Intro Quantum Computing Course

Semester Final Project Requirements

Part 1:

Students will write a paper reviewing some aspect of computing. The student can choose the specific topic. Papers should be at least 2000 words and use IEEE format.

- Quantum Physics related to quantum computing
- A study of a particular physical implementation of Qubits (i.e., Bose-Einstein Condensate, photon polarization, etc.)
- Quantum Error correction
- Mitigating decoherence
- A detailed analysis of a quantum algorithm
- An analysis of a quantum resistant cryptographic algorithm
- A study of a quantum programming language.

Part 2:

Students will write a paper discussing challenges to quantum computing. The student can choose the specific topic. Papers should be at least 2000 words and use IEEE format. Potential topics include

- Quantum Physics related to quantum computing
- A study of a particular physical implementation of Qubits (i.e., Bose-Einstein Condensate, photon polarization, etc.)
- Quantum Error correction
- Mitigating decoherence
- A detailed analysis of a quantum algorithm
- An analysis of a quantum resistant cryptographic algorithm
- A study of a quantum programming language.