

Advanced Laboratory I & II

Summer 2026

PHYS 4321 & 4322

3 credit hours

Instructor Information

Instructor: Eric Murray

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General Course Information

Description

Experiments are conducted that demonstrate basic principles from various fields of physics. An emphasis is placed on contemporary concepts in modern physics.

Course Learning Outcomes

Upon successful completion of this course, you should be able to write a clear, succinct, and precise lab report, with conclusions that are supported by your data and analysis.

Required Course Materials

None. Lab manuals are available in Canvas.

Grading Policy:

Each lab report is worth 25% of the final grade.

Description of Graded Components

Lab Report scores will be assigned as follows:

- Performance of experiment and quality of data /50pts
- Analysis and presentation of experiment /30pts
- Other elements (including logbook keeping and late penalties) /20pts

Note that scores are assigned to Lab Reports. That is, if you perform the experiment and keep a good notebook, but do not submit a report, you will earn zero, not 70.

Note, too, that late penalties may result in an “other” score less than zero.

The grade breakdown is A = 90-100, B = 80-89, C = 70-79, D = 60-69, F <60.

Course Policies

Attendance and Participation

You must be present for the first day of each experiment; contact your instructor if you will be unable to attend.

On subsequent days, you need attend only if you will be collecting data, although you are always welcome to attend. Note that you should arrive in the first half-hour of the class meeting. If there are no students present after that, the instructors will lock the lab room and leave.

Note that you may not use any data that you did not participate in collecting during the current semester.

Accommodations for Students with Disabilities

If you are a student with learning needs that require accommodation, [contact the Office of Disability Services](#) (404-894-2563) as soon as possible to make an appointment to discuss your needs and to obtain an accommodations letter. Please also e-mail your instructor to make an appointment for discussing your accommodation.

Student-Faculty Expectations

It is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body at Georgia Tech. [The Student-Faculty Expectations](#) articulate some basic expectations.

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.

In particular, each student must turn in their own original lab report, based on data they participated in collecting in the current semester. Although you work in pairs, your laboratory reports are written individually (including text, tables and figures). The protocol is to take data together, share your research and external resources, discuss the experiment and results, as you would do in a research team, but write reports separately.

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