Physics 4301 Quantum Mechanics

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Text: Introduction to Quantum Mechanics, 2nd Edition by David J. Griffiths. We will cover Chapters 1 - 4, a brief review of Appendix A, and if time permits, we'll study parts of Chapters 5 and 6.

Topics: Fundamental principles of quantum theory with application to one and three dimensional systems under various potentials; free particle; bound particle; harmonic oscillator, angular momentum, hydrogen atom, and (time permitting) exchange symmetry, time-independent perturbation theory.

WWW: The course WWW page is http://www.utdallas.edu/dept/physics/Courses/izen/4301.htm

Office hours: To be announced in class, but you are welcome to catch me at other times too.

SI Brandon Anderson brandona@utdallas.edu is the course Supplemental Instruction Leader. Brandon will schedule weekly discussion sessions and exam reviews at a convenient time for the majority of the class.

HW: Quantum will require your flexing your mathematical and philosophical muscles. Unless you live with these problems, you will not 'get it'. Homework assignments and other important course announcements will be posted via a WWW based discussion Yahoo®!Group no later than Thursday of each week. Please join the group by sending an email to phys4301-subscribe@yahoogroups.com and then follow the instructions in the return email. You may choose to read and send postings by email or via the WWW at http://groups.yahoo.com/group/phys4301/. It is your responsibility to join the group and check for postings. The Yahoo®!Group is also intended to be a discussion/question/answer forum for the class. You are expected to keep posts on topic, following commonly accepted practices of nettiquette. To unsubscribe use phys4301-unsubscribe@yahoogroups.com.

Homework normally is to be turned in during the first class meeting of the week. Homework that is placed under my office door after that class is late. If I have not yet graded the homework or made solutions available, I will grade it without penalty, but you hand in late homework at your own peril. If I have already started grading, you are out of luck. Typically, two or three HW problems per week will be graded. The problems to be graded will not be announced. If you want to check your remaining problems, please ask Brandon during an SI discussion session.

You may ask any of your classmates or the course SI Leader for homework hints, and **you are encouraged to do so, especially when you are having trouble getting started on a problem**. Hints and advice must be given completely **orally**, and the hintee may not look at the hinter's written homework or notes. You may not consult the homework of previous classes, solutions to previous years' homework sets, online solutions to Griffiths' problems, or the publisher's solutions manual without the explicit consent of Prof. Izen

Exams: There will be three exams. The last exam may be given during Finals period, but it will not be comprehensive. You are specifically forbidden to consult previous years' tests or solutions, nor may you ask previous classes about the contents of previous tests. If you inadvertently become aware of material from past years' tests, please describe the exact nature of the violation in writing and hand it in with your examination. Aside from freely divulged, inadvertent violations that will be handled at Prof. Izen's discretion, you should assume violations will trigger a UTD disciplinary proceeding. I make an effort to vary test questions from year to year, but some duplication is inevitable due to the limited pool of Quantum Mechanics questions appropriate for an in-class test that are solvable in closed form.

Grading: HW: 15%. Top 2 Exams scores: 35% each. Lowest exam: 15%. Adjustments as necessary for quizzes.

Honesty: In addition to the course policy on consulting past exams and homework, plagiarizing the work of other students, providing information to other students during an exam or quiz, or bringing information into an exam or quiz in any way that is not explicitly approved by Prof. Izen is forbidden. Should you inadvertently violate a course rule such as disclosing information to another student, or inadvertently become aware of information on another student's examination or quiz, please bring it to the attention of Prof. Izen or the exam proctor immediately. Aside from freely-divulged, inadvertent violations which will be handled at Prof. Izen's discretion, confirmed violations of course policies will **certainly** result in the creation of a disciplinary file with the University's judicial officer, and other penalties as allowed under the University's disciplinary guidelines for intellectual honesty.