

COURSE DETAIL

QUANTUM COMPUTING

Country

United Kingdom - England

Host Institution

Imperial College London

Program(s)

Imperial College London

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

141

UCEAP Course Suffix**UCEAP Official Title**

QUANTUM COMPUTING

UCEAP Transcript Title

QUANTUM COMPUTING

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

In this course students have the opportunity to explore this exciting topic that sits at the boundaries of computer science and physics. The course is taught from a computer science perspective, but it also draws on topics from linear algebra, which provides the mathematical apparatus for formalizing quantum systems. Students are introduced to the basic notions of quantum computing, including quantum bits and quantum entanglement and explore quantum algorithms, such as Quantum Search, Quantum Simulation and Quantum Information concepts such as quantum error correction.

Language(s) of Instruction

English

Host Institution Course Number

COMP70021

Host Institution Course Title

QUANTUM COMPUTING

Host Institution Course Details

<https://www.imperial.ac.uk/computing/current-students/courses/70021/>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Department of Computing

Course Last Reviewed

2025-2026

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