BIOS 4460 Syllabus

Communicating Biological Research | 1 credit

Section Number: F

Semester: Spring 2027

Course Meeting Day/Time: Thursdays 3:30-4:20 PM

Course 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.

Instructor Information

Instructor: Dr. Hannah Smith

Email: hannah.smith@biosci.gatech.edu

General Course Information

Course Learning Outcomes:

The objectives for the course are for students to:

- develop oral and poster presentation skills on your own research
- learn to 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 Materials: none

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:

One mini oral presentation	15%
One major oral presentation	25%
Poster presentation	25%
Class participation & activities	35%

Grade Scale:

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

A 100%-90%

B 89%-80%

C 79%-70%

D 69%-60%

F <60%

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 judged 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: 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 lower the final grade by 5%.

Academic Integrity: Academic dishonesty will not be tolerated. This includes cheating, lying about course matters, plagiarism, stealing classroom materials, or helping others commit a violation of the Honor Code. Students are reminded of the obligations and expectations associated with the Georgia Tech Academic Honor Code and Student Code of Conduct, available online at http://osi.gatech.edu/content/honor-code. Plagiarism includes reprinting the words of others without both the use of quotation marks and citation, *including ChatGPT or similar artificial language tools*. 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: If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (http://disabilityservices.gatech.edu/) as soon as possible to make an appointment to discuss your needs and to obtain an accommodation letter. Please also email me as soon as possible if you want 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, acknowledgment, 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.