

QUANTUM COMPUTING

Hands-On Quantum Programming

QUANTUM TECHNOLOGY COURSE

Build and run quantum circuits with open-source tools. Work with simulators and cloud hardware, interpret noisy results and develop maintainable code through practical exercises.

DURATION

8 hours

Short professional course

LEVEL

Intermediate

Python required

ON-DEMAND FEE

US\$699

Online on-demand

Write circuits. Run them. Read the results.

WHAT YOU WILL LEARN

- ✓ Set up quantum development tools, including Qiskit, Cirq and Braket.
- ✓ Build circuits and implement fundamental quantum algorithms.
- ✓ Interpret hardware results, noise and measurement statistics.
- ✓ Optimize, test and run your capstone circuit on real hardware.

WHO SHOULD ATTEND

Software developers, data scientists and technical professionals seeking practical experience programming quantum computers and working with cloud-based quantum processors.

PREREQUISITES

Python programming experience required. No quantum physics or advanced mathematics prerequisite.

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

Practical circuit development, hardware execution and quantum software engineering.

01 Getting Started with Quantum SDKs

Set up open-source tools, build your first circuit and run it on a simulator.

02 Core Algorithms in Practice

Build entanglement and interference circuits; implement Grover's search and the QFT.

03 Simulators Versus Hardware

Use cloud processors; work within connectivity, fidelity and coherence constraints.

04 Noise and Error Mitigation

Apply measurement error mitigation and zero-noise extrapolation; interpret noisy results.

05 Engineering Maintainable Quantum Code

Optimize and transpile circuits, test reusable code and run your capstone on hardware.

Formats and fees

Online on-demand	US\$699
Live online	US\$1,049
In person	US\$1,399
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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