

SENSING & METROLOGY

Quantum Sensing Fundamentals

QUANTUM TECHNOLOGY COURSE

Understand the principles behind quantum sensors, compare the main device classes and assess applications, deployment constraints and vendor claims with informed judgment.

DURATION

4 hours

Short professional course

LEVEL

Foundational

No physics prerequisite

ON-DEMAND FEE

US\$399

Online on-demand

Evaluate sensing capability and readiness.

WHAT YOU WILL LEARN

- ✓ Explain how clocks, magnetometers and gravimeters work.
- ✓ Assess sensing applications in navigation, medicine and infrastructure.
- ✓ Distinguish commercial capability from emerging or aspirational uses.
- ✓ Evaluate vendor claims and technology readiness for procurement.

WHO SHOULD ATTEND

Defense and intelligence analysts, technology strategists, infrastructure planners, medical technology evaluators and senior leaders assessing sensing capability and procurement.

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

Sensing principles, device classes, applications and evidence of deployment readiness.

01 Quantum Sensing Principles

Explore how coherence, superposition and entanglement support precision measurement. Learn which properties matter for different sensor types and tasks.

02 Device Classes

Compare atomic clocks, magnetometers, gravimeters and emerging imaging approaches. Relate operating principles to the measurements each device can support.

03 Applications

Assess timing, navigation in GPS-denied environments, medical imaging and geophysical sensing. Examine defense and security use cases with attention to practical constraints.

04 The Market and What's Next

Evaluate technology maturity, vendors and commercial availability. Distinguish deployable products from emerging capabilities and assess national programs as case studies.

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.

support@quantumacademy.com | +1 (312) 803-4969

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