Syllabus PHYS 623 "Introduction to Quantum Mechanics II" Spring 2019

Web page of the course on ELMS/Canvas
Login site: http://elms.umd.edu/
Instructions: - Log in using your UMD Directory ID. If you are registered for the course, you will see the course Web space after login.
- Homework will be delivered via ELMS and must be submitted online via ELMS. Your scores will be posted there.
- Course announcements will be posted on ELMS, so you should check it regularly.

Outside link: https://myelms.umd.edu/courses/1260532

Course Information
Course title: Introduction to Quantum Mechanics II
Course number: PHYS 623, 3 credits
Course description: First and second semesters. A study of the Schroedinger equation, matrix formulations of quantum mechanics, approximation methods, scattering theory etc., and applications to solid state, atomic, and nuclear physics. Continuation of PHYS 622.
Course dates: Monday, January 28, 2019 through Tuesday, May 14, 2019
Location: Room 2108, Chemical and Nuclear Engineering Building (CHE 090)
Days and times: Monday and Wednesday 2 - 3:15 pm
Prerequisite(s): An undergraduate course of quantum mechanics

Instructor
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Teaching Assistant
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Textbooks
Required J. J. Sakurai and Jim Napolitano, Modern Quantum Mechanics, 2nd edition
The goal is to cover Ch. 5 - 8 from this book

Recommended Franz Schwabl, Quantum Mechanics,
freely available electronically from UMD library

Recommended Lecture Notes on Quantum Mechanics by Prof. Robert Littlejohn at University of California, Berkeley (be sure to scroll down)
Recommended NSF-supported Quantum Mechanics Wiki at Florida State University, a collections of various topics in quantum mechanics


Goals, Homework, Exams, and Grades

Course Goals: To cover the last four chapters from the book by Sakurai:
Ch. 5 Approximation Methods
Ch. 6 Scattering Theory
Ch. 7 Identical Particles
Ch. 8 Relativistic Quantum Mechanics
Timeline of the course will be updated weekly on ELMS. Solving homework problems is essential for the course and for preparation to qualifying exam.

Homework: Homework assignments will be posted on ELMS weekly and will be due in one week. Homework must be uploaded online via ELMS only in pdf format as a single file. Other formats, such as doc, jpg, and photo shots of pages, are not acceptable. Homework can be typeset, e.g. using LaTeX or Word, or scanned from handwriting. Homework scores and solutions will be posted on ELMS. Late homework cannot be accepted after solution has been posted.

Exams: There will be a midterm exam and a final exam on Monday, May 20, 1:30 - 3:30 pm. All exams are "open book": You may use the textbooks and your notes.

Grades: The final grade will be based on your scores in exams (50%) and homework (50%). Your score within each category will be divided by the maximal possible score and added toward the overall score with the weights specified above. Then this overall score will be converted into letter grades with + and - steps.

Course Related Policies

General: Course Related Policies
Student Honor Council: The University of Maryland, College Park 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. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://she.umd.edu/.

Created on January 27, 2019