

EAS 6430 Syllabus

Experimental Methods in Air Quality, EAS 6430, 3 Credits

Spring 2027

Instructor Information

Instructor: Rodney Weber

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General Course Information

Description

Introduction to experimental and field methods with a focus on measurements of atmospheric gases and particulates associated with air quality.

Course Learning Outcomes

Upon completion of this course, the student should have:

Knowledge of the theory behind commonly used and research-grade atmospheric instrumentation

Practical laboratory and field measurement skills

Skills in the analysis of atmospheric measurement data

Required Course Materials

None.

Lectures and Labs

Lecture: There will be 1 lecture per week covering lab background material and assistance with data analysis and interpretation.

Labs: Lab experiments will take place in the EAS research trailer, the ES&T Weber labs, or the ES&T penthouse lab. Sign-up for labs will be arranged in class. Lab report due dates will be assigned in class.

Grading Policy:

5 lab experiments, all of equal weight (i.e., $100/5 = 20\%$ each).

A>90; B>80; C>70; D>60

Description of Graded Components

Each lab experiment is graded on a written lab report. Ideally there will be 2 students per lab group, **where each student is expected to submit their own lab report that represents their own work (i.e., graphs, data interpretation, etc.).**

Course Policies

Attendance and/or Participation

This will be an active learning environment and all students are expected to participate equally with their respective lab partner in the performance of the experiments. It is also expected that all students participate in the weekly classes since this is the most efficient way to learn from both other students and the lecturer.

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](#).

Academic misconduct includes, but is not limited to: (1) use of material that is wholly or substantially identical to that created or written by another individual or group, and (2) false claims of performance or work that have been submitted by a student. Any student suspected of misconduct will be reported to the Office of Student Integrity.

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.

Pre- &/or Co-Requisites

None, but helpful if taken an aerosol or atmospheric chemistry class, such as EAS 6795 and

EAS/CEE 6790.

Collaboration, Group Work, and Use of Generative AI

Lab experiments are carried out in groups, ideally 2 students per group. However, each student must submit their own lab report that represents their own work (i.e., graphs, data analysis and interpretation, etc.) written or produced by your own hand.

Extensions, Late Assignments, & Re-Scheduled/Labs

Late submitted lab writeups will be penalized accordingly. Missed participation in a lab will not be permitted. Rescheduling labs due to illness, approved Institute activities or religious observances will be accommodated.