

UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Teoria della Informazione e Computazione Quantistica

2324-1-F1701Q148

Aims

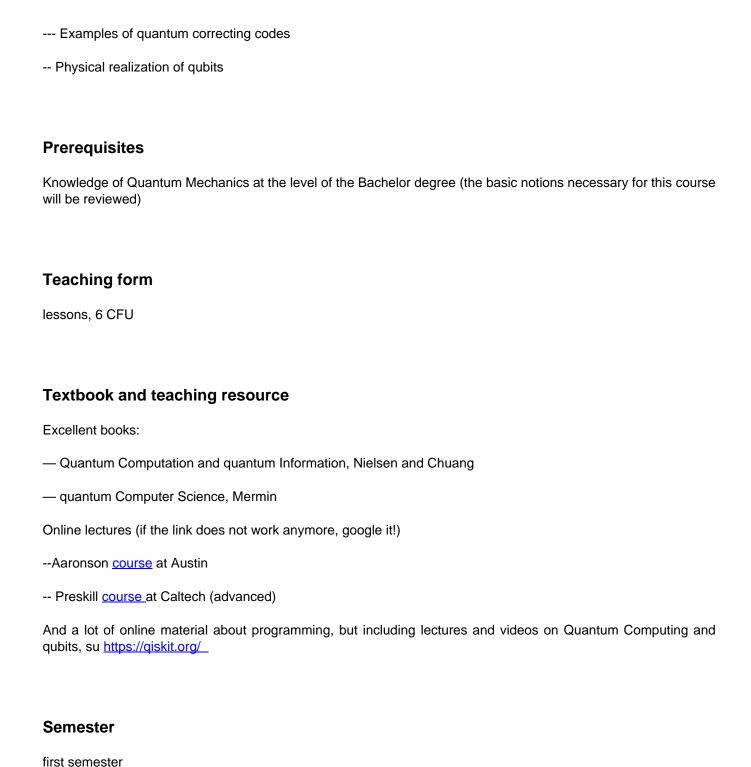
The aim of the course is to give an introduction to Quantum Information and Computing and to qubits, the basic elements of quantum computers and quantum technologies.

Contents

Introduction to the fundamental principles of quantum physics for Quantum Computing and Quantum Technologies: entanglements, Bell's inequalities, qubits and their physical realization, examples of quantum circuits and elementary algorithms.

Detailed program

- Basic elements of quantum mechanics
- Entanglement and Bell's inequalities
- -- Quantum information
- -- Qubits
- Quantum circuits
- Simple example of quantum algorithms



Assessment method

oral exam with open questions on the entire program

Office hours

On student request, at agreed time

Sustainable Development Goals

QUALITY EDUCATION