

QUANTUM COMPUTING

Building and Operating Quantum Computers

QUANTUM TECHNOLOGY COURSE

Examine the infrastructure, control electronics and software required to operate quantum computers. Assess integration, facility needs and ownership costs across system choices.

DURATION

4 hours

Short professional course

LEVEL

Intermediate

No formal prerequisites

ON-DEMAND FEE

US\$399

Online on-demand

Evaluate the system beyond the processor.

WHAT YOU WILL LEARN

- ✓ Describe facility needs, cryogenics, signal chains and shielding.
- ✓ Evaluate the control and software stack from pulses to applications.
- ✓ Assess quantum-HPC integration and total cost of ownership.
- ✓ Compare modular architectures, interoperability and vendor dependencies.

WHO SHOULD ATTEND

Technology evaluators, infrastructure planners, facility managers, systems engineers and procurement specialists, plus investors and analysts assessing quantum computing companies.

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

Physical infrastructure, control systems, integration and operational economics.

01 Physical Infrastructure

Assess cryogenic systems, dilution refrigerators, shielding, vibration control and power. Relate facility requirements to the hardware approach under consideration.

02 Control Electronics and Software Stack

Examine signal generation, readout and control electronics. Follow the software stack from circuits to hardware, including calibration and characterization.

03 Integration and Operations

Evaluate quantum-HPC integration, maintenance and ongoing calibration. Account for capital, operational and personnel costs, and assess modular assembly.

04 Open Architecture and What's Next

Examine Quantum Open Architecture, interoperability and vendor lock-in. Assess modular systems and alternatives such as magnetic cooling and room-temperature modalities.

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



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

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