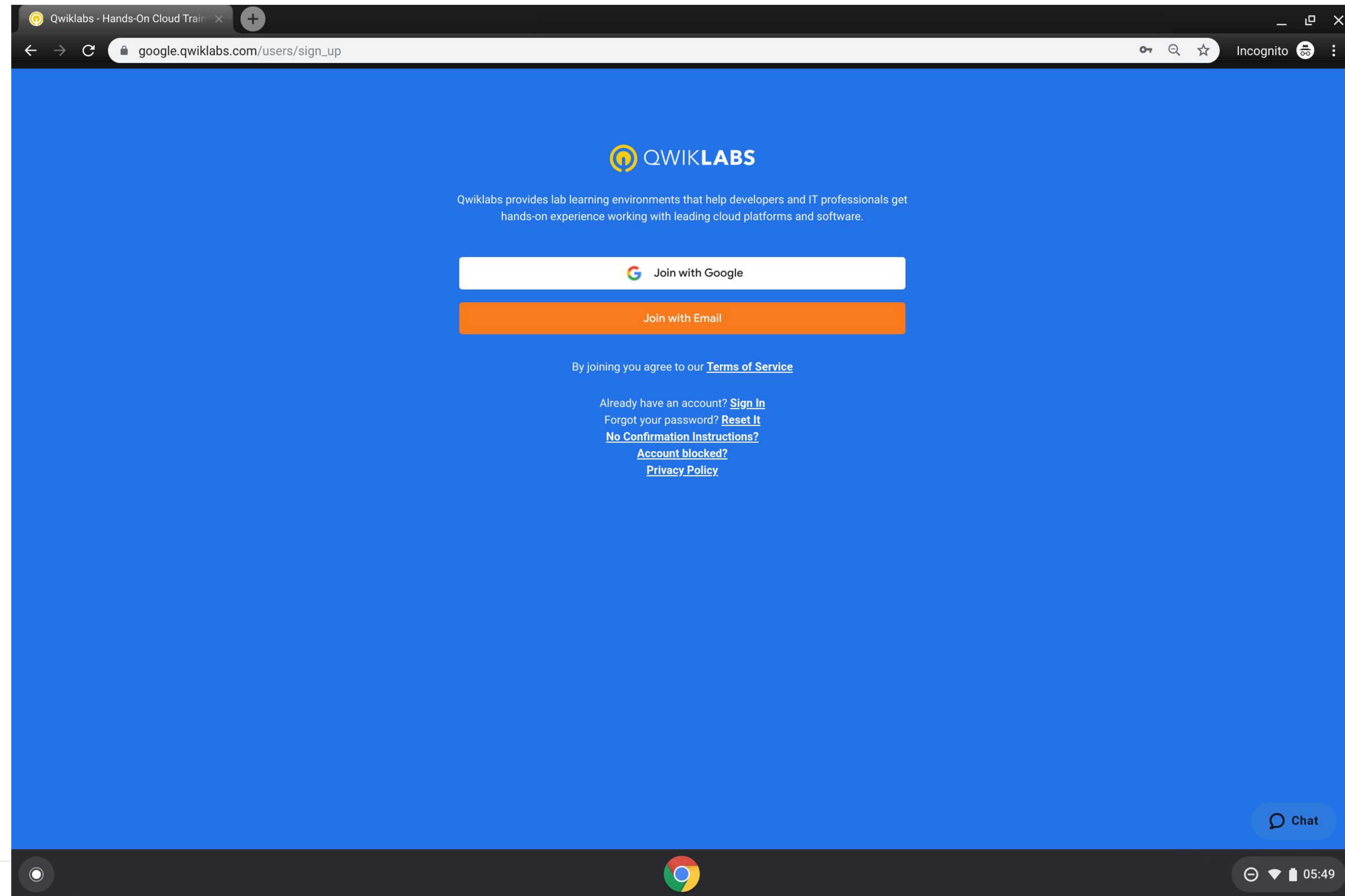
Qwiklabs walkthrough

- google.qwiklabs.com



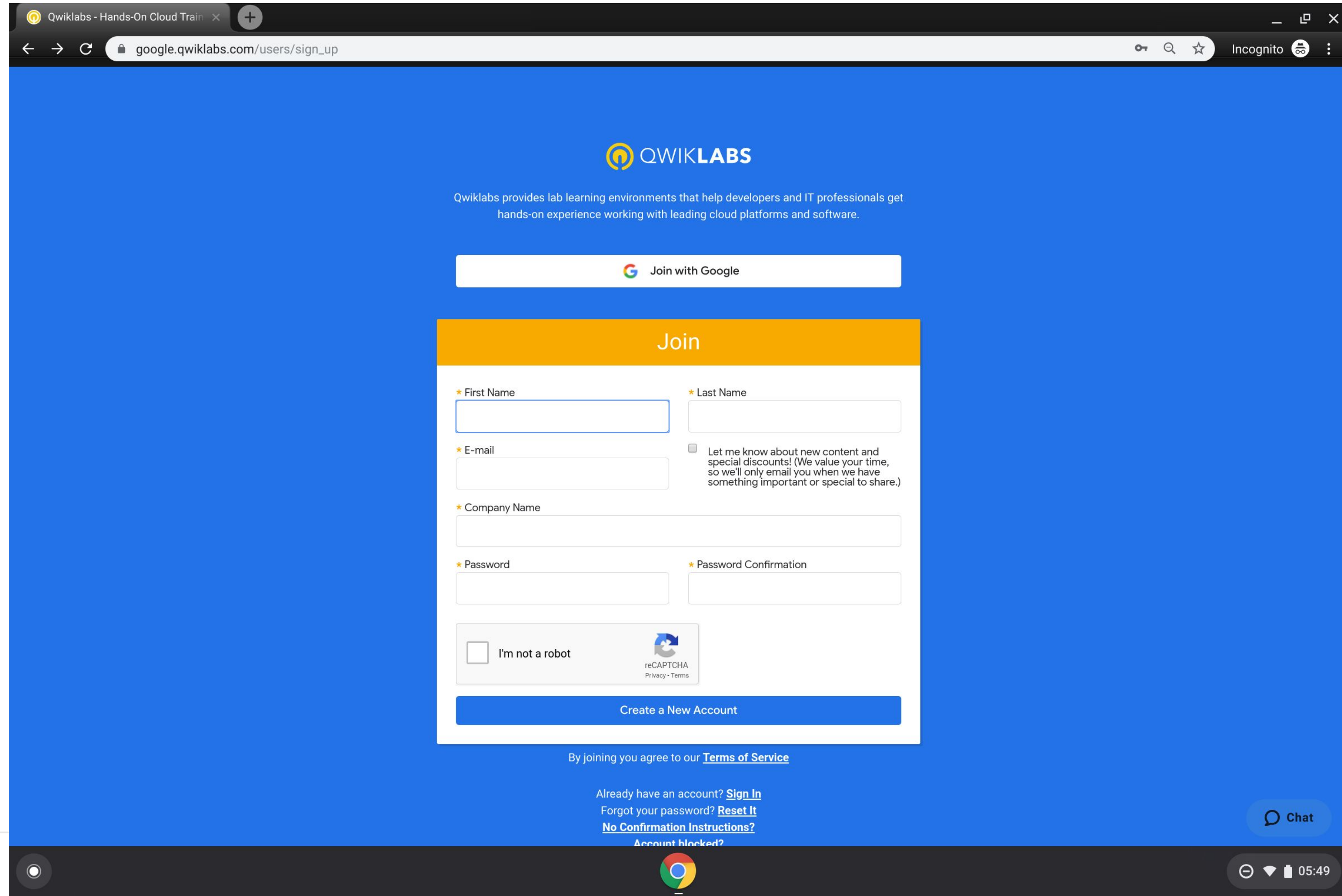
Qwiklabs walkthrough

- You can but you do not have to use a Google Account on your name to join and later sign in (gmail or organizational GSuite)
- Alternatively you can also join with an email address and password



Qwiklabs walkthrough

- You can but you do not have to use a Google Account on your name to join and later sign in (gmail or organizational GSuite)
- Alternatively you can also join with an email address and password



The screenshot shows the Qwiklabs sign-up page in a web browser. The browser's address bar shows the URL `google.qwiklabs.com/users/sign_up`. The page has a blue background with the Qwiklabs logo at the top. Below the logo, there is a description of the platform and a "Join with Google" button. A "Join" form is centered on the page, containing fields for First Name, Last Name, E-mail, Company Name, Password, and Password Confirmation. There is also a checkbox for "Let me know about new content and special discounts!" and a reCAPTCHA "I'm not a robot" checkbox. A "Create a New Account" button is at the bottom of the form. At the very bottom of the page, there are links for "Sign In", "Reset It", "No Confirmation Instructions?", and "Account blocked?".

Qwiklabs - Hands-On Cloud Train

google.qwiklabs.com/users/sign_up

Incognito

QWIKLABS

Qwiklabs provides lab learning environments that help developers and IT professionals get hands-on experience working with leading cloud platforms and software.

Join with Google

Join

* First Name

* Last Name

* E-mail

* Company Name

* Password

* Password Confirmation

☐ Let me know about new content and special discounts! (We value your time, so we'll only email you when we have something important or special to share.)

☐ I'm not a robot

reCAPTCHA

Privacy - Terms

Create a New Account

By joining you agree to our [Terms of Service](#)

Already have an account? [Sign In](#)

Forgot your password? [Reset It](#)

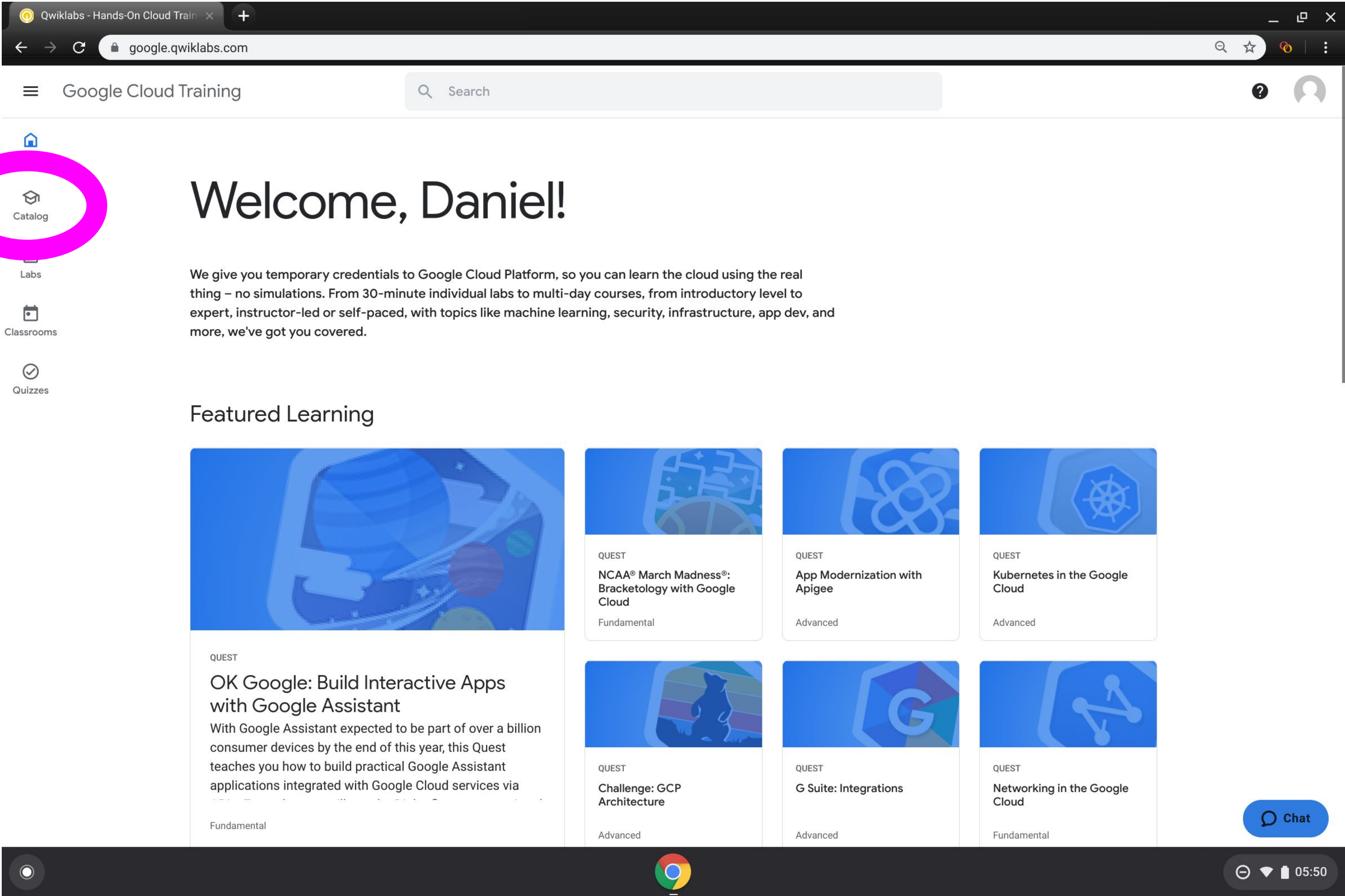
[No Confirmation Instructions?](#)

[Account blocked?](#)

Chat

GDG

Qwiklabs walkthrough



Qwiklabs walkthrough

Just search for labs of your interest in the catalog

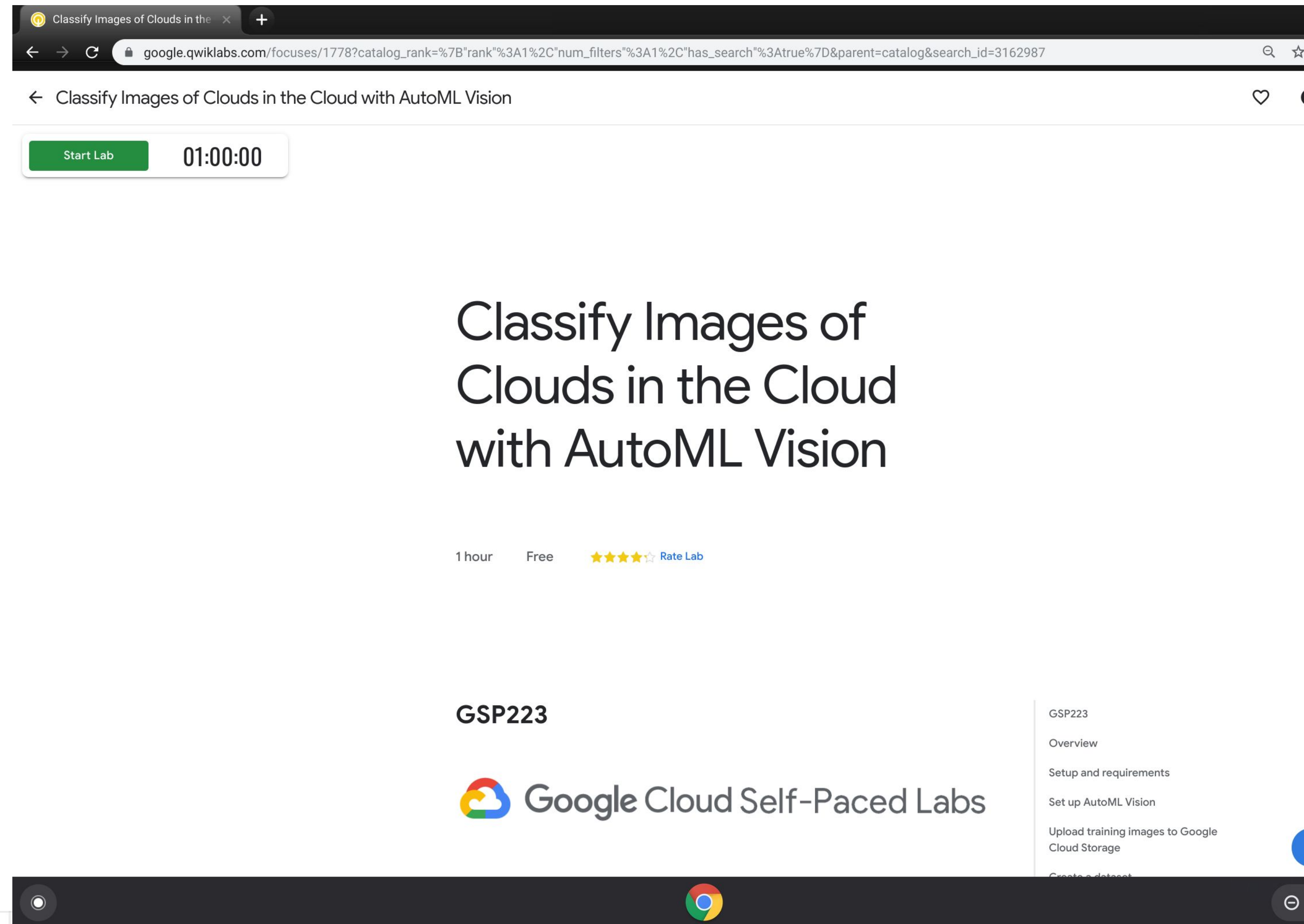
Search both e.g. for "Machine Learning" and "ML" to find all content



A screenshot of a web browser showing the Google Cloud Training catalog on the Qwiklabs platform. The browser's address bar shows 'google.qwiklabs.com/catalog'. The page has a dark header with 'Google Cloud Training' and a search bar. A left sidebar contains navigation icons for Home, Catalog, Labs, Classrooms, and Quizzes. The main content area displays '469 results' and lists three 'QUEST' items: 'GCP Essentials', 'G Suite Essentials', and 'Google Developer Essentials'. Each item includes a brief description, duration, introductory status, credits, and availability. A right sidebar titled 'Filter' contains dropdown menus for 'Cloud Environment', 'Format', 'Level', 'Duration', 'Price', 'Modality', and 'Language'. The bottom of the image shows a dark taskbar with a Windows Start button and the Chrome browser icon.

Qwiklabs walkthrough

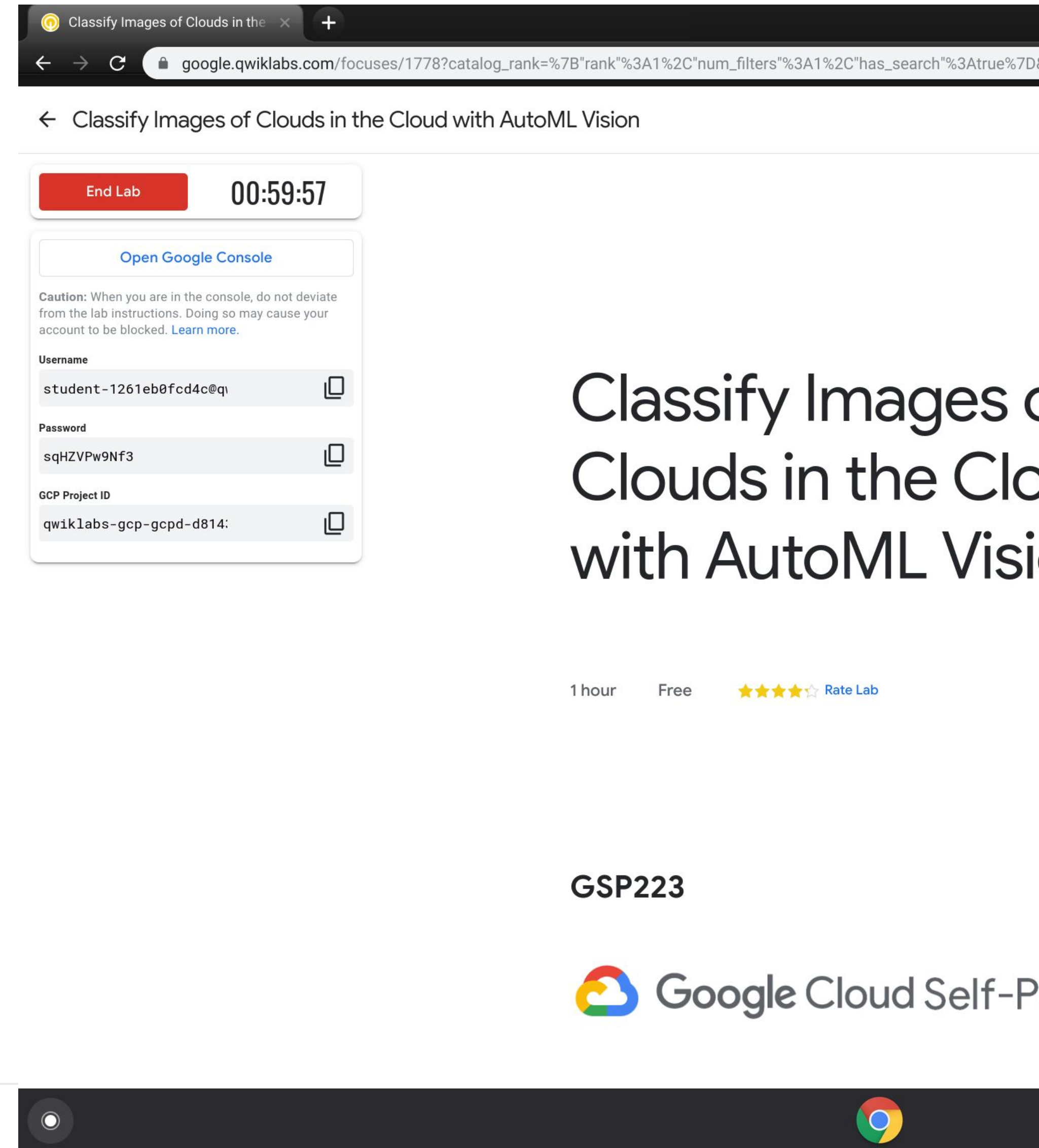
- Once opened a lab, read the self-containing description.
- click the top left green Start Lab button (put in vouchers here)



The screenshot shows a web browser window with the URL `google.qwiklabs.com/focuses/1778?catalog_rank=%7B"rank"%3A1%2C"num_filters"%3A1%2C"has_search"%3Atrue%7D&parent=catalog&search_id=3162987`. The page title is "Classify Images of Clouds in the Cloud with AutoML Vision". Below the title, there is a green "Start Lab" button and a timer showing "01:00:00". The main heading of the lab is "Classify Images of Clouds in the Cloud with AutoML Vision". Below this, it indicates "1 hour", "Free", and a star rating of 4.5 out of 5, with a link to "Rate Lab". The lab ID "GSP223" is displayed. The Google Cloud Self-Paced Labs logo is visible. On the right side, there is a sidebar menu with the following items: "GSP223", "Overview", "Setup and requirements", "Set up AutoML Vision", "Upload training images to Google Cloud Storage", and "Create a dataset". The bottom of the browser window shows the Chrome logo and a search icon.

Qwiklabs walkthrough

- ephemeral environment, with quotas
- Do use a new Incognito window
- multiple separate GUI's (such as console, AutoML, Dialogflow, etc) but the walkthrough is self-containing
- If the timer is up, restart with new voucher



The screenshot shows the Qwiklabs interface for a lab titled "Classify Images of Clouds in the Cloud with AutoML Vision". At the top, there's a browser tab and address bar showing the URL "google.qwiklabs.com/focuses/1778?catalog_rank=%7B%22rank%3A1%2C%22num_filters%3A1%2C%22has_search%3Atrue%7D%7B%22". Below the browser, the lab title is displayed. A red "End Lab" button and a timer showing "00:59:57" are visible. A "Open Google Console" button is present. A caution message states: "Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)". Below this, there are input fields for "Username" (student-1261eb0fcd4c@q), "Password" (sqHZVPw9Nf3), and "GCP Project ID" (qwiklabs-gcp-gcpd-d814:). To the right of the lab title, the text "Classify Images of Clouds in the Cloud with AutoML Vision" is partially visible. Below the lab title, there are details: "1 hour", "Free", and a "Rate Lab" button with a star rating. At the bottom right, the text "GSP223" and "Google Cloud Self-P" are visible. The bottom of the screenshot shows a Chrome browser window with a navigation button and the Chrome logo.

(live walkthrough)



End Lab

00:59:57

[Open Google Console](#)

Username

student-1261eb0fcd4c@q

Password

sqHZVPw9Nf3

GCP Project ID

```
qwiklabs-gcp-gcpd-d814:
```

1 hour Free  [Rate Lab](#)

GSP223



How to facilitate Qwiklabs

Days in advance

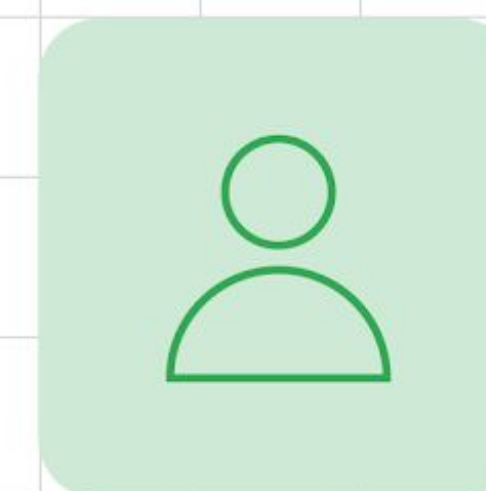
- make sure your participants have Qwiklabs access (e.g. vouchers), equipment, suitable network (capacity, firewalls) and optionally second displays.
- Walk through the chosen labs yourself upfront to familiarize yourself and check for any issues

On the day

- (optional) Give a short intro talk with slides covering the topic in scope, such as AutoML or TensorFlow
- Introduce participants to Qwiklabs and point their attention to their necessary Qwiklabs accounts and ephemeral Google Account
- Distribute voucher codes
- Continuously walk around to assist any issues
- (optional) walk through the lab yourself on the screen, to help some participants (especially if you have a co-facilitator)
- Wrap up on time even if not everyone is fully finished (the labs time out anyway), point them to the possibility of finish later
- Conclude and prompt for questions

Google Developers

<http://bit.ly/ml-lab-link>



Thank You!



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1. Follow the provided link: <http://bit.ly/ml-lab-link> (link expires on **13th October, 2019** so hurry!)
2. You will be prompted to log into Qwiklabs. If you did not already have a Qwiklabs account, you'll need to create one. Creating an account is always free.
3. When you click "**start lab**", use the free pass you have in your account to take the lab.
4. You will be able to take the lab free of charge. (You must be logged in to see the benefit).