

Science Communication – Biology 2024

Professor Barry Logan

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Office Hours: M – 2:50-3:50PM, Th – 10:00-11:00am, or by appt.

Class Meetings: M & W: 1:15-2:40PM in Searles 113.

Course Description: Scientists are communicators, using images, graphical representations, written and spoken words to convey their findings. Those findings achieve their greatest impact through dissemination; a research project is not complete until it has been described for others. Mindfulness of the intended audience and the goals of communication dictate the most suitable forms. *Science Communication* explores and develops effective communication with peer scientists, potential funders (i.e., grant proposals), non-specialist scientists, children and adult lay audiences through written work, presentations, posters, displays, podcasts, short videos and documentary films. Involves individual and group projects, critiques, site visits, and engagement with scientists and communication professionals (including journalists, filmmakers, and museum curators).

Course Goals:

- Form an inquisitive, rigorous, tolerant, and supportive learning community
- Explore various modes of communicating the findings of scientific inquiry through reading, discussion, engagement with each mode and selected practitioners
- Explore the societal importance of effective science communication
- Develop our communication skills
- Develop our ability to provide and accept peer feedback

Participation, Engagement & Attentiveness: Instruction is in person. I expect in-person attendance and participation during each class period. Please feel free to wear a face covering (i.e., a mask) if you wish. Adhere strictly to the College's Covid isolation protocols and inform me of any isolation you must undertake. I expect you to read your Bowdoin email at least daily. *I am sensitive to the challenges brought on by our return to in-person instruction and a return to forms of accountability at times relaxed (for good reason) during the peak of the pandemic. I expect you to stay in touch with me if your schoolwork begins to overwhelm you.*

Academic Integrity: Unless explicitly instructed otherwise, all of the work that you turn in should be yours only, with proper citation. I expect knowledge of and strict adherence to Bowdoin's Academic Honor Code (which can be found in the Student Handbook).

Grading: I will determine final grades based on the following components, described below:

Element ¹	Percent of overall grade
News & Views Article	12
Analysis of Long-Form Science Communication (written & video)	12
Museum Exhibit	10
Presentation	10
Grant Proposal (and peer review)	16
Independent Project	10
Exercises & Reflections	20
Class Engagement	10

I will employ traditional forms of grading, contract grading, and hybrid grading. Contract grading rewards engagement and dedication building towards completion of an assignment, whereas traditional grading assesses the perceived quality of the completed assignment. Contract grading emphasizes process. Rewards (*i.e.*, good grades) come via contract grading through the timely and thoughtful completion of milestones on the path towards a final product (and completion of that final product, itself). Thoughtful completion of milestones involves meaningful engagement with my feedback. Hybrid grading, as the name suggests, draws upon the strengths of both grading models to balance process with the quality of the completed assignment.

News & Views article – A 600-word article² describing a recent original research article, its scientific context, and its societal importance (if applicable). *HG*³

Analysis of Long-Form Science Communication (written & video) – An approximately 500-word paper describing a lengthy article or book written for the nonspecialist. Emphasize one or a small number of structural aspects of the writing designed to convey complex scientific findings or inquiry. In other words, what makes this writing “work”? Your paper should excerpt from the book to highlight your chosen structural aspect(s) (excerpts not included in your word count). Create a one-minute video promoting your chosen article/book (or dissuading readers, if that’s what you feel) emphasizing the structural aspect(s) around which you wrote your paper. *HG* for your paper, *CG* for your video

Museum Exhibit – Design the layout of chosen/created imagery/graphics/captions and other informative text. *HG*

Presentation – An eight-minute, in-person, oral presentation of a scientific finding (generally supported by a set of Powerpoint slides). *HG*

Grant Proposal – A 600-word proposal seeking funds to conduct a scientific research project (with at least one figure, image, or illustration) written in the spirit of a National Science Foundation *Graduate Research Fellowship Proposal*. Will also involve peer proposal review. *HG*

Independent Project – To be designed in consultation with me (Prof. Logan). *CG*

Exercises & Reflections – Regular exercises to be completed in preparation for class (occasionally in class) and reflections on readings and other engagement with science communication. Generally, *TG* for exercises, *CG* for reflections

¹ Refer to course Canvas site for due dates

² Maximum length

³ *CG* = contract grading, *TG* = traditional grading, *HG* = hybrid grading

Class Engagement - The success of our course, collectively and for you as individuals, hinges on your active participation. If you show up for class meetings mentally keen and full of zeal, curiosity, and a readiness to engage, then we will all enjoy our course more fully and come away with improved skills at science communication and an enriched appreciation for its importance.

I will not set numerical standards for grades until the end of the course; however, please feel free to make an appointment to discuss your performance, if you like.