

# Google Cloud Professional Developer Outline

**Duration: (10 day, 8 hrs/day)**

**Pre-requisites: None**

With Associate Cloud Engineer Training completed duration is 5 days, 8hrs/day

## Course Overview:

Professional Cloud Developers build scalable and highly available applications using Google-recommended practices and tools. They have experience with cloud-native applications, developer tools, managed services, and next-generation databases. Cloud Developers are also proficient with at least one general-purpose programming language and are skilled at producing meaningful metrics and logs to debug and trace code.

## After completing this course, participants will be able to:

1. Acquire knowledge on creating applications using programming languages and apply cloud computing features such as scalability, high availability and creating customized logging for debugging these applications.
2. Attain skills required to clear the GCP Professional Cloud Developer Certification Exam

Module No	Module Name	
1	Google Cloud Fundamentals: Core Infrastructure	
	1	Introducing Google Cloud
	2	Resources and Access in the Cloud
	3	Virtual Machines and Networks in the Cloud
	4	Storage in the Cloud
	5	Containers in the Cloud
	6	Applications in the Cloud
	7	Developing and Deploying in the Cloud
	8	Logging and Monitoring in the Cloud

Module No	Module Name	
1	Hands-on	
	1	Cloud Storage: Qwik Start - Cloud Console
	2	Compute Engine: Qwik Start - Windows
	3	Cloud IAM: Qwik Start
	4	Cloud Monitoring: Qwik Start
2	Getting Started With Application Development	
	1	Best Practices for Application Development
	2	Getting Started with Google Cloud Development
	3	Overview of Data Storage Options
	4	Best Practices for Using Datastore
	5	Best Practices for Using Cloud Storage
	Hands-on	
	1	App Dev: Setting up a Development Environment
	2	Importing Data to a Firestore Database
3	Securing and Integrating Components of your Application	
	1	Handling Authentication and Authorization
	2	Using Pub/Sub to Integrate Components of Your Application
	3	Adding Intelligence to Your Application
	4	Using Cloud Functions for Event-Driven Processing
	5	Managing APIs with Cloud Endpoints
	Hands-on	
	1	App Dev - Adding User Authentication to your Application
	2	App Dev - Developing a Backend Service
	3	App Dev - Processing Cloud Pub/Sub Data using Cloud Functions

Module No	Module Name	
4	Application Development with Cloud Run	
	1	Introduction to Cloud Run
	2	Understanding Cloud Run
	3	Building Container Images
	4	Diving Deeper into Cloud Run
	5	Service Identity & Authentication
	6	Serving Requests
	7	Controlling Inbound & Outbound Requests
	8	Persisting Data
	9	Service-to-Service Communication
	10	Building Serverless Workflows
	Hands-on	
	1	Build a Serverless App with Cloud Run that Creates PDF Files
	2	Build a Resilient, Asynchronous System with Cloud Run and Pub/Sub
	3	Developing a REST API with Go and Cloud Run
	4	Creating PDFs with Go and Cloud Run
5	Securing and Integrating Components of your Application	
	1	Deploying Applications
	2	Compute Options for Your Application
	3	Debugging, Monitoring, and Performance Tuning
	Hands-on	
	1	Build a Serverless Web App with Firebase
	2	Deploy a Hugo Website with Cloud Build and Firebase Pipeline
	3	Google Assistant: Build an Application with Dialogflow and Cloud Functions

Module No	Module Name	
6	Getting Started with Google Kubernetes Engine	
	1	Introduction to Google Cloud
	2	Introduction to Containers and Kubernetes
	3	Kubernetes Architecture
	4	Introduction to Kubernetes Workloads
	Hands-on	
	1	Introduction to Docker
	2	Kubernetes Engine: Qwik Start
	3	Orchestrating the Cloud with Kubernetes
	4	Managing Deployments Using Kubernetes Engine
	5	Continuous Delivery with Jenkins in Kubernetes Engine