

GSDC Certified Cloud FinOps & Cost Optimization Professional

Complete Course Syllabus (Video-Ready, Topic-Wise Structure)

Format: Self-paced video course | Each topic = one standalone video (8–15 min) **Total:** 12 modules · 78 video topics · ~14–16 hours of content **Aligned with:** FinOps Foundation Framework 2025 (Scopes, Domains, Capabilities), FOCP exam domains, AWS Well-Architected Cost Optimization Pillar, FOCUS v1.x specification **Audience:** Cloud engineers, DevOps/SRE, finance & procurement professionals, engineering managers, IT leaders, consultants
Prerequisites: None mandatory. Basic familiarity with any one cloud provider (AWS/Azure/GCP) recommended.

MODULE 1 — Foundations: Why Cloud Costs Break Traditional IT Finance

Maps to FOCP domain: "Challenge of Cloud" (8% of exam)

#	Video Topic	Key Points Covered
1.1	The Cloud Cost Problem: Why Bills Spiral Out of Control	Decentralized purchasing, variable spend, per-second billing, the "invisible waste" problem, real-world overspend statistics
1.2	Cloud vs Traditional IT: CapEx to OpEx Shift	Procurement cycles vs on-demand, asset ownership vs consumption, budgeting implications, tax treatment differences

1.3	Anatomy of a Cloud Bill	Billing hierarchy (accounts/subscriptions/projects), line items, usage types, credits, taxes, amortization vs cash views
1.4	Cloud Pricing Models 101	On-demand, reserved/committed, spot/preemptible, savings plans, tiered pricing, free tiers, egress charges
1.5	The Iron Triangle: Cost vs Speed vs Quality	Trade-off decision-making, when spending MORE is the right call, business value framing
1.6	Key Terminology Every FinOps Practitioner Must Know	Showback, chargeback, amortization, blended/unblended rates, unit economics, COGS, TCO, ROI, waste, coverage, utilization

Module outcome: Learner can read a cloud bill, explain why cloud economics differ from data center economics, and speak both "finance" and "engineering" language.

MODULE 2 — The FinOps Framework (2025 Edition)

Maps to FOCP domains: "What is FinOps & Principles" (12%) + "FinOps Lifecycle" (30%)

#	Video Topic	Key Points Covered
2.1	What is FinOps? Definition, Origin & Evolution	2019 FinOps Foundation launch, Linux Foundation, 2025 updated definition covering "cloud and technology" spend (Cloud+)
2.2	The 6 FinOps Principles	Teams collaborate; decisions driven by business value; everyone takes ownership; data is accessible & timely; centrally enabled; variable cost model advantage

2.3	The FinOps Lifecycle: Inform → Optimize → Operate	The three iterative phases, what happens in each, crawl-walk-run within each phase
2.4	The 4 FinOps Domains (2025)	Understand Usage & Cost, Quantify Business Value, Optimize Usage & Cost, Manage the FinOps Practice
2.5	The 22 FinOps Capabilities — Mapped to Domains	Full capability tour: data ingestion, allocation, reporting, anomaly management, forecasting, budgeting, benchmarking, unit economics, architecting for cloud, rate optimization, workload optimization, licensing & SaaS, sustainability, FinOps education, policy & governance, invoicing & chargeback, tools & services, intersecting disciplines, onboarding workloads, FinOps assessment, planning & estimating
2.6	FinOps Scopes: The Big 2025 Addition	Public Cloud, SaaS, Data Center, AI, Licensing — how Scopes make FinOps modular for all technology spend
2.7	FinOps Personas: Who Does What	Core personas (FinOps Practitioner, Engineering, Finance, Procurement, Leadership, Product) + allied personas; responsibilities per capability
2.8	The FinOps Maturity Model: Crawl, Walk, Run	Maturity characteristics per capability, how to assess where an org stands, why "Run" everywhere is NOT the goal

Module outcome: Learner can explain the complete 2025 FinOps Framework and map any cost activity to its domain, capability, phase, and persona.

MODULE 3 — Building the FinOps Team & Culture

Maps to FOCP domain: "FinOps Teams & Motivation" (12%)

#	Video Topic	Key Points Covered
3.1	Where FinOps Sits in the Org	Central team vs federated vs hybrid models; reporting lines (CTO vs CFO vs COO); team sizing by cloud spend
3.2	Roles & Skills of a FinOps Team	FinOps analyst, engineer, lead; skill matrix; hiring vs upskilling
3.3	Driving Cultural Change: Making Engineers Care About Cost	Cost as a first-class metric, gamification, cost in sprint reviews & PRs, avoiding "cost police" perception
3.4	Executive Buy-In & the FinOps Business Case	Building the ROI case for a FinOps practice, quick-win strategy, reporting savings vs avoidance
3.5	FinOps Cadences: Meetings, Reviews & Rituals	Weekly cost reviews, monthly business reviews, commitment purchase councils, anomaly triage process

Module outcome: Learner can design a FinOps operating model and stakeholder engagement plan for any organization size.

MODULE 4 — Inform Phase I: Visibility, Tagging & Cost Allocation

#	Video Topic	Key Points Covered
4.1	Cost Visibility: The Foundation of Everything	Why you can't optimize what you can't see; native dashboards overview (Cost Explorer, Azure Cost Management, GCP Billing)

4.2	Designing a Tagging & Labeling Strategy	Mandatory tag sets (owner, environment, cost-center, project, application), naming conventions, tag governance
4.3	Enforcing Tags with Policy-as-Code	AWS Config rules & SCPs, Azure Policy, GCP Organization Policy; tag compliance dashboards; target: 90%+ allocation coverage
4.4	Account & Resource Hierarchy Design	AWS Organizations/OUs, Azure Management Groups/Subscriptions, GCP Folders/Projects as allocation boundaries
4.5	Allocating Shared & Untagged Costs	Shared services (networking, security, logging), split methods (proportional, even, fixed), handling the "unallocatable" bucket
4.6	Showback vs Chargeback	When to use each, political dynamics, invoice reconciliation, memo entries in the GL
4.7	Hands-On Lab: Build a Cost Allocation Dashboard	AWS CUR / Azure Cost Exports / GCP BigQuery billing export → dashboard by team & environment

Module outcome: Learner can implement a tagging strategy, enforce it with policy, and produce team-level cost allocation reports.

MODULE 5 — Inform Phase II: Billing Data, FOCUS & Reporting

#	Video Topic	Key Points Covered
---	-------------	--------------------

5.1	Deep Dive: AWS Cost & Usage Report (CUR)	CUR 2.0 structure, key columns, amortized vs unblended, querying with Athena
5.2	Deep Dive: Azure Cost Management + Exports	Cost analysis views, exports to storage, EA/MCA billing differences, Microsoft FinOps toolkit
5.3	Deep Dive: GCP Billing & BigQuery Export	Standard vs detailed export, SKU-level analysis, committed use discount reporting
5.4	FOCUS: The Open Billing Data Standard	Why FOCUS exists, common schema across providers, key columns (BilledCost, EffectiveCost, ChargeCategory), version landscape
5.5	Building a Multi-Cloud FinOps Data Pipeline	Ingesting FOCUS/native exports into a warehouse, normalization, currency handling, data quality checks
5.6	Reporting & Dashboarding for Different Personas	Exec scorecards vs engineering drill-downs vs finance reconciliation views; KPI selection per audience
5.7	Anomaly Detection & Cost Alerting	Native anomaly detection (AWS Cost Anomaly Detection, Azure/GCP equivalents), thresholds vs ML-based, alert routing & triage runbook

Module outcome: Learner can work directly with raw billing data from all three clouds, understand FOCUS, and stand up reporting + anomaly alerting.

MODULE 6 — Quantify: Forecasting, Budgeting & Unit Economics

#	Video Topic	Key Points Covered
---	-------------	--------------------

6.1	Cloud Forecasting Methods	Trend-based, driver-based, and hybrid forecasting; forecast vs budget vs actuals; accuracy targets
6.2	Budgets & Guardrails in Practice	AWS Budgets, Azure budgets, GCP budget alerts; budget actions (auto-stop, notify); handling variable workloads
6.3	Unit Economics: Cost per Customer, Transaction & Feature	Choosing the right unit metric, computing cost-per-unit, why unit cost matters more than total spend
6.4	Benchmarking: Internal & Industry	Comparing teams/apps internally, State of FinOps benchmarks, efficiency KPIs (coverage %, utilization %, waste %)
6.5	TCO & Business Case Analysis	Cloud vs on-prem TCO, migration business cases, build-vs-buy cost modeling
6.6	Planning & Estimating New Workloads	Pricing calculators, architecture-stage cost estimation, Infracost for IaC cost preview in CI/CD

Module outcome: Learner can forecast cloud spend, set budgets with automated guardrails, and express cloud cost as business unit economics.

MODULE 7 — Optimize Phase I: Usage Optimization (Eliminate Waste)

#	Video Topic	Key Points Covered
---	-------------	--------------------

7.1	The Waste Taxonomy: Where Money Leaks	Idle resources, orphaned storage, unattached IPs/volumes, oversized instances, forgotten environments — typical 20–30% waste
7.2	Rightsizing Compute	Utilization analysis (CPU/memory/network over 14+ days), AWS Compute Optimizer, Azure Advisor, GCP Recommender; the 2–3x overprovisioning problem
7.3	Scheduling & Auto-Shutdown of Non-Production	Nights/weekends shutdown (≈65% savings on non-prod), instance schedulers, tag-driven automation
7.4	Storage Optimization & Lifecycle Policies	S3 tiers (Standard/IA/Glacier), Intelligent-Tiering, EBS gp2→gp3, snapshot cleanup, Azure/GCP storage class equivalents
7.5	Database Cost Optimization	RDS/Aurora rightsizing, serverless databases, read replica sprawl, storage autoscaling, DynamoDB on-demand vs provisioned
7.6	Network & Data Transfer Costs	Egress charges, cross-AZ/cross-region traffic, NAT Gateway costs, CDN offload, private endpoints
7.7	Autoscaling & Elasticity Design	Horizontal vs vertical scaling, scaling policies, scale-to-zero patterns, matching capacity to demand
7.8	Serverless & Modern Architecture Economics	Lambda/Functions/Cloud Run pricing mechanics, when serverless is cheaper (and when it isn't), Graviton/ARM savings (20–40%)
7.9	Hands-On Lab: Waste Hunt	Run a full waste audit on a sample account using native recommenders + scripted checks; quantify and prioritize savings

Module outcome: Learner can systematically find and eliminate the top waste categories and design cost-aware architectures.

MODULE 8 — Optimize Phase II: Rate Optimization (Pay Less for What You Use)

#	Video Topic	Key Points Covered
8.1	Commitment Discounts Explained	Reserved Instances vs Savings Plans vs Committed Use Discounts — mechanics, discount ranges (up to 72%), 1yr vs 3yr, payment options
8.2	AWS: RIs vs Savings Plans Strategy	Compute SP vs EC2 Instance SP vs RIs; flexibility trade-offs; convertible RIs; RI marketplace
8.3	Azure Reservations & Hybrid Benefit	VM reservations, Azure Hybrid Benefit for Windows/SQL licensing, savings plan for compute
8.4	GCP CUDs & Sustained Use Discounts	Resource-based vs spend-based CUDs, automatic sustained use discounts, flex CUDs
8.5	Building a Commitment Strategy	Coverage vs utilization targets, laddering purchases, baseline analysis, covering steady-state only, commitment councils & approval workflow
8.6	Spot / Preemptible Instances	Up to 90% savings, interruption handling, fault-tolerant workload patterns (batch, CI, stateless), mixed on-demand+spot fleets
8.7	Enterprise Discounts & Negotiation	EDP/MACC/enterprise agreements, negotiation leverage, private pricing, marketplace commit burn-down

8.8	Licensing & SaaS Cost Optimization	BYOL vs included licensing, SaaS license utilization audits, shelfware elimination, renewal negotiation
-----	------------------------------------	---

Module outcome: Learner can design and manage a full commitment portfolio and rate optimization program across providers.

MODULE 9 — FinOps for Kubernetes & Containers

#	Video Topic	Key Points Covered
9.1	Why Kubernetes Breaks Cost Visibility	Bill shows nodes, not apps; shared clusters; dynamic pods; the allocation gap
9.2	Kubernetes Cost Allocation Concepts	Namespace/label/pod-level allocation, requests vs usage-based costing, idle cost distribution
9.3	OpenCost & Kubecost Hands-On	Deploying OpenCost (CNCF standard), Prometheus integration, per-namespace reports, Kubecost enterprise features
9.4	Rightsizing Requests & Limits	Overprovisioned requests as #1 K8s waste, VPA/Goldilocks recommendations, bin-packing efficiency
9.5	Cluster-Level Optimization	Cluster Autoscaler vs Karpenter, node pool design, spot node groups, scale-down of dev clusters
9.6	Hands-On Lab: Per-Team Kubernetes Chargeback Report	Deploy OpenCost on a demo cluster → produce automated monthly per-team spend report

Module outcome: Learner can allocate, report, and optimize containerized workload costs down to pod level.

MODULE 10 — FinOps for AI (The 2026 Frontier)

#	Video Topic	Key Points Covered
10.1	Why AI Spend Breaks Traditional FinOps	Token-based billing, shared GPU clusters, bursty inference, training runs that produce nothing; 98% of FinOps teams now manage AI spend
10.2	The Four Layers of AI Cost	GPU compute, platform overhead (SageMaker/Bedrock/Vertex/Azure OpenAI fees), token costs, storage (models/checkpoints/training data)
10.3	LLM API Cost Management	Input/output token pricing, model selection & routing (big vs small models), prompt caching (≈90% cheaper cache reads), batching
10.4	GPU Cost Optimization	The idle GPU problem (avg utilization often <10%), utilization monitoring, spot GPUs, quantization & inference engine gains, self-host vs API economics
10.5	AI Unit Economics & Chargeback	Cost per inference / per answer / per user, token-level tagging & allocation, forecasting variable AI workloads
10.6	Governing AI Spend	Budget guardrails for experimentation, model registries with cost metadata, approval workflows for GPU capacity

Module outcome: Learner can extend a FinOps practice to cover LLM APIs, GPU fleets, and managed AI services.

MODULE 11 — Operate: Governance, Automation & Tooling

#	Video Topic	Key Points Covered
11.1	Cloud Cost Governance & Policy	Policy catalog (mandatory tags, approved regions/instance types, budget gates), guardrails vs gates, exceptions process
11.2	Automating FinOps	Auto-remediation (delete unattached volumes, stop idle instances), event-driven cleanup, Cloud Custodian intro
11.3	Cost in CI/CD: Shift-Left FinOps	Infracost in pull requests, cost diffs on IaC changes, pre-deployment cost estimation, cost as a code review criterion
11.4	The FinOps Tooling Landscape	Native tools vs third-party platforms (CloudHealth/Cloudability/CloudZero/nOps/Finout/ProsperOps etc.), build vs buy decision framework, FinOps Certified Platforms
11.5	Sustainability & GreenOps	Carbon-aware cost optimization, cloud carbon footprint tools, the cost-carbon correlation
11.6	Intersecting Disciplines	FinOps × ITAM, ITFM/TBM, security, and procurement — where responsibilities meet and hand off
11.7	Running the Practice: Assessment & Continuous Improvement	FinOps assessments, KPI scorecards for the practice itself, roadmap planning, scaling from one cloud to Cloud+

Module outcome: Learner can operationalize FinOps with governance policies, automation, tool selection, and a continuous improvement loop.

MODULE 12 — Capstone, Case Studies & Certification Prep

#	Video Topic	Key Points Covered
12.1	Case Study: Enterprise FinOps Transformation	End-to-end story: from no visibility → 25% savings; org design, quick wins, commitment strategy, cultural rollout
12.2	Case Study: Startup/Scale-up Cost Crisis	Runway-driven optimization, 30-day action plan, prioritizing by effort-vs-savings
12.3	Case Study: Kubernetes + AI Heavy Organization	Combining Modules 9 & 10 into one operating model
12.4	Building Your 90-Day FinOps Roadmap	Template walkthrough: days 0–30 (visibility), 31–60 (quick wins + allocation), 61–90 (commitments + governance)
12.5	Capstone Project Briefing	Learner deliverable: full FinOps assessment + optimization plan for a provided sample billing dataset (multi-cloud, with K8s and AI spend)
12.6	Certification Exam Preparation & Mock Questions	Exam blueprint review, domain weightings, scenario-question strategy, common traps
12.7	Career Paths & Staying Current	FinOps job market, State of FinOps report, community (FinOps Foundation Slack, working groups), continuing education

Module outcome: Learner completes a portfolio-grade capstone and is exam-ready.

Assessment Structure (GSDC Certification)

Component	Weight
Module quizzes (10 MCQs each, end of every module)	20%
Hands-on lab submissions (Modules 4, 7, 9)	20%
Capstone project (Module 12)	25%
Final certification exam (60 scenario-based MCQs, 90 min, 70% pass)	35%

Final exam domain weighting (mirrors FOCP-style distribution):

- FinOps Framework, Principles & Lifecycle — 25%
 - Visibility, Allocation & Reporting — 20%
 - Usage & Rate Optimization — 25%
 - Kubernetes & AI Cost Management — 15%
 - Governance, Tooling & Operating the Practice — 15%
-