

COMMUNICATIONS & NETWORKING

Quantum Networking and QKD Essentials

QUANTUM TECHNOLOGY COURSE

Understand how quantum key distribution works, assess the network architectures and compare QKD with post-quantum cryptography in the context of real deployment decisions.

DURATION

4 hours

Short professional course

LEVEL

Foundational

No physics prerequisite

ON-DEMAND FEE

US\$399

Online on-demand

Assess where quantum networking fits.

WHAT YOU WILL LEARN

- ✓ Explain QKD protocols and the security properties they aim to provide.
- ✓ Compare point-to-point, trusted-node and entanglement-based networks.
- ✓ Assess hardware, operational constraints and implementation risks.
- ✓ Judge when QKD adds value and when PQC alone meets the need.

WHO SHOULD ATTEND

Network and security engineers, telecom professionals, government and defense technology specialists, and technical evaluators assessing quantum networking proposals.

PREREQUISITES

No formal prerequisites or physics background required. Quantum Computing Fundamentals is optional preparation.

Why Quantum Academy

The course draws on Quantum Systems Integration by Marin Ivezic and faculty experience working with quantum engineering and integration teams.

What you will study

QKD principles, architectural choices and practical deployment tradeoffs.

01 How QKD Works

Study BB84, no-cloning and eavesdropping detection. Compare protocol security properties with implementation reality, including E91, decoy-state and MDI-QKD approaches.

02 QKD and PQC: Complementary, Not Competing

Compare strengths, limitations and use cases. Assess where QKD could complement a PQC transition and where its additional infrastructure is difficult to justify.

03 Network Architectures

Examine point-to-point and trusted-node networks, satellite links and entanglement-based designs. Assess range limits, sources, detectors and quantum random-number generators.

04 Deployment Realities

Evaluate cost, infrastructure, operational constraints, standards and maturity. Use deployment examples to assess vendor proposals and the gap between theory and practice.

Formats and fees

Online on-demand	US\$399
Live online	US\$599
In person	US\$799
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 Systems Integration by Marin Ivezic, at no extra cost.

Includes a certificate of completion. This is not a professional certification.

Explore the course

[View course details at QuantumAcademy.com](https://quantumacademy.com)



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

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