

Syllabus

Physics 30b, Introduction to Quantum Mechanics

Spring 2008

Instructor:

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Office Hours: By appointment

Textbook: "Introduction to Quantum Mechanics" 2nd ed., David J. Griffiths

Prerequisites: Physics 20, 30a, or consent of instructor.

Course Description: A serious introduction to quantum mechanics.

Topics to be covered include, but not limited to:

- the time dependent and independent Schrodinger Equation
- interpretation of the wave function
- the formalism of quantum mechanics
- barriers and wells in one dimension
- the harmonic oscillator
- the hydrogen atom
- intrinsic spin
- coupling of angular momenta
- identical particles, fermions, bosons
- time independent perturbation theory
- time dependent perturbation theory

Exams: There will be two mid-term exams and a final. Grades will be based on the homework (20%), the mid-term exams (20% each) and the final (40%).

Homework: There will be weekly homework assignments due during the last class of the week following the week during which the assignment is made.