Physics 401 Quantum Physics I - Spring 2018

Instructor
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Office hours: M: 2:00-3:00 PM, drop-ins encouraged.

TA
TBD

Course Goals
Introduces some quantum phenomena leading to wave-particle duality.
Schrödinger theory for bound states and scattering in one dimension. One-particle Schrödinger equation and the hydrogen atom. We will primarily cover the 1st half of Griffiths (Chaps. 1-4)

Class Schedule
Room: PHYS 1201 Toll Physics Building
Hours: MWF: 11:00-11:50, M: 10:00-10:50
4 Credits

Prerequisites
Pre-requisite: PHYS 371 & PHYS 373

Required Text


Course Website
http://elms.umd.edu

Homework
Assignments will be posted on ELMS approximately weekly, due in one week, hardcopy in class. Collaboration is encouraged, but copying is not, and will not help you learn. Your lowest homework grade will be dropped.

Exams
Quiz: there will be ~ 5 quizzes generally held in either the first or second hour of alternate Mondays. The lowest grade will be dropped, so there will be no make-ups.
Midterms: There will be three mid-term exams. The first midterm (M, Feb 5) will cover the introductory mathematical background and should be used as a gauge to determine if you are ready for the later material. The second and third midterms will be on 16-March and 13-April respectively. Dates for midterm exams may change as needed, so pay attention.
Final: the final exam will be on Tuesday 15-May at 8:00-10:00 AM.
Grades
Homework: 15 %
Quizzes: 20%
Early Mid-term: 10%
2nd Midterm: 15%
3rd Midterm: 15%
Final: 25%

Tips for Doing Well
Read the book
Do the homework - feel free to work with classmates, but do work the problems yourself (relying on answers from the Web will do yourself a disservice).
Ask questions - if you do not understand it, chances are some of your classmates do not as well.
Come to lectures - much of the material is not going to be in the book, or will be presented in a different way.

Academic Dishonesty
The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. You are responsible for upholding these standards. Failure to do so can result in a “XF” grade denoting “failure due to academic dishonesty.”