



4:173 ATMOSPHERIC AND ENVIRONMENTAL CHEMISTRY

PROF. MARK A. YOUNG

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Syllabus

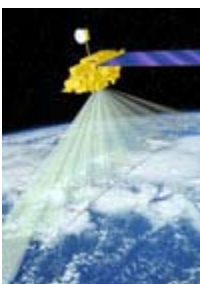
INSTRUCTOR: Prof. Mark A. Young

Office: 229 CB

Phone: 335-2099

Office Hours: T, Th 9:30-10:30 AM or by appointment

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COURSE CONTENT: Fundamental chemical processes of importance in the atmosphere, soil and water with an emphasis on the kinetics and photochemistry of homogeneous and heterogeneous reactions, atmospheric structure and dynamics, global geochemical cycling, chemistry-climate relationships, and

environmental pollution. Experimental methods used in field and laboratory studies.

PREREQUISITES: Knowledge of basic chemistry, chemical kinetics and thermodynamics. Basic calculus.

LECTURE: T, Th 10:55-12:10 PM in [221 CB](#); attendance is expected.

TEXT AND MATERIALS:

- “Air Composition and Chemistry”, by P. Brimblecombe, Cambridge University Press, 2nd. ed., 1995.
- “Aquatic Environmental Chemistry”, by A.G. Howard, Oxford University Press, 1998.
- “Soil Chemistry and Its Applications”, by M. Cresser, K. Killham, and T. Edwards, Cambridge University Press, 1993.
- various handouts and web sites.
- Atmospheric and Environmental Chemistry class web site: <http://www.uiowa.edu/~c004173/>

GRADING: The final course grade will be based on performance in the following activities:

Homework assignments	30 %
Exams (two exams)	40 %
Final project	30 %

Plus/minus grades will be assigned within each range.

EXAMINATIONS: There will be two in-class exams, each covering approximately half of the course material. There will be no comprehensive final exam. Make-up and early examinations must be arranged with the instructor and are only available in the event of a University recognized excuse (e.g. a documented medical emergency). If you feel that an error was made in the grading of an exam, you may request a re-grade by notifying the

instructor within one week of receiving the graded material. The request should be in writing and indicate the section of the exam that is in question. Please note that the entire examination may be subject to a re-grade.

HOMEWORK: There will be approximately four graded homework assignments. The problem sets should represent the students own work. (Please see the section in the Student Academic Handbook on [Rights and Responsibilities](#) for University policy on academic misconduct). Late assignments and assignments submitted by email will not be accepted. The problem sets are subject to the same re-grade policy as for examinations, as described above.

FINAL PROJECT: The final project will consist of a written report on a topic relevant to atmospheric and environmental chemistry. Possible project topics will be discussed and each student will confirm their choice with the instructor.

COMPLAINTS, PROPER CONDUCT, AND MODIFICATIONS: Please inform the instructor if you have complaints about the course content or policies. The procedures are described in the [Rights and Responsibilities](#) section of the Student Academic Handbook.

Students with special needs or disabilities that may require some modification of seating, testing, or other class requirements, should see the instructor so that appropriate arrangements may be made. (Please see the [Student Disability Services](#) web site for more information.)



updated: August
2004

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