

CHEM 5210.001
SPRING 2016

Lecture: WF - 11:00 AM to 12:20 PM - Room ENV 391

Instructor: Martin Schwartz

Office: Chem. Bldg.: Rm. 272

Off. Hrs: Mon through Friday - 10:00 AM to 11:00 + **Anytime**

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Web Site: <http://www.chem.unt.edu/~mschwartz/chem5210/>

or: <http://www.chem.unt.edu/> and navigate (→Faculty→Schwartz→Classes)

I. COURSE MATERIAL

A. Chapter	Title	Approx. Starting Date (Week of)
1.	Introduction and Background To QM	Jan. 20
2.	Quantum Theory	Jan. 27
3.	Particle-in-Box Models	Feb. 3
4.	Rigid-Rotor Models and Angular Momentum Eig.	Feb. 17
5.	Molecular Vibrations and Time Indep. Perturb.	Mar. 2
6.	The Hydrogen Atom	Mar. 9
7.	Multielectron Atoms.....	Mar. 30
8.	Diatomic Molecules	Apr. 13
9.	<i>Ab Initio</i> and Density Functional Methods	Apr. 20
10.	Semiempirical Methods and Applications of Symmetry.....	Apr. 27

B. Text: **No Required Text:** When I've taught CHEM 5210 in the past, students commented that they utilized the PP lectures, homework, old exams to study for tests, and didn't find the textbook particularly useful. Therefore, I do not assign any required text for the course.

I **would** suggest that as we reach specific material (e.g. Particle in Box, Rigid Rotor, Harmonic Oscillator, etc.), you will find it useful to review the material in the quantum mechanics section of any good undergraduate textbook.

II. HOMEWORK

Homework problems will be assigned for each chapter (attached to the Chapter Outline) .

Homework will **not** be collected. However, you are **strongly encouraged** to work the homework, since problems and questions on the exams will be based upon homework and examples worked in class.

Solutions to the homework problems are available on the CHEM 5210 Web Site.

III. EXAMS

A. GENERAL

1. There will be three “hourly” exams. Each hourly exam will count 100 points. You will be given ~1.8 hours (10:00 AM - 11:50 AM) to work each exam. The tests will be in a room (to be determined) in the Chemistry Building.
2. There will be a 2+ hour comprehensive final exam. The Final will count 200 points. The test will be in a room (to be determined) in the Chemistry Building.
3. Either the lowest of the three hourly exams **OR** one-half of the final exam will be **dropped** prior to computing your average.
4. There will **not** be any makeup exams. A missed exam will count as your dropped test (excluding a **well documented** serious illness, requiring hospitalization).
5. If classes are cancelled by the University on the day of a scheduled exam, then the test is automatically scheduled for the next class lecture period.

B. TEST SCHEDULE**Exam # Date**

1 Friday, February 19

2 Friday, March 25

3 Friday, April 22

Final Exam Monday, May 9, 10:30 AM - 12:30 PM

We will have the Final Exam in a room (to be determined) in the Chemistry Building. The above time period is the official time. We will arrange extra time for the Final Exam.

IV. COURSE GRADING**A. CALCULATION OF AVERAGE**

Your average will be calculated as a percentage of 400 points. The average will be calculated after dropping the lower of either:

- a) The lowest of the three hourly exams.
- b) One-half of the final exam.

B. GRADING SCALE

A: $\geq 90\%$ B: $\geq 75\%$

V. NOTES

1. By University regulations, a grade of "I" cannot be given as a substitute for a failing grade in a course.
2. **ADA Compliance:** I am happy to cooperate with the Office of Disability Accommodation to make reasonable accommodations for qualified students with disabilities. If applicable, please present your request, with written verification from the ODA, before the first test.
3. Any student caught cheating on an examination will receive an "F" in the course and be reported to the Dean of Students.