

BIOS 4460 Syllabus

Communicating Biological Research | 1 Credit

Fall 2026

Instructor: Julia Kubanek, Regents Professor, School of Biological Sciences and School of Chemistry & Biochemistry

Class is held on: Fridays, 9:30-10:20am, in MRDC room 2405

Office hours: By appointment. Please email or consult with me during class to set up a meeting. Students are also welcome to request meeting with me for issues other than course material (e.g., career plans, research interests).

Office locations: Ford ES&T building (311 Ferst Drive), room 2242 and Tech Tower Garden Level (225 North Ave), suite 001-002

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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.

Pre- and Co-requisites:

BIOS 4460 (this course) is a co-requisite for BIOS 4590 (Research Project Lab) because students enrolled in BIOS 4590 will present their research from that course in BIOS 4460. Biology majors who have chosen BIOS 4690 (Independent Research Project) for their Senior Research Experience may enroll in BIOS 4460 concurrently or after completion of BIOS 4690. Thus, to be enrolled in BIOS 4460, you must also be simultaneously enrolled BIOS 4590 or BIOS 4690, or already have completed BIOS 4690.

Required Course Materials

There are no required course materials.

Optional texts:

Writing Papers in the Biological Sciences by Victoria E. McMillan (any edition), Bedford/St.Martin's, Boston/NY.

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 BIOS 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 in an accompanying document 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 zero credit for class participation and activities that day.

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, graphics, or findings of others, *including AI sources*, without clear and appropriate credit. 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 me 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.

Use of Electronic Devices in the Classroom: To promote engagement and discussion, the use of electronic devices during class is prohibited, except for handwriting-based note-taking tablets. Students may use their laptop computer or the classroom podium computer to deliver their scheduled oral presentation. Phones must remain out of use.

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.