PHYX412-1 Fall 2008 : Quantum Mechanics I

Lectures (Tech F127):	Professor Tim Tait
MWF 10:00 AM - 10:50 AM	Tech F224
Office Hours (Tech F224):	(847) 491-3236 (MWF) / (630) 252-1373 (TTh)
W 11:00 AM - 12:00 PM	tait@northwestern.edu

Course Information on the Web:

http://www.hep.anl.gov/tait/course/phy412-1/phy412-1.html

Text books:

- Primary Text: *Modern Quantum Mechanics*, J.J. Sakurai, Addison-Wesley (1994)
- Supplementary reading: *Principles of Quantum Mechanics*, R. Shankar, Springer (1994)

This course is the first in a three part sequence of graduate level quantum mechanics, covering classical mechanics and mathematical preliminaries, the foundations of quantum theory, symmetries, two state systems, and stationary states.

Grades will be based on (quasi-) weekly homework assignments (30%), two midterms (20% each), and a final exam (30%).

Course Outline:

- Review of Classical Mechanics
- Failure of Classical Mechanics and Early Quantum Theory
- Mathematical Formalism
- Fundamentals of Quantum Mechanics
- Symmetries and Angular Momentum
- Two State Systems
- Stationary States