

# CHEM273 Syllabus

## Spring 2008

**Instructor:** Professor Lynn Russell ([lmrussell@ucsd.edu](mailto:lmrussell@ucsd.edu)).

**Office Hours:** Tu/Th 16:50-17:20 after class in Center 216, and by appointment at NH343.

**Office:** SIO/Nierenberg Hall 343 at 8810 Shellback Way (at LJSB), 534-4852.

**Lecture:** Tuesdays and Thursdays 15:30-16:50, Center 216.

**Teaching Assistant:** Lelia Hawkins ([lnhawkins@ucsd.edu](mailto:lnhawkins@ucsd.edu)), Keck/OAR 228, 534-6856.

**Office Hours:** Wednesdays 18:00-18:50 at Espresso Roma, and by appointment at OAR228.

**Discussion Section:** Wednesdays 17:00-17:50, Peterson 104.

### Course Topics and Schedule:

The topics covered in this course are based on concepts that you have learned in other courses. You will be expected to master a large volume of material. One key to success is to not fall behind in your work. Attendance at lectures and sections will not be taken but is mandatory since missing a class can result in a lack of understanding of course material in future classes. Also, some material presented and discussed in class might not be covered in the textbook with the same level of detail.

1. Atmospheric Structure (for Midterm 1: Ch. 4, 10, 2, 3, 5)
  - a. Radiation
  - b. Stratospheric Chemistry
  - c. Lifetimes
  - d. Composition, Sources and Sinks
2. Tropospheric Chemistry (for Midterm 2: Ch. 6, 8, 9)
  - a. Global Biogeochemical Cycles
  - b. Air Pollution
  - c. Tropospheric Chemistry
3. Climate Change (Ch. 7, 1)
  - a. Clouds and Precipitation
  - b. Measuring Atmospheric Composition
  - c. Global Warming and Climate Change

**Class Web-page:** <http://webct.ucsd.edu> and <http://aerosols.ucsd.edu>

**Reserves Web-page:** <http://reserves.ucsd.edu/>

### Required Textbook:

Peter Hobbs, *Introduction to Atmospheric Chemistry*, Cambridge University Press, 2000.

### Recommended/ Reserved Textbooks:

Barbara Finlayson-Pitts and James Pitts, Jr., *Chemistry of the Upper and Lower Atmosphere: Theory, Experiments, and Applications*, Academic Press, 2000.

John Seinfeld and Spyros Pandis, *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*, Wiley Interscience, 1997.

John Houghton, *Global Warming, The Complete Briefing, Third Edition*, Cambridge University Press, 2004.

Peter Hobbs, *Basic Physical Chemistry for the Atmospheric Sciences*, 2nd Edition, Cambridge University Press, 2000.

## Grading

First Midterm 20% (Thursday, April 24: 15:30-16:50)

Second Midterm 25% (Tuesday, May 22: 15:30-16:50)

Final 30% (Wednesday, Jun 9: 15:00-18:00)

Peer-Reviewed Article and Class Presentation 20%

Other (discussion, quizzes) 10%

## Problem Sets:

Recommended problems: **ALL** problems in the covered Chapters from the *Introduction to Atmospheric Chemistry* textbook, with exceptions as noted in section. You are not required to turn in the problems; however it is strongly recommended that you work on these problems to check your understanding of the material presented and to prepare for the examinations. This material may be covered in exams and quizzes. (Collaboration is authorized on the ungraded problem sets but not on the graded exams and quizzes; all graded items, including extra credit, must be completed without collaboration.)

## Exams and Quizzes:

Midterm examinations will be given during lecture time on Thursdays **April 24** and **May 22**.

The final examination is scheduled for **Monday, June 9 (15:00-18:00)**.

Make-up exams are not possible, and exam locations will only be changed for OSD clients or active duty military assigned out of state during exams. Five or more quizzes will be given, but your overall quiz score will be at least as high as your four highest scores, so if you miss a quiz due to a legitimate or other reason you will not be allowed to make it up. The quizzes will deal with material being covered in class during the corresponding week (as well as necessary related material and assigned reading or homework). The time for the quizzes will not be announced. Quizzes will be held either during the lecture time or during the discussion section. All exams and quizzes must be written in ink.

## Plagiarism and Cheating

Plagiarism (presenting the language, ideas, or thoughts of another as one's original work) will not be tolerated in this class and will be dealt with according to the policies dictated by the University (University policies can be found in the UCSD Catalog). If a paper is found to contain material copied from another source without proper reference, the student will receive a grade of F for the entire course. Anyone cheating on an exam will receive an F for the entire course.

### A few "words to the wise":

(1) All **legitimate reasons for missing mandatory parts of the course** require a letter from a Dean, a "Divine," or a medical Doctor. Please bring or submit these when you talk or email to the TA or instructor.

(2) Missing a lecture, section, or quiz means that you will need to ask a student in the class for the material covered. Printouts from slides are distributed in class only, but these do not constitute lecture notes. **Taking lecture notes enhances learning** and so is the responsibility of each student; slides are provided only as an aid to facilitate this. Lecture notes from missed classes should be obtained from other students in the class not the TA or instructor (even if you have a legitimate reason for missing the class).

(3) If you miss a midterm, **you will get a zero** so the final will count more (even if you have a legitimate reason for missing the midterm such as severe illness, a death in the family, etc). If you miss the first midterm and then suddenly cannot take a subsequent midterm due to severe illness, a death in the family, etc., **you will get a zero on both midterms** and thus be forced to drop the course. Missing a midterm is a risky gamble.

(4) If you miss the final, **you will get a zero** unless you are seriously ill and can present proof in the form of a hospital bill or police report from an auto accident. In these special cases, your final grade will be determined solely from your midterm scores without dropping any of the two scores. **Off-site or makeup finals will only be given to active members of the armed services working abroad during finals week.**

- (5) Midterms and the final will never be given except at the scheduled times and places (or at OSD). I will happily and gratefully make exceptions for soldiers called up for out of state active military duty.
- (6) Exams will be returned for your review at the end of class. No writing material will be allowed during your review of the graded exams, and any marks that you add to your exam prior to asking for a re-grade will constitute academic dishonesty. If you have a question about the correct answer or the partial credit you received, you must ask it in writing before you leave the class. If you are unable to follow this re-grade policy, you may request an exception to this policy in writing from the instructor for legitimate and honest reasons.
- (7) The following will not excuse a midterm or final: (a) Athletic engagements, (b) Special Olympics or similar events, (c) Social/family commitments, (d) Employment obligations, (e) Political Campaigning, (f) Over-sleeping, (g) Car problems; (h) Child care. **If you have a known or potential conflict**, please take the class next year.
- (8) The final **will not** be rescheduled for students who have 3 finals in one day. Our final is now scheduled for **Monday, June 9: 3-6 pm**. Just to repeat one more time: Students must take their midterms and final at the required time. **Off-site or makeup finals will only be given to active members of the armed services working abroad during finals week.**
- (9) You are **encouraged to obtain help from the TA and instructor** by asking questions in class, section, office hours, and email. All other forms of improving your work other than **your own honest effort** are considered unauthorized collaboration or cheating, unless it is explicitly stated otherwise in writing. Examples of unauthorized collaboration or cheating on exams and quizzes are defined to include any use of words or equations copied from a source (such as your friend, the web, study guides, notes, your phone/PDA, your calculator memory); their use on graded assignments is permitted only if specifically authorized and only if explicitly cited.

**Academic Dishonesty:** The University expects TAs and instructors to take student misconduct very seriously for "academic dishonesty is unacceptable conduct which seriously undermines the integrity of scholarship and erodes the value of honest effort". (from the *UCSD Instructor's Guide For Preventing And Processing Incidents Of Academic Dishonesty*) The definition of academic dishonesty by the university is "any conduct engaged in by any student that violates the UCSD Policy on Integrity of Scholarship". In short, all academic work must be done by the student to whom the work has been assigned FOR THAT QUARTER. Furthermore, that work must be done without unauthorized aid of any kind. **There is a broad range of behaviors that fall under the umbrella of academic misconduct.** If you are unclear on whether any effort toward your grade in this course could/would be unauthorized, then **you should be very specific and ask your TA or the instructor.** It is the *student's responsibility* to make sure that he/she is *not* dishonest in the academic sense. **Being academically dishonest is an easy way to fail this course** (or *worse* - expulsion from the University is possible!). If you have committed academic dishonesty and are caught, the consequences will be severe (an **'F' grade** being the *least* severe). All use of unauthorized material in quizzes or exams constitutes academic dishonesty, as does any false, incomplete, or unclear portrayal of your work in requesting a regrade. **To enroll in this course, you are required to sign below that you understand all aspects of the requirements of this course, including the policy on academic dishonesty. Until you have signed and returned this form, your grades on all coursework will be zero.**

**By signing below, I state that I have read completely, have understood fully, and will undertake honestly (with only explicitly authorized aid from any sources) all aspects of the policies and requirements of this course, including the University policy on academic dishonesty. Furthermore, the enumeration in this syllabus of certain specific examples of academic dishonesty shall not be construed to allow behaviors not enumerated here.**

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Signature

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Student ID

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Date