

Chemistry 542  
Fall, 2002  
Syllabus

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

Text: I. N. Levine, *Quantum Chemistry*, 5<sup>th</sup> 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 ten chapters of the book. Topics to be included are (1) the foundations of quantum mechanics, (2) elementary systems including the particle in a box, the harmonic oscillator, the rigid rotor, and the hydrogen atom, and (3) approximation methods. The emphasis throughout the course will be on concepts rather than applications.

Mathematical skills required for this course include integral and differential calculus, linear algebra and matrices, and Fourier analysis. We may also do some computer projects, depending on the students' prior experience.

The grader for the first half of the course is Sujatha Unny (SES 4244, [sunny1@icarus.cc.uic.edu](mailto:sunny1@icarus.cc.uic.edu)). The grader for the second half of the course is Praneeth Edirisinghe (SES 4230, [pediri1@uic.edu](mailto:pediri1@uic.edu)). Their office hours are Tuesday and Thursday 2-3pm. A problem sets will be given 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 any case will not be accepted once the solutions have been distributed.

I will have to miss an occasional lecture on some Mondays in September and October. 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, to be held on Wednesday, September 25 and Monday, November 4. The final will be on Tuesday, December 10, 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%

