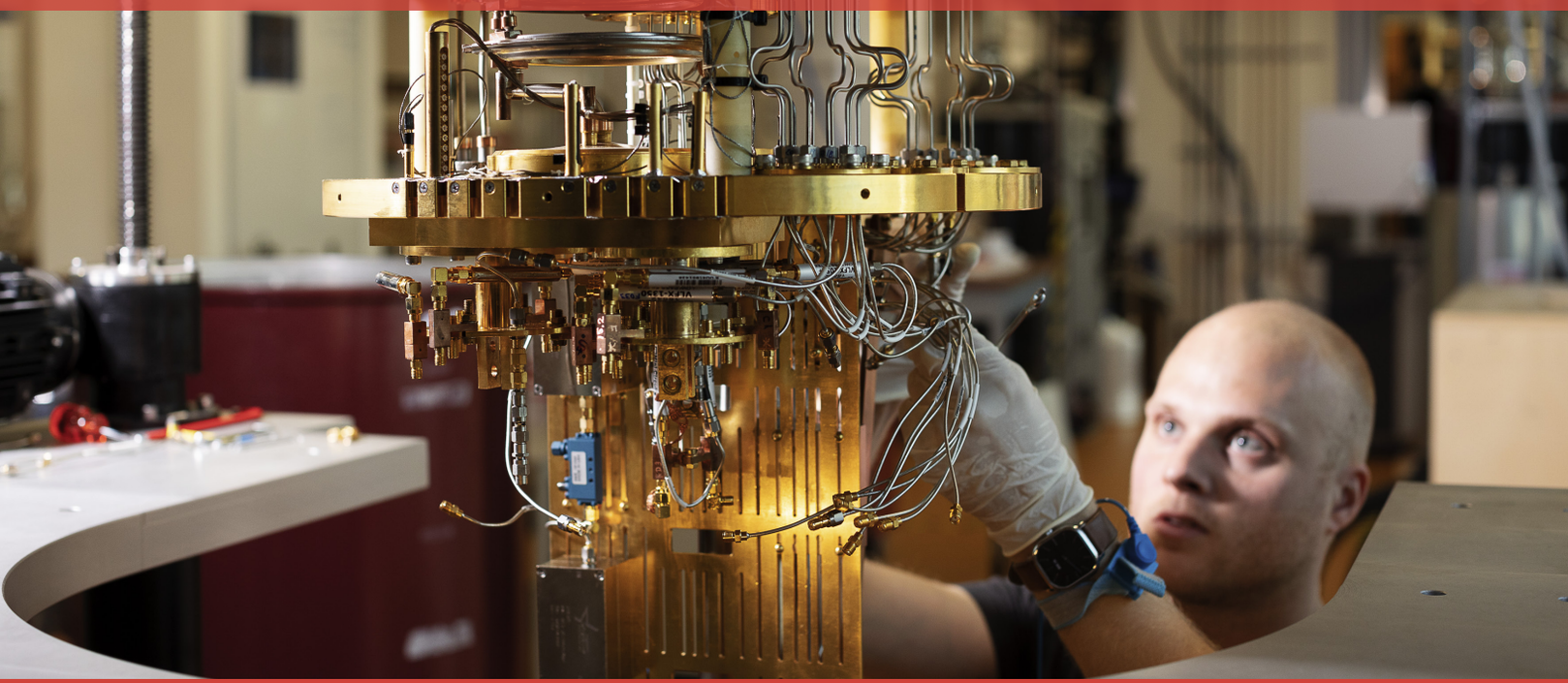
Faculty of Applied Sciences

Minor
Quantum Science and Quantum Information



Photographer: Marieke de Lorijn

Quantum Science and Quantum Information

"I think I can safely say that nobody understands quantum mechanics".

(R. P. Feynman, Nobel Laureate of Physics)

What you will learn

The goal of this minor is to make you familiar with developments in the field of quantum science, quantum technology and with practical applications arising from research in this multidisciplinary field, such as quantum computers and quantum networks.

The minor programme begins with covering the fundamental knowledge you will need from mathematics, quantum mechanics and computer science. After this, you dive into learning about modern quantum technologies, in particular hardware platforms for realizing qubits, quantum communication protocols, and quantum sensing and measurements. In a team project at the end of the minor you will work on applications in quantum technology, involving hardware or software.

Attention please:

This minor is challenging and requires your willingness to work hard. We strongly recommend that you have obtained an average mark for the calculus and algebra courses in your BSc programme that is above 7. This minor should be completed within one academic year.

Who is the minor for?

Participation in the QSQI minor is open to students from BSc programmes (Applied) Physics, Astronomy, Electrical Engineering, (Applied) Mathematics, and Computer Science at Delft University of Technology and other universities. Students in the Molecular Science & Technology BSc programme at Delft University can (only) participate in the minor after successfully completing the Quantum Chemistry and Physics, Linear Algebra and Differential Equations, and Theoretical Chemistry courses of the major Materials. (Applied) physics students must have successfully completed the regular second-year quantum mechanics courses.

Successful completion of this minor automatically fulfils the criterion of successful completion of 5 EC quantum mechanics/quantum information course(s) that is required for admission into the MSc programme Quantum Information Science & Technology.

Contact

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TU Delft

March 2023