Introduction to Quantum Mechanics
Physics 310

Instructor: Newshaw Bahreyni
Text (Required): Quantum Physics A Fundamental Approach to Modern Physics, John S. Townsend
Lecture: MWF 9:00 – 9:50, Masters Hall 208
Office Hours: MF 10:00 – 11:30
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Course Description: We will cover time-dependent and time-independent Schrodinger equation in 1 and 3 dimensions, potential wall and barrier and one electron atoms. Prerequisite: Physics 255.

Course Goals: To better understand some of the microscopic phenomena and how quantum theory successfully explains them, to solve Schrodinger equation in one-dimensional potentials, to learn basic atomic structure and angular momentum, to develop problem-solving skills and apply mathematical tools learned from previous courses in solving problems.

Tentative Course Schedule:
Week 1: Waves Review (Chapter 1)
Week 2: Schrodinger Equation (Chapter 2)
Weeks 3,4: Time-Independent Schrodinger (Chapter 3)
Exam I, Friday October 2
Weeks 5-7: One-Dim Potentials (Chapter 4)
Weeks 8,9: Parity and Hermitian Operators (Chapter 5)
Exam II, Friday November 6
Weeks 10-13: Three-Dim Schrodinger (Chapter 6)
Week 14: Introduction to Perturbation Theory
Final Exam, Saturday Dec 19, 8:30 - 10:30

Grading Policy:
The final grade will be a combination of the homework, 2 exams and a final %25 each.

Extensions and Make-ups: Homework sets are due one week after they are assigned. No extensions will be given for homework and there is no make-up exam unless there is a note from the doctor or a letter from the dean’s office.

Academic Honesty: You are encouraged to work together on homework assignments but everyone must hand in their own work and not a copy of someone else’s. Plagiarism is the key to failure.
**Disability Guidelines:** Students who need accommodations for exams or classroom should contact one of the Deans in the Office of Academic Advising for the Disability Accommodation Student Request Form. The student is responsible to confirm any special arrangements 1 week before an exam.