CHEM 3530.001
SPRING 2018

Lecture: M, W, F -11:00 AM to 12:10 PM
Credits: Four (4) Credits
Room: Rm. 106

Instructor: Martin Schwartz
Office: Rm. 272 [Chem. Bldg.]
Off. Hrs: MWF - 10:00 AM to 11:00 AM + 12:15 PM - 1:00 PM
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OR: http://www.chem.unt.edu/ and navigate (→Faculty→Schwartz→Classes)

I. COURSE MATERIAL

A. Text: There is no formal text required for this course
See last page of syllabus for explanation

B.

Chapter	Title	Approx. Starting Date (Week of)
1.	The Properties of Gases	Jan. 17
2	Thermodynamics: The First Law	Jan. 22
3.	Thermochemistry	Jan. 29
4.	Thermodynamics: The Second Law	Feb. 12
5.	Phase Equilibria: Pure Substances	Feb. 19
6.	The Properties of Mixtures	Feb. 26
7.	Principles of Chemical Equilibrium	Mar. 5
8.	Consequences of Equilibrium	Mar. 26
10.	The Rates of Reactions	Apr. 9
11.	Accounting for the Rate Laws	Apr. 23
20.	Electronic Transitions and Photochemistrry	If time

CHEM 3530.001
SPRING 2018

II. HOMEWORK

(A) Homework problems will be assigned from "text" exercises at the end of each chapter. Solutions for these problems will be posted on the CHEM 1413 Web Site.

(B) A number of additional supplementary questions will be handed out with each chapter outline. Answers will be given to the supplementary questions on the course web site. I will be happy to work out complete solutions to these questions as well as textbook problems during the Wednesday recitation classes.

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

III. EXAMS

1. There will be four "hourly" exams. The tests will be approximately 70% to 80% multiple choice questions and 20% to 30% problems. Each hourly exam will count 100 points.

   You will be given extra time (past 12:10 PM) for the exam if needed.

   No material covered later than the Monday prior to the test will be on a given exam.

2. There will be a 2 hour comprehensive final exam. The exam will be composed primarily of multiple choice questions. The final will count 200 points.

3. The lowest of the four hourly exams will be **dropped** prior to computing your average.

4. All four hourly Exams and the Final Exam must be taken during the regularly scheduled times. Exams cannot be taken outside the scheduled time.

5. There will **not** be any makeup exams. A missed exam will count as your dropped test (excluding a **well documented** serious illness, requiring hospitalization).

6. 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 9
2	Friday, March 2
3	Friday, March 30
4	Friday, April 20
Final Exam	Monday, May 7 10:30 AM - 12:30 PM

IV. COURSE GRADING

A. CALCULATION OF AVERAGE

Your average will be calculated as a percentage of 500 points. The average will be calculated after dropping the lowest of the four hourly exams.** The final will count 200 points.:

If a student receives a grade of zero on a test for cheating, it **cannot** be used as the dropped exam.

**On the occasion that keeping all four hourly exams results in a higher average, then no exam will be dropped (and the average will be calculated as a percentage of 600 points). This is relatively uncommon (~10%-20% of student grades).

B. COURSE GRADES

(Based on average calculated to nearest 0.1% after dropped exam)

A: Avg. $\geq$ 90.0%

B: 80.0% $\leq$ Avg. $\leq$ 89.9%

C: 65.0% $\leq$ Avg. $\leq$ 79.9%

D: 50.0% $\leq$ Avg. $\leq$ 64.9%

CHEM 3530.001
SPRING 2018

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. There will be no “extra credit” assignments in this course. Grades will be determined on the basis of examination scores, as detailed above.

4. In order to protect against potential cheating on examinations, I must request that students either refrain from wearing long-billed caps on tests days or turn the bill towards the back. Any student caught cheating on an exam will receive an “F” in the course and reported to the Dean of Students.

CHEM 3530.001
SPRING 2018

VI. No Textbook

The lectures and homework are based loosely upon a text which is no longer in print: **Elements of Physical Chemistry, 5th. Ed.**
by Peter Atkins and Julio de Paula
Freeman Press

Based upon past experience, most students find that the lectures, PowerPoint (and handouts), Homework and solutions, and Practice Exams are sufficient to learn the course material and study for the Exams, and did not really use the textbook.

If you prefer to have additional reading, you have a couple of options:

1. The above textbook can be purchased from Amazon for $15-$20.

2. The authors have another, more sophisticated, textbook:
: **Physical Chemistry for the Life Sciences, 2th. Ed.**
by Peter Atkins and Julio de Paula
Freeman Press

This latter book covers significantly more detail than given in the course and the "old" text. **However,** it has been published free on the Web, and can be accessed by the following URL should you wish to read the material which we cover:

http://astro.ins.urfu.ru/sites/default/files/upload_files/temp/1/Physical_chemistry_for_the_life_sciences.pdf

Note: It seems that to get to the above site, copy and paste the URL into the browser.

I would emphasize that all exams will be based upon material covered in class + Homework, Practice Exams, etc.

You will **NOT** be responsible for additional reading material not covered in the course.