PHYS-F509 | 2024-2025

Quantum Information Theory

Lecturer Stefano PIRONIO (Coordinator)

Course mnemonic PHYS-F509

ECTS credits 5 credits

Language(s) of instruction English and French

Course period First term

Campus Plaine

Course content

Quantum computers and algorithms, quantum communications, quantum cryptography.

Objectives (and/or specific learning outcomes)

Initiation to quantum information.

Pre-requisits and co-requisits

Required knowledge and skills Quantum mechanics, Dirac notation.

Teaching method and learning activities

black board course

References, bibliography and recommended reading

Quantum Computation and Quantum Information Nielsen and Chuang Lecture Notes of Preskill http://www.theory.caltech.edu/ ~preskill/ph229/

Other information

Place(s) of teaching Plaine

Plaine

Contact(s) S. Pironio (stefano.pironio@ulb.be)

Evaluation method(s)

Oral examination and Oral presentation

Main language(s) of evaluation English and French

Programmes

Programmes proposing this course at the faculty of Sciences

MA-PHYS | **Master in Physics** | finalité Research/unit 1 and finalité Teaching/unit 1