

# A Quantum Leap in Education: Qubit by Qubit & Google Quantum AI Partner to Make Quantum Computing Accessible to Students

*A Quantum Leap in Quantum Education: Qubit by Qubit and Google Quantum AI Partner to Make Quantum Computing Accessible to Thousands of Students*

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[/Einpresswire.com/](https://www.einpresswire.com/) -- The Coding School's Qubit by Qubit (QxQ), the world's largest quantum education initiative for early learners, is [partnering with Google Quantum AI](#) on QxQ's 2023-24 Introduction to

Quantum Computing course, the first course of its kind to make quantum computing accessible to high school students and above. With the support of Google Quantum AI, over one thousand students globally will be able to participate in the course at no cost, furthering their shared vision for equitable, accessible, high-quality quantum computing education. Interested learners can apply [here](#).

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*Kiera Peltz*

Introduction to Quantum Computing is a first-of-its-kind course aimed to equip students globally with foundational quantum computing knowledge and hands-on programming experience. Since the creation of the course in 2020, the course has introduced quantum computing to over 20,000 students from every U.S. state and 125 countries, making it the largest introductory quantum computing course offered globally.



Students at Qubit by Qubit learning quantum computing.

Quantum technologies are [projected](#) to reach a market cap of \$1.3 trillion by 2035, but the current talent gap leaves about a third of jobs in the field unfilled. By creating an opportunity for early learners in a field historically accessible only to graduate-level students, the goal of this course is to engage and nurture diverse minds early on in their STEM journeys so that they are

empowered to pursue a career in Quantum Information Science and Engineering (QISE).

“With an ever-changing technological landscape, expanded access to quantum education is fundamental to the advancement, sustainability, and inclusivity of QISE,” said Kiera Peltz, Founder of The Coding School and Executive Director of QxQ. “Through this partnership, we aim to ignite curiosity, spark interest, and create a strong foundation for individuals to pursue further studies and careers in quantum computing. With Google Quantum AI’s shared belief in the importance of early quantum education, this partnership is a major step forward in our mission to prepare the next generation of quantum leaders.”

Introduction to Quantum Computing, which begins on October 8, 2023, offers students a comprehensive understanding of foundational quantum computing knowledge and hands-on programming experience. With the option of participating for one or both semesters, students will learn topics including quantum mechanics, quantum information and computation, and quantum algorithms. Each week, participants attend lectures, labs, and optional office hours, and complete problem sets. Students will end the year by completing Capstone Projects, enabling them to combine their newfound knowledge with existing passions. Taught virtually with live instruction, the course will be led by Drs. Connie Hseh and Derrick Boone Jr., both PhDs in Applied Physics from Stanford University.

With Google Quantum AI as the course’s partner, students this year will learn to code in Cirq, Stim and Qualtran, open-source programming languages developed by Google for building and exploring quantum programs.

“The Google Quantum AI team is committed to building and discovering applications that can run on quantum computers. Through expanded access to education in QISE, we hope to see exciting new ways that we can use quantum computers in meaningful ways. This year-long course will expose students to the cutting edge in quantum computing, from building and running quantum circuits to simulating quantum error-correcting codes, all in a hands-on way. They will also meet with various members of the team throughout the year who will share their own paths to careers in quantum computing,” said Dr. Abraham Asfaw, Education and Outreach Lead at Google Quantum AI.

Introduction to Quantum Computing is designed to be as accessible to as many students as possible. Designed for students with no prior quantum computing experience and limited STEM knowledge, there are minimal prerequisites to apply (just high-school level geometry). It is also available to both U.S. based and international students in high school and above, including university students, educators, and members of the workforce.

As part of its goal to inspire the next generation of quantum leaders, Introduction to Quantum Computing exposes participants more broadly to different quantum-related academic and career paths available to them. Throughout the year, students will frequently get to attend virtual lab tours, hear from guest speakers in academia, government, and industry, and join

fireside chats with their instructors and teaching assistants.

#### Application Details:

Introduction to Quantum Computing begins on October 8, 2023; applications will remain open until 11:59 pm ET on October 5. Students have the option to enroll in only the first semester of the course (October - December, 2023) or both semesters (October 2023 - April 2024).

Individuals interested in this program should learn more and register at [www.qubitbyqubit.org](http://www.qubitbyqubit.org).

#### About The Coding School:

The Coding School (TCS) is a 501(c)(3) tech education nonprofit dedicated to empowering the next generation through computer science education. Founded in 2014, TCS has become a global leader in emerging technology education, teaching over 50,000 students and educators in 125 countries with over 55% of students from traditionally underrepresented backgrounds. TCS' flagship program, Qubit by Qubit offers a wide-range of first-of-its-kind programming; from classroom workshops to a full-year high school course, Qubit by Qubit has introduced over 20,000 students to quantum computing since 2020. Regarded as an international quantum education expert, Qubit by Qubit is partnered with a number of leading academic institutions, companies, and organizations, including IBM Quantum, Microsoft, and the White House's National Q-12 Education Partnership. To learn more about our organization and programs, visit: [www.the-cs.org](http://www.the-cs.org).

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