COURSE DETAIL

INTRODUCTION TO QUANTUM COMPUTING

Country
United Kingdom - Scotland

Host Institution
University of Edinburgh

Program(s)
Scottish Universities,University of Edinburgh

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Computer Science

UCEAP Course Number
113

UCEAP Course Suffix

UCEAP Official Title
INTRODUCTION TO QUANTUM COMPUTING

UCEAP Transcript Title
INTRO QUANTUM COMP

UCEAP Quarter Units
4.00

UCEAP Semester Units
2.70

Course Description

This course offers an overview of the rapidly growing field of Quantum Computation (QC). The course starts with a brief introduction of the mathematical framework of QC. Students learn two models of quantum circuit and measurement-based quantum computing, and through these models examine various key concepts in QC such as entanglement and teleportation. In order to compare QC and classical computing, the course also presents simple quantum algorithms with their complexity analysis. The course finishes by highlighting the recent development of the field in secure delegated QC.

Language(s) of Instruction

English

Host Institution Course Number

INFR11099

Host Institution Course Title

INTRODUCTION TO QUANTUM COMPUTING

Host Institution Campus

Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department

Informatics

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