

## **Quantum Mechanics I**

Lecturer: Allan MacDonald

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Office Hours: after class, Weds 5P-6:30P,

or contact Michele (mlandfield@austin.utexas.edu) to schedule

Reference Material:

Lectures on Quantum Mechanics / S. Weinberg

Quantum Mechanics / E. Merzbacher

Modern Quantum Mechanics / J.J. Sakurai

Grader: Not yet assigned

### **COURSE OUTLINE:**

- Postulates of the Quantum Theory
- Simple Applications in One Dimension
- The simple Harmonic Oscillator and Generalizations
- Symmetries in Quantum Mechanics
- Angular Momentum and the Hydrogen Atom
- Spin Hamiltonians
- Quantum Information and Quantum Computers

**Evaluation:** Homework: 6 Assignments 50%  
Final Exam 50%