

Chemistry 542
Fall, 1010
Syllabus

Instructor: Prof. Robert Gordon
4240 SES
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Office hours: Monday and Wednesday at 3pm.

Text: I. N. Levine, *Quantum Chemistry*, 6th Edition
Supplementary reading, to be assigned.

The core material of this course deals with the fundamentals of quantum mechanics, which are covered in the first eleven chapters of the book. Topics to be covered are (1) the foundations of quantum mechanics, (2) elementary quantum mechanical systems, including the free particle, particle in a box, the harmonic oscillator, the rigid rotor, and the hydrogen atom, (3) atomic structure, and (4) approximation methods. Mathematical skills required for this course include linear algebra and matrices, integral and differential calculus, and differential equations.

The grader for the course is Yang Cui (ycui7@uic.edu, 5104 SES). His office hour is on Thursday at 2pm. A problem set will be assigned each week and will usually be due in class one week later. Late homework will be accepted at the discretion of the grader, but in no case will it be accepted once the solutions have been posted.

I will have to miss an occasional lecture on some Fridays in September and at other times. To make up these missed lectures, and also to provide an opportunity for more informal discussion and review, there will be an extra session each week on a day and time to be announced. Please look at the course calendar to find the dates of the extra lectures.

There will be two hour exams, tentatively scheduled for Sept. 22 and October 27. The final will be given on Wednesday, December 8, from 1:00 to 3:00 pm.

The final grade will be calculated as follows:

Weekly problem sets:	20%
First Hour Exam:	20%
Second Hour Exam:	20%
Final Exam:	40%