Quantum Mechanics PHYS:5742  
Spring 2021  
www.physics.uiowa.edu/~cpryor/5742

Instructor  
Craig Pryor  
402 VAN  
319-335-0099  
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Lectures  
The course will meet in person MWF 9:30-10:20 in 63 VAN.

Office Hours  
M 1:00-2:00, Tu 1:30-2:30, F 11:30-12:30, or by appointment. Office hours will be held by zoom. The meeting numbers will be posted on the course web site listed at the top of the syllabus.

Course Description  
Continuation of PHYS:5741. Nonrelativistic quantum mechanics, Schrödinger wave mechanics, Hilbert space methods, scattering, spin and angular momentum, selected applications.

Text  
Modern Quantum Mechanics, 2nd Ed., by J. J. Sakurai and Jim Napolitano

Optional: Quantum Mechanics, 4th Ed., by F. Schwabl  
This book is available online as part of the University’s Springer e-book subscription at link-springer-com.proxy.lib.uiowa.edu/book/10.1007/978-3-540-71933-5. You may download pdf’s for free, or order a softcover copy of the book for $25. I do not recommend buying the book elsewhere since it will be much more expensive.

Homework  
Assigned on each Wednesday, due the following Wednesday. Homework assignments will be self-graded. You must submit a scan of your assignment by 5:00 PM on the due date, at which time the solution, with scoring instructions, will be posted on ICON. You will then turn in your graded assignment at the next class meeting.

Exams  
There will be two midterms and a final exam. They will be take-home exams, with dates to be announced in advance of the exams.

Grading  
Homework 20%, Midterms 25% each, Final 30%. Each homework assignment will contribute equally to the homework total, regardless of the number points in an assignment.

Department of Physics and Astronomy Main Office  
203 Van Allen Hall  
319-335-1686  
Chair -- Professor Philip Kaaret, philip-kaaret@uiowa.edu
Absences and Attendance
Students are responsible for attending class and for contributing to the learning environment of a course. Students are also responsible for knowing their course absence policies, which will vary by instructor. All absence policies, however, must uphold the UI policy related to student illness, mandatory religious obligations, including Holy Day obligations, unavoidable circumstances, or University authorized activities (https://clas.uiowa.edu/students/handbook/attendance-absences). Students may use the CLAS absence form to aid communication with the instructor who will decide if the absence is excused or unexcused. The form is located on ICON within the top banner under "Student Tools."

Academic Integrity
All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College’s Code of Academic Honesty. Misconduct is reported to the College, resulting in suspension or other sanctions, with sanctions communicated with the student through UI email. Visit this page for information: (https://clas.uiowa.edu/students/handbook/academic-fraud-honor-code).

Accommodations for Disabilities
UI is committed to an educational experience that is accessible to all students. A student may request academic accommodations for a disability (such as mental health, attention, learning, vision, and physical or health-related condition) by registering with Student Disability Services (SDS). The student is then responsible for discussing specific accommodations with the instructor. More information is at https://sds.studentlife.uiowa.edu/.

Administrative Home of the Course
The College of Liberal Arts and Sciences (CLAS) is the administrative home of this course and governs its add/drop deadlines, the second-grade-only option, and related policies. Other colleges may have different policies. CLAS policies may be found here: https://clas.uiowa.edu/students/handbook.

Classroom Expectations
Students are expected to comply with University policies regarding appropriate classroom behavior as outlined in the Code of Student Life. This includes the policies and procedures that all students have agreed to regarding the Steps Forward for Fall 2020 in response to the COVID-19 pandemic. Particularly, all students are required to wear a face cover when in a UI building, including a classroom. In addition, the density of seats in classrooms has been reduced. In some instances, this will allow 6 feet or more of distance while other cases, it may be less. Regardless, wearing face coverings and maintaining as much distance as is possible are vital to slowing the spread of COVID-19. In the event that a student disrupts the classroom environment through their failure to comply with the reasonable directive of an instructor or the University, the instructor has the authority to ask that the student immediately leave the space for the remainder of the class period. Additionally, the instructor is asked to report the incident to the Office of Student Accountability for the possibility of additional follow-up. Students who need a temporary alternative learning arrangement related to COVID-19 expectations should contact Student Disability Services (https://sds.studentlife.uiowa.edu/fall-2020/covid-19-temporary-learning-arrangements/; +1 319 335-1462).
Class Recordings: Privacy and Sharing
Some sessions of a course could be recorded or live-streamed. Such a recording or streaming will only be available to students registered for the course. These recordings are the intellectual property of the faculty, and they may not be shared or reproduced without the explicit written consent of the faculty member. Students may not share these sessions with those not in the class; likewise, students may not upload recordings to any other online environment. Doing so is a breach of the Code of Student Conduct and, in some cases, a violation of the Federal Education Rights and Privacy Act (FERPA).

Communication and the Required Use of UI Email
Students are responsible for official correspondences sent to the UI email address (uiowa.edu) and must use this address for all communication within UI (Operations Manual, III.15.2).

Complaints
Students with a complaint about an academic issue should first visit with the instructor or course supervisor and then with the Chair of the department or program offering the course; students may next bring the issue to the College of Liberal Arts and Sciences; see this page for more information: https://clas.uiowa.edu/students/handbook/student-rights-responsibilities.

Final Examination Policies
The final exam schedule is announced around the fifth week of classes; students are responsible for knowing the date, time, and place of a final exam. Students should not make travel plans until knowing this information. No exams of any kind are allowed the week before finals with a few exceptions made for particular types of courses such as labs or off-cycle courses: https://registrar.uiowa.edu/final-examination-scheduling-policies.

Nondiscrimination in the Classroom
The University of Iowa is committed to making the classroom a respectful and inclusive space for people of all gender, sexual, racial, religious, and other identities. Toward this goal, students are invited in MyUI to optionally share the names and pronouns they would like their instructors and advisors to use to address them. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University’s Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity (https://diversity.uiowa.edu/eod; +1 319 335-0705 or (diversity.uiowa.edu)

Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment must be reported immediately. For assistance, please see https://osmrc.uiowa.edu/.