

Module:	Elective Advanced Lectures: Theoretical Physics
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Module No.: physics70c

Course:	 Quantum Computing (T)
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Course No.: physics7508

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	3+2	7	WT/ST

Requirements for Participation:

Preparation:

Theoretical courses at the Bachelor degree level

Form of Testing and Examination:

written / oral examination

Length of Course:

1 semester

Aims of the Course:

Understand the theory of quantum computing and apply it to existing hardware.

Contents of the Course:

- Quantum circuits
- Quantum algorithms
- Quantum computers
- Quantum noise and quantum operations
- Quantum error correction

Recommended Literature:

M. A. Nielsen and I. L. Chuang, Quantum Computation and Quantum Information, Cambridge