
Private Reading on Quantum Computing

Phys 995F, 4 Credits

Spring 2025

Meetings

- Time: Wednesdays, ? pm
- Location: Wright 209

Instructor

- Name: Robert Owen
- E-mail: rowen@oberlin.edu
- Department: Physics and Astronomy

Student

- Name: Iago Braz Mendes
- E-mail: ibrazmen@oberlin.edu
- T number: T01362926

Course Overview

?

Textbook

“Quantum Computer Science: An Introduction” by N. David Mermin

Assignments

- Weekly Presentations ?
- Coding Projects ?

Evaluation

?

Tentative Schedule

Week	Topic	Reading
1 (02/05)	Course overview	–
2 (02/12)	Cbits and Qbits	Ch. 1
3 (02/19)	General features and examples	Ch. 2
4 (02/26)	Breaking RSA encryption	Ch. 3
5 (03/05)	Searching with a quantum computer	Ch. 4
6 (03/12)	Quantum error correction	Ch. 5
– (03/19)	<i>Away for a conference</i>	–
– (03/26)	<i>Spring break</i>	–
7 (04/02)	Project: Bells state	Sec. 6.1
8 (04/09)	Project: Quantum cryptography	Sec. 6.2
9 (04/16)	Project: Bit commitment	Sec. 6.3
10 (04/23)	Project: Quantum dense coding	Sec. 6.4
11 (04/30)	Project: Teleportation	Sec. 6.5
12 (05/07)	Project: The GHZ puzzle	Sec. 6.6