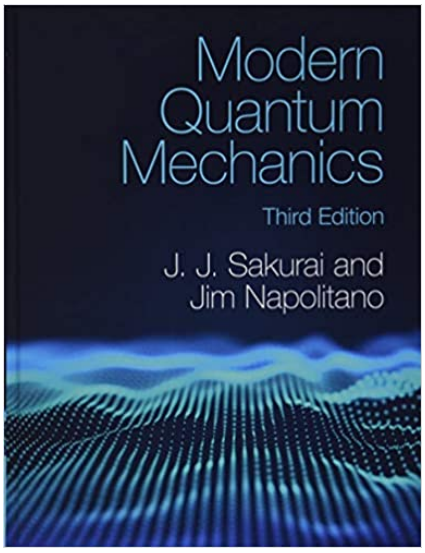
Course Outline

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
Third 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%

Monday Dec 5, 2022 at Noon (See Class Schedule)

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

90%	A
80%	B
70%	C
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.

COVID INFORMATION

If you need to isolate due to contracting the coronavirus at any point this semester, you should do so, and email me as soon as possible. I will work with you to help you continue your progress in the course. More information on isolation protocols can be found at https://coronavirus.olemiss.edu/.

Quarantines are an important tool for controlling the spread of the virus. If you need to quarantine at any point this semester, you should do so, and email me as soon as possible. In your email, state how

long you expect not to attend class. I [will/will not] be able to provide recordings of class sessions, and we can work together to establish a plan for completing the necessary work. You will have access to your texts, my course slides, and our Blackboard course site. More information on quarantine protocols can be found at https://coronavirus.olemiss.edu/.

Students attending the virtual component of hybrid or online courses are subject to the same attendance policy and procedures as traditional students. However, participation is defined in a different manner. The University's "Attendance Policy for Online Education" states: "Student attendance in online courses is defined as active participation in the course as described in the individual course syllabus." If students fail to meet online attendance requirements as stated in the syllabus, they will be given an absence.

Students are encouraged to visit the University's Keep Learning site https://keeplearning.olemiss.edu/ to access information and resources related to COVID-19 support. The site provides links to University student services to facilitate and support learning.

Students with diagnosed health concerns that may affect their compliance with COVID-19 health requirements should contact UM's Student Disability Services (SDS) Office https://sds.olemiss.edu/ to see if they are eligible for an SDS accommodation as soon as possible.

The University Counseling Center is a professional facility offered by the University of Mississippi to assist students, faculty, and staff with many types of life stressors that interrupt day-to-day functioning, including the stressors associated with the COVID-19 pandemic. They offer individual counseling, couple's counseling, group counseling, stress management, crisis intervention, assessments and referrals, outreach programs, consultations, and substance abuse services. There is no fee for currently enrolled University students and everything you say to your counselor is confidential. You can contact the Counseling Center for information about mental health issues at https://counseling.olemiss.edu, counslg@olemiss.edu, 662-915-3784, 320 Lester Hall, and https://www.facebook.com/universitycounselingcenterolemiss/. You can schedule an appointment or get information about appointments by calling the

UCC at 662-915-3784. Attendance Policies (Language in this section can be inserted into syllabus.) Student Support Services (Language in this section can be inserted into syllabus.) Updated Contact Information (Language in this section can be inserted into syllabus.)

The University must have accurate contact information, including cell phone numbers, to facilitate student communications and contact tracing. Students should check and update their University contact information available at https://olemiss.edu/mystudentprofile. ? Exams, tests, or quizzes exceeding 10% of the grade are not be given on the last three days of classes. Papers and projects (so long as due dates are in the syllabus) are allowed during these last three days, just not exams, tests, or quizzes. The Fall 2021 semester will end on Friday, Dec. 3, 2021. Thus, exams, tests, or quizzes exceeding 10% of the total grade) are not permitted on the Wednesday (Dec. 1), Thursday (Dec. 2), or Friday (Dec. 3) of that week.

All University visitors must follow COVID-19 emergency health and safety protocols.