

BIOS 4460 Syllabus

Communicating Biological Research | 1 Credit

Fall 2026

General Course Information

Description

Biology students will present seminars on recent research topics based on their own research experience and literature research. This course will be structured similarly to an academic lab meeting, where effective participation and the ability to provide constructive criticism to your colleagues are fundamental.

Course Learning Outcomes

The objectives for the course are for students to:

- develop oral and poster presentation skills on your own research
- engage an audience in a scientific topic through presentation
- critically present and discuss your research results
- put your biological findings in a broader scientific context

These skills can be applied in a variety of possible future careers including: business (convincing supervisors of a new project idea, delivering results from a pilot project or clinical trial), medicine (informing colleagues about a medical case, teaching colleagues about a new treatment), government (testifying before elected officials about the importance of a research area, negotiating with bureaucrats about funding for science or education), and academia (presenting your own research in a faculty seminar or job interview, delivering a presentation at an international conference). We will also discuss strategies and techniques for scientific writing and interacting with other scientists in formal and informal meetings and conferences.

Required Course Materials

There are no required course materials.

Optional text: Writing Papers in the Biological Sciences by Victoria E. McMillan (any edition), Bedford/St. Martin's, Boston/NY. Can be found used for \$5 at thriftbooks.com.

OR

The Scientist's Guide to Writing by Stephen A. Heard (any edition), Princeton University Press.

Grading Policy:

Your final course grade will be comprised of the following components:

| Assignment | Weight |
|----------------------------------|--------|
| One mini oral presentation | 15% |
| One major oral presentation | 25% |
| Poster Presentation | 25% |
| Class participation & activities | 35% |

Your final grade will be assigned as a letter grade according to the following scale:

| Letter Grade | Percentage |
|--------------|------------|
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | 0-59% |

Description of Graded Components

Oral presentations should include use of PowerPoint (or similar), should be practiced ahead of time, and will be graded by the instructor according to the rubric provided on Canvas. Mini oral presentations (6 min: 5 min talk + 1 min Q&A) may be on a scientific topic of your choosing or framed around a recent primary literature journal article. Major oral presentations (12 min: 10 min talk + 2 min Q&A) will be based on your research from BIOL 4590/4690.

Poster presentation: Each student will create a poster to present their research (from BIOL 4590/4690) in a poster session held at the end of the semester. The poster format is described at the end of this syllabus and will be further discussed in class. The grading rubric will be available on Canvas.

Class participation & activities: Students will be assessed by the extent to which they participate in class discussions (by asking questions, answering questions, offering ideas, opinions, and critiques of student presentations). Students are expected to ask a question or offer a comment at least once every class. In addition, class workshop days will involve student activities that contribute to this part of your grade.

Course Policies

Attendance and/or Participation

Because this is a presentation and discussion-based course, attendance and active participation are required. Examples of excusable absences include documented illness, death in the family, accident, sanctioned Institute events, and grad school/med school/job interviews. If you know that you are going to be absent, please let me know ahead of time. Documentation may be required for excused absences. Each unexcused absence will result in no credit for class activities.

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 dishonesty in this course will be referred to the Office of Student Integrity for adjudication. This includes plagiarism, stealing classroom materials, or helping others commit a violation of the Honor Code. Plagiarism includes reprinting the ideas, words, or findings of others without clear and appropriate. As direct quotes are seldom used in scientific writing, you are expected to rephrase the words of others and provide the citation. If this is unclear, please ask for help.

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.