

# 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 Course Details

## Host Institution Campus

Edinburgh

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Informatics

## Course Last Reviewed

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