Quantum Mechanics I

Physics 342

January 25th, 2010

Joel Franklin	P34	(503) 777-7249 jfrankli@reed.edu
Office hours:		M, T, Th: 3–5 p.m., F: 1–2 p.m.

Text: Griffiths, D. J. "Introduction to Quantum Mechanics", 2nd ed., Pearson Prentice Hall, 2005.

Other Resources:

Merzbacher, E. "Quantum Mechanics", 2nd ed. John Wiley & Sons, 1970.

Messiah, A. "Quantum Mechanics", Dover, 1999.

http://academic.reed.edu/physics/courses/P342.S10/Physics342

Homework:

Homework will be assigned at each class meeting, due at the next meeting. Lecture notes (including reading and homework assignments) will be available at 5 p.m. the day before lecture at the course website.

Exams

There will be two in-class mid-term examinations and a final (to be scheduled during finals week). The midterms will occur on March 5th, and April 9th.

Grading

The structure is as follows:

Homework	30%
Midterm Exams (3/5 & 4/9)	$2 \times 20\%$
Final Exam	30%

Late Homework Policy: Late homework will not be accepted except with prior notification of appropriate circumstances.

Week	Date	Topic
1	1/25	Review: Separation, Linear Algebra, & Probability
	1/27	
	1/29	
2	2/1	
	2/3	Schrödinger's Equation – One Dimensional Examples
	2/5	
3	2/8	
	2/10	
	2/12	Piecewise Potentials
4	2/15	
	2/17	
	2/19	
5	2/22	
	2/24	Linear Algebra & Function Space
	2/26	
6	3/1	
	3/3	
	3/5	**Midterm I**
7	3/8	Three Dimensional Schrödinger Equation
	3/10	
	3/12	
Spring Break		
8	3/22	Hydrogen
	3/24	
	3/26	
9	3/29	Angular Momentum & Spin
	3/31	
	4/2	
10	4/5	
	4/7	
	4/9	**Midterm II**
11	4/12	Multiple Particles
	4/14	
	4/16	
12	4/19	Perturbation Theory – Fine Structure
	4/21	
	4/23	
13	4/26	Relativity & Quantum Mechanics
	4/28	
	4/30	