THE FUTURE IS QUANTUM.

TAKE INTRODUCTION TO QUANTUM COMPUTING

September 19, 2021-April 10, 2022

LECTURES BY MIT PHD GRADUATE MIT

MANY SCHOLARSHIPS AVAILABLE THANKS TO IBM **Quantum**
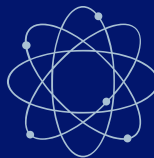
About The Course

This is a first-of-its-kind Introduction to Quantum Computing course designed to make quantum computing accessible to high school students. Quantum computing will impact industries from healthcare to finance to cybersecurity, and we want today's high school students to be prepared to lead **the next computing revolution**.

Through two semesters of **weekly lectures**, **lab sections**, and **homework** assignments, you will develop a foundational understanding of quantum computing. You will learn introductory linear algebra, discover the weirdness of quantum mechanics, explore quantum protocols and algorithms, and code quantum circuits on a real quantum computer- topics most students don't learn until graduate school. The only prerequisite is **geometry**. We will teach you the rest!

2020-2021 COURSE HIGHLIGHTS

We taught **7,500 students** from 125 countries in this course sponsored by **IBM.**

90% of students said that quantum computing is **fun!**

99% of students would **recommend the course** to a friend.

94% of students felt **more confident** in their **STEM** skills after just one semester.

⚛ 100% virtual (lectures and labs are held over Zoom).

⚛ Weekly lectures are on Sundays (1:00-2:30pm ET). Live attendance is encouraged but not required.
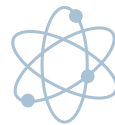
⚛ No special technology required. All you need is a computer with internet access.

⚛ Each student will also choose a 1-hour LIVE lab section. Multiple time options, Tuesday-Saturday.

⚛ Course instructors and teaching assistants are graduate students at leading universities, like MIT and Harvard.

⚛ Includes special events, such as virtual lab tours and guest lectures by quantum experts and industry leaders.

FOR MORE INFORMATION AND TO APPLY:

www.qubitbyqubit.org/programs

OUR STUDENTS LOVE LEARNING QUANTUM

"Qubit by Qubit changed my life! I learned so much from the Quantum Course, gained new diverse friends from all over the world, and for once felt like I could belong in a STEAM environment. This was my first time not being the only Latina in a STEAM class I've been in so it was so amazing to not feel on the outside for once and meet people like me!
- Samantha, 10th grade, Massachusetts

"Taking this course was a risk for me. I was afraid I would fall behind and never understand the core concepts of quantum computing. However, the community welcomed me and provided resources to ensure that I could learn about quantum at my own pace. I felt empowered by the instructors... and the course has given me the knowledge and skills I need to further pursue quantum computing!"
- Sasha, 9th grade, California

"I signed up for this course thinking "nice, I could probably check out some quantum stuff" but this year has really been a blast and all the instructors, assistants, and just the quantum community overall have been really amazing. I learned so much from this course ranging from math to physics to computer science."
--Jesse, 12th grade, Mississippi

"The lectures were so good that I would stay up till midnight to watch them live whenever I could. After this course, I feel that I can learn anything if I want to. Learning quantum computing before my school even finished calculus has shown me that age is no barrier."
- Abhinav, 12th grade, India

QUBIT X QUBIT

www.qubitbyqubit.org

IBM **Quantum**