Course Outline

Course: Quantum Mechanics 1-Section I Instructor: Dr Alakabha Datta Office: Lewis 209 Meeting: M-W-F 11-11.50 am at Lewis 104(Tutoring Room) Office Hours: By Appointment Email:datta@olemiss.edu, datta@phy.olemiss.edu Phone: (662) 915-5611 Course homepage: Check Blackboard.



Book : Modern Quantum Mechanics Second Edition J.J. Sakurai and Jim Napolitano

Many other books can be used as references:

Quantum Mechanics by E. Merzbacher.

Principles of Quantum Mechanics by R. Shankar.

Introduction to Quantum Mechanics by David J Griffiths.

Quantum Mechanics by L. Schiff.

Quantum Mechanics by Claude Cohen Tannoudji

Quantum Mechanics by David H. McIntyre.

Quantum Mechanics with Basic Field Theory by Bipin R. Desai.

Solutions for Quantum Mechanics Textbook Problems

www.johnboccio.com/TQM/solutions/QM_Book_Solutions.pdf May 6, 2013 - *Quantum Mechanics*. Mathematical Structure and. Physical Structure. *Problems* and Solutions. John R. Boccio. Professor of Physics.

Course Requirement: You must have taken undergraduate quantum mechanics. You must be familiar with mathematical methods for physicists at the undergraduate level. Knowledge of linear algebra like basis states, eigenvalues, eigenvectors and diagonalization e.t.c. is extremely important

Course Goals: Learning the basic postulates and rules of Quantum Mechanics and learning to apply them to solve problems in various areas of research.

Independent study: The course may also involve solving problems that will require students to research material on published journals to complete the project. The purpose of this is to help the student acquire skills to pursue independent research.

Marking:

Homework: 55 % (30% book HW, 25% short assignments)

Mid Term Exam 20%

Final Exam: 25%

An overall course average of the following percentages will guarantee the corresponding letter grade:

90%	А
80%	В
70%	С
60%	D

Topics Covered in course: Topics will be taken from the first 3 chapters and part of chapter 5. Topics include fundamental concepts of Quantum Mechanics, Quantum dynamics, theory of angular momentum and time independent perturbation theory.

Attendance: There is no attendance requirement. However if you miss an exam because of illness I will require a doctor' note. If you will be away on other reasons inform me prior to your absence and get a note if applicable.

Academic Integrity: We will follow the University's policy of academic integrity (M-book). Violations of these policies will result in a failing grade and other disciplinary actions.