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# Statement of participation

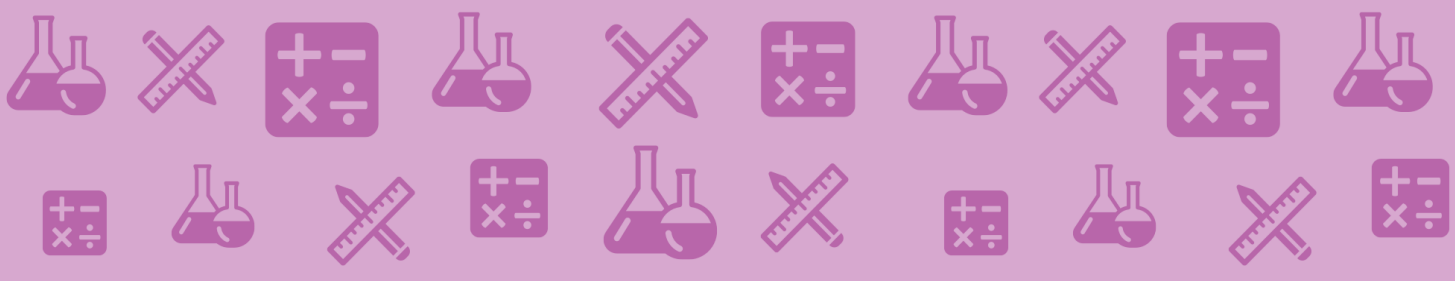
# Maher Faisal Rafin

has completed the free course including any mandatory tests for:

## Introduction to quantum computing

This free 8-hour course looked at how quantum computers deliver a computational power beyond the ability of classical computers.

**Issue date:** 3 January 2026



**www.open.edu/openlearn**

This statement does not imply the award of credit points nor the conferment of a University Qualification.
This statement confirms that this free course and all mandatory tests were passed by the learner.

Please go to the course on OpenLearn for full details:
**https://www.open.edu/openlearn/science-maths-technology/introduction-quantum-computing/content-section-0**

COURSE CODE: **SM380_1**

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# Introduction to quantum computing

https://www.open.edu/openlearn/science-maths-technology/introduction-quantum-computing/content-section-0

## Course summary

Quantum computing is a developing field with enormous potential societal and economic impact. In the future, quantum computers will enable us to solve a range of complex problems that are currently intractable, potentially revolutionising key sectors including medicine, finance and the pharmaceutical industry. In this free course, Introduction to quantum computing, you will learn how quantum computers exploit quantum mechanical properties like superposition and entanglement to deliver a computational power that goes way beyond the ability of classical computers.

## Learning outcomes

By completing this course, the learner should be able to:

- describe a qubit and understand how it differs from a bit in classical computing
- explain how a two-qubit CNOT gate can generate entanglement between two qubits
- derive the output qubits of a quantum circuit given the input qubits
- describe different ways quantum computing is being implemented in practice.

## Completed study

The learner has completed the following:

**Section 1**

Why quantum computing?

**Section 2**

Background mathematics and terminology

**Section 3**

Setting the scene in quantum physics

**Section 4**

Classical computing

**Section 5**

Qubits and quantum gates

**Section 7**

Summary