Course Information Sheet for Physics 371H: Honors Quantum Mechanics

This course provides an introduction to nonrelativistic quantum mechanics: Schrödinger's equation, one-dimensional problems, operators and matrices, three-dimensional problems, two-particle problems, angular momentum, the hydrogen atom, and spin. Some facility with complex numbers, ordinary and partial differential equations, and linear algebra is required.

In addition to the requirements of Physics 371, students enrolled for honors credit must make a 15-minute oral presentation on an advanced topic to be agreed upon with the instructor.

Professor: Charles Stafford **Office:** PAS 347
Phone: 626-4260 **email:** staffordphysics92@gmail.com

Lectures: MWF 10–10:50am, PAS 414 **Office hours:** Thursdays, 1–3pm

Web: `www.physics.arizona.edu/~stafford/teaching.html` (main site);
`d2l.arizona.edu` (mostly grades and proprietary material)

Grading:

The course will be graded on a curve, based on the cumulative score. The minimum cumulative percentages necessary to obtain the following letter grades will be approximately (but not higher than): $A \geq 85\%$, $B \geq 70\%$, $C \geq 55\%$, $D \geq 40\%$. Cumulative scores will be determined as follows:

Homework: 9% (lowest score dropped)
Midterm 1: 18% (February 12)
Midterm 2: 18% (March 9)
Midterm 3: 18% (April 15)
Honors presentation: 10% (May 2)
Final Exam: 27% (Friday, May 6, 10:30am–12:30pm)

No excuses accepted for missed homework, but the lowest hw score will be dropped. A missed exam due to an excused absence or a planned absence that is documented ahead of time by the student and approved by the instructor will be substituted with a make-up exam or an alternative arrangement at the discretion of the instructor.

All work to be considered for a regrade must be submitted at most one week after its due date.

Required Text:

David J. Griffiths, "Introduction to Quantum Mechanics" (2nd Ed., Pearson Prentice Hall, 2004).

Additional References

Richard P. Feynman *et al.,* "The Feynman Lectures on Physics, Volume 3." Available free online at `http://www.feynmanlectures.caltech.edu/III_toc.html`.

Lorella M. Jones, "An introduction to Mathematical methods of physics" (Benjamin/Cummings, 1979), available in the Science Library.

Accessibility and Accommodations:

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. Testing accomodations at the DRC should be arranged ASAP as space is limited.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Academic integrity:

Students are expected to follow the University code of academic integrity and the code of student conduct. These codes can be found at
`http://deanofstudents.arizona.edu/policiesandcodes`.

Note: The information contained herein is subject to change with reasonable notice from the instructor.