# *Science Communication* – Biology 2024

*Professor Barry Logan*
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Office Hours: M & Tu. 9:15-10:15AM, or by appt.

*Molly Holmberg Brown*

*Class Meetings*: Thursday afternoon, either in the LLC at the SCSC or in Banister Hall 106.

*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 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 & 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. I expect you to read your Bowdoin email at least daily. *I want you to stay in touch with me if illness or personal matters interfere with your ability to attend class or if your schoolwork begins to overwhelm you.*

*Academic Integrity*: Unless instructed otherwise, all work you turn in should be yours only, with proper citation. Unless instructed otherwise, I expect you to refrain from using AI writing assistance at any stage in the preparation of your written work. 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] | **% of overall grade** |
|---|---|
| News & Views Article | 12 |
| Bowdoin Pines Piece (group project) | 8 |
| Museum Exhibit | 10 |
| Grant Proposal (and peer review) | 20 |
| Science-Art | 8 |
| Cartography | 8 |
| Analysis of Long-Form Science Communication (written & presentation) | 12 |
| Exercises, Reflections & Engagement | 20 |

I will employ traditional forms of grading, labor-based grading, and hybrid grading. Labor-based grading rewards engagement and dedication building towards completion of an assignment, whereas traditional grading assesses the perceived quality of the completed assignment. Labor-based grading emphasizes process. Rewards (*i.e.,* good grades) come via labor-based grading through the timely and thoughtful completion of milestones on the path towards a final product (and completion of that final product). 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.

[1] Refer to course Canvas site for due dates

News & Views article – A ~600-word article[2] describing a recent original research article, its scientific context, and its societal importance (if applicable). *HG*[3]

Bowdoin Pines Piece – A short, engaging, and informative product (video, infographic, podcast, *etc.*) highlighting the history, ecology or management of the Bowdoin Pines. L-BG

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

Science-Art – Create a work of art intended to convey or to be in dialogue with a scientific phenomenon. L-BG

Cartography – Create a map or a place that conveys a feature of scientific relevance. L-BG

Analysis of Long-Form Science Communication (written & presentation) – An ~600-word paper describing a book written for nonspecialists. 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" (provided that you think it succeeded)? Your paper should excerpt from the book to highlight your chosen structural aspect(s) (excerpts not included in your word count). Deliver a presentation summarizing and 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*

Exercises, Reflections & Engagement – Regular exercises to be completed in preparation for class (occasionally in class) and written reflections on readings. The success of our class hinges on your in-class engagement with our material and exercises, with each other, with our invited guests, and with me. Your degree of engagement could affect your final grade by as much as a letter grade. Generally, *TG* for exercises, L-BG for reflections

I will not set numerical standards for grades until the end of the course, and I do not keep my grades on Canvas. However, please feel free to make an appointment to discuss your performance, if you like.

[2] Maximum length
[3] L-BG = labor-based grading, TG = traditional grading, HG = hybrid grading

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|---|---|
| *September 5 (SCSC)* | Greet, introduce, reflect, converse, and discuss effective writing |
| *September 12 (SCSC)* | Effective writing (cont.); Science journalism – A virtual visit with Jeff Tollefson |
| *September 19 (Banister 106)* | Museum exhibitions – A visit with Mike Lawrence |
| *September 26 (all day)* | Visit to Monhegan Island |
| *October 3 (Banister 106)* | Communications & The Bowdoin Pines - A visit with Janie Porche |
| *October 10 (SCSC)* | Promoting understanding across communities - A visit with Arthur Middleton |
| *October 17 (SCSC)* | Grant proposals & Exhibition showcase |
| *October 24 (Banister 106)* | Art-Science collaborations & A visit with Lisa Munoz |
| *October 31 (SCSC)* | Art-Science collaborations & A visit with Barbara Putnam |
| *November 7 (SCSC)* | Effective presentations & Bowdoin Pines showcase |
| *Week of November 10-16* | Panel proposal reviews *(no formal class on Nov. 14)* |
| *November 21 (Osher Map Library)* | A visit to the Osher Map Library and a conversation with Libby Bischof |
| *November 28* | *Thanksgiving* |
| *December 5 (location TBD)* | Cartography with Molly Holmberg Brown |
| *December 12 (Banister 106)* | Book presentations & a visit to the BCMA |