

Special Topics (CHM 69600) Spring 2018

Quantum Information and Computation

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Lectures: Tuesday & Thursday, 9:00-10:15 BRWN 3100

Course Description

This course provides an introduction to the theory of quantum information and computation.

Topics Covered Include:

- (1) Fundamental Concepts
- (2) Quantum Information
- (3) Quantum Entanglement
- (4) Quantum Algorithms
- (5) Physical Implementations of Quantum Computation
- (6) Near Term Applications of Quantum Computing

Textbook:

- Michael A. Nielsen and Isaac L. Chuang, *Quantum Computation and Quantum Information*, Cambridge University Press, 2000

Grading: Problems sets 50% (Total 5) and a project 50% .