QUANTUM LITERACY - MICRO-CREDENTIAL

This credentialing opportunity allows learners to develop proficiency with foundational quantum concepts, achieving a conversant level of quantum literacy needed for a majority of quantum workers across the industry. By attending online lectures and participating in various learning activities, learners will attain and demonstrate that they understand the core concepts of quantum industry.

Eligibility

- CU Boulder students (including degree-seeking and nondegree/ACCESS)
- Other learners at schools in the Denver/Boulder area

Delivery Mode

Hybrid of in-person and online delivery

Credit Status

Noncredit

Academic Level

- Professional
- Undergraduate

Time to Completion

Two semesters

Fee

No

Requirements

In order to achieve each badge, students will:

- Attend or view the relevant lecture/material.
- Take the corresponding quiz to assess knowledge (two attempts; no letter grade); achieving 80% on the quiz (by the second attempt).
- Post at least one original comment and leave at least one reply to another person's comment in the community message board about the topic.

For the overall credential, students will additionally be required to:

- Participate in at least one other QRX-sponsored quantum-focused activity (e.g., the annual Hackathon, a quantum job fair, quantum professionals' day, etc.)

Criteria

For each topic (i.e., for each badge), learners must:

- Be able to define the relevant quantum topic and discuss it in the context of an industry entry-level professional conversation. (E.g., they must be able to say "This is what quantum entanglement means in the context of building a quantum computer," or "This is how Quantinuum works with quantum gates.")
- Produce a one-page written description or a 2–3-minute elevator pitch of their specific interest in quantum as it pertains to the topic. That is, students will create mini "script skeletons" that they might use to discuss with potential employers the quantum topic of interest.

Skills

- Mathematica familiarity
- Qiskit familiarity
- Quantum entanglement
- Quantum gates
- Quantum hardware
- Quantum states
- Qubits