

## Course Information Sheet for Physics 472H/572: Quantum Mechanics II

A continuation of Physics 371. Schrödinger equation with an external electromagnetic field; identical particles; addition of angular momenta; fine structure of atomic spectra; molecules; approximation methods (perturbation theory; semiclassical methods; variational principle); special topics.

In addition to the requirements of Physics 472, students enrolled for honors or graduate credit must make a 15-minute oral presentation on an advanced topic to be agreed upon with the instructor. The presentation will be graded rigorously, according to the same standard as the exams.

**Professor:** Charles Stafford

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**Phone:** 626-4260

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**Office hours:** Thursdays, 1–3pm (tentative), or by appointment

Course content available at [www.physics.arizona.edu/~stafford/teaching.html](http://www.physics.arizona.edu/~stafford/teaching.html);  
item grades and duplicates of important information available at [d21.arizona.edu](http://d21.arizona.edu).

### 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: 13.5% (due Fridays at 4pm; lowest score dropped)

Midterm 1: 22.5% (Thursday, October 2)

Midterm 2: 22.5% (Thursday, November 13)

Presentation: 10% (December 2 or 4)

Final Exam: 31.5% (Wednesday, December 17, 10:30am–12:30pm)

One or more homework assignment(s) will be computational. No excuses accepted for missed homework, but the lowest homework 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** (available in the Science Library)

Lorella M. Jones, "An introduction to Mathematical methods of physics" (Benjamin/Cummings, 1979).

**Disabilities:**

Students requiring accomodation in testing or note-taking must notify the instructor and sign up with the Disability Resource Center by September 5, 2014.

**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 [deanofstudents.arizona.edu/policiesandcodes](http://deanofstudents.arizona.edu/policiesandcodes).

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