EAS 4740 Syllabus

Atmospheric Chemistry EAS 4740, Section 1, 3 Credits

Fall 2026

Instructor Information

Instructor: Jennifer Kaiser

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General Course Information

Description

This course provides a general chemical description of the Earth atmospheric system with a major focus on the two lowest layers of the atmosphere, i.e., the troposphere and the stratosphere.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

- Apply the fundamental principles of chemical kinetics and mass balance to develop and solve simple box models
- Describe and analyze the chemical mechanisms and physical processes governing stratospheric and tropospheric composition
- Discuss the interconnectedness of atmospheric composition and the global climate system

Required Course Materials

Introduction to Atmospheric Chemistry; D. J. Jacob. Available for free online.

Grading Policy:

Grades are rounded to the nearest integer. Letter grades are assigned are as follows:

- A ≥ 85%
- B: 75-84%
- C: 65-74%
- D: 50-64%

- F <50%

Assignments

- Homework, 25%
- Exam 1, 30%
- Exam 2, 30%
- Presentation, 15%
- Final Exam (Optional): If taken, the Final Exam is weighted at 30%, and Exams 1 and 2 in weight to 15% each.

Description of Graded Components

All exams are in class, on paper, and closed book/notes.

Course Policies

Attendance and/or Participation

Students are expected to attend all classes. In the event of an absence due to illness or other extenuating circumstances, students are responsible for all material covered.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Core IMPACTS

Core IMPACTS is the University System of Georgia's General Education curriculum. If you are teaching a course that counts towards Core IMPACTS, you should include a syllabus statement about the Core area and associated career competencies. This resource developed by the Center for Excellence in Teaching and Learning and Online Education at Georgia State University includes template syllabus statements for each of the Core IMPACTS areas that you may adapt for your course.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss

your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.