

QUANTUM SECURITY & PQC

Cryptographic Agility: Design and Implementation

TECHNICAL DEEP DIVE

Design systems that can change cryptographic algorithms with less re-engineering, and verify agility through architecture choices and realistic testing.

DURATION

4 hours

Short professional course

LEVEL

Advanced

PQC basics recommended

ON-DEMAND FEE

US\$499

Online on-demand

Design for the next algorithm change.

WHAT YOU WILL LEARN

- ✓ Distinguish practical agility from configuration options alone.
- ✓ Place cryptographic abstractions at application and protocol boundaries.
- ✓ Handle key, signature-size and performance differences across algorithms.
- ✓ Test algorithm changes and define agility requirements for assurance.

WHO SHOULD ATTEND

Security architects, principal engineers and technical leads designing systems that must keep working through future algorithm changes as well as the current migration.

PREREQUISITES

PQC fundamentals recommended. Foundation or PQCS Specialist Training provides optional preparation.

Why Quantum Academy

The course draws on the Applied Quantum PQC Migration Framework and faculty experience running migration programs inside organizations.

What you will study

Architecture patterns, implementation choices and verified algorithm change.

01 What Cryptographic Agility Means

Define agility as a system design property. Examine the limits of configurability and the consequences of difficult cryptographic change.

02 Agility Architecture Patterns

Compare abstraction layers, negotiation, configuration-driven selection and provider interfaces. Identify patterns that obstruct agility.

03 Implementing Agility

Apply agility across applications, protocols and infrastructure. Address retrofit constraints, key management and algorithm-specific differences.

04 Testing, Standards, and Compliance

Verify that algorithm changes work under realistic conditions. Relate tests to relevant standards, requirements and ongoing assurance.

Formats and fees

Online on-demand	US\$499
Live online	US\$749
In person	US\$999
Private team training	Custom quote

What is included

- Course handbook: full material with written instructor notes.
- 180 days of online on-demand access. Where that course is not yet published, the 180 days start on the day it is.
- PDF copy of Quantum Ready by Marin Ivezic, at no extra cost.

Includes a certificate of completion, not professional certification. CPE earned may apply toward Quantum Academy certification maintenance.

Explore the course

View course details at QuantumAcademy.com



On-demand enrollment opens soon. Check the course page for live dates and availability.

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