

PHYS6520 *Quantum Mechanics II*

Problem Sets for Spring 2002 Semester

Instructor: Jim Napolitano

January 10, 2002

Your grade in this course will be based on these problem sets. You are encouraged to collaborate with other students on all problem sets, **except for the midterm and final sets** on which you must work independently. The due dates and times are indicated and will be strictly enforced.

Number	Due	Material
1	Jan 28 Start of Class	Thru Jan 24 (Merzbacher Section 16.5): Spin and Rotations
2	Feb 11 Start of Class	Thru Feb 7 (Merzbacher Chapter 17): Density Matrix, Angular Momentum, The Wigner-Eckart Theorem
3	Feb 25 Start of Class	Thru Feb 21 (Merzbacher Chapter 18): Perturbation Theory
Midterm Problem Set: Work on this independently		
4	Mar 21 (Thursday) Start of Class	Thru Mar 7 (Merzbacher Chapter 19): Time-Dependent Perturbation Theory
5	Apr 1 Start of Class	Thru Mar 28 (Merzbacher Chapters 21,22): Many-Body Field Theory
6	Apr 15 Start of Class	Thru Apr 11 (Merzbacher Chapter 23, Sec. 24.2): Photons and the Electromagnetic Field; Relativistic Many-Body Theory
Final Problem Set: Work on this independently		
7	May 3 (Friday) At 5pm <i>in the Physics</i> <i>Department office</i>	All of the course