

PHYS 484 – 584 Quantum Computation and Quantum Information

Spring 2021

Schedule: Monday 14:40 – 17:30

Join Zoom Meeting

Meeting ID: 984 2796 9249

Passcode: 390329

<https://sabanciuniv.zoom.us/j/98427969249?pwd=RGNzNOVHZSs5eIMvaWNoL1l0anNJZz09>

Textbook: M. A. Nielsen and I. L. Chuang, Quantum Computation and Quantum Information, Cambridge University Press (2000). ISBN 978-1-107-00217-3.

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Grading

- Homework (25%)
- Midterm I (25%)
- Midterm II (25%)
- Project (25%)

Important Dates

- Midterm I: 29 March
- Midterm II: 17 May
- Project Presentations: 24 May

Topics

- Introduction to quantum mechanics
- Quantum information
- Quantum cryptography
- Quantum computation
- Quantum algorithms
- Error and error correction
- Quantum computers