

# Communicating Science

## Syllabus

*"We have also arranged things so that almost no one understands science and technology. This is a prescription for disaster. We might get away with it for a while, but sooner or later this combustible mixture of ignorance and power is going to blow up in our faces."*  
– Carl Sagan

**Welcome** to Communicating Science! I look forward to getting to know each of you as we explore the intersections between science and society this semester. This course is for you, so if there are specific ways that I can support you as you work to your goals, please let me know.

**Course Description.** For students seeking to develop practical skills in communicating science across broad platforms. Students will be asked to think critically about science outreach strategies and actively participate in class discussions. Course topics include science writing, crafting effective presentations, matching audience and form, and using online media for science communication. The course will culminate in student-led science communication projects. *Prerequisites: 100 level majors science class. 3(3-0) credits.*

### Course Meetings.

Monday, Wednesday, Friday    11:30 am – 12:20 pm    *ISC 137*

**Instructor.**    Dr. Mackenzie Geringer    ISC 255    [gerringe@geneseo.edu](mailto:gerringe@geneseo.edu)

**Office Hours.**    Mon. 10:30 – 11:30 am, Wed. 3:30 – 4:30 pm, Friday 1:30 – 2:30 pm, and By Appointment

Office hours are your time for getting questions answered, course expectations clarified, advice on pursuing opportunities or careers in science and more! Office hours will be held on Zoom, joining information is available on Canvas. Please email me ([gerringe@geneseo.edu](mailto:gerringe@geneseo.edu)) or chat before/after class if you have questions or would like to set up a meeting outside of office hours.

**Course Materials.** Our required course textbook is *Writing Science*. Joshua Schimel, 2011. There is a digital copy available through the library course reserves. This eBook is limited to three users at one time, so please log out when you are finished with the reading for that day. We will explore additional readings, videos, and podcasts, provided via Canvas. Please note that readings may be subject to change given current events: you will be given as much notice as possible about any changes. Any course software and websites will be free to access. You are encouraged to seek out and interact with science media on your own throughout the semester, including reading science news and following science accounts on social media. Attending Biology seminars on Fridays at 2:30 pm is also highly encouraged.

## Learning Objectives

Throughout this course, we will:

- Learn and implement inclusive, accessible ways to communicate science to diverse audiences.
- Understand and use storytelling techniques across multiple platforms.
- Gain confidence, experience, and practical strategies for presentations.
- Hone writing, editing, and reviewing skills.
- Develop strategies for the critical consumption and evaluation of science news and other media.
- Engage with new and creative outlets for science communication.

## How this course fits into your biology education...

This course will help you work toward the following Biology Program Learning Outcomes:

- *Biology Learning Outcome 3.* Students will be able to communicate biological ideas from literature or their own laboratory investigations to audiences of biologists and non-biologists in a variety of formats including written reports, poster and oral presentations. Level: Mastery.
- *Biology Learning Outcome 4.* Students will recognize the importance of scientific integrity and ethical research and applications of biology to science policy. They will be able to work independently and in teams for life-long learning. Level: Mastery.

*“It would be possible to describe everything scientifically, but it would make no sense; it would be without meaning, as if you described a Beethoven symphony as a variation of wave pressure.”*

– Albert Einstein

**Course Expectations.** Much of the value of this course will come from our in-class activities and discussions. Therefore, attendance is expected when safe and possible for you to do so and active participation will be part of your course grade. In class, you will not be graded on whether your answers are right or wrong, engage with the course materials and activities to the best of your abilities to receive in-class participation credit. Contribute to one of our Canvas discussion posts each week to support your participation credit. If you cannot join a synchronous class session, please plan on participating in our discussions on Canvas and completing an alternative response on Canvas. Submit any participation make-up assignments to Canvas within one week of your absence. Please reach out to me to discuss potential or needed extended absences. The earlier you get in touch about questions or concerns, the more options we will have.

You, the expert. For nearly all course assignments, you will focus on a science topic of your choosing. Choosing something that you care about is a great way to get the most out of this course. You will read and evaluate primary literature on the topic, then synthesize your knowledge in writing, illustration, and presentation. Further details on expectations, strategies, and resources will be provided in class and on Canvas. Please do not hesitate to reach out if you have any questions.

Options for our COVID-19 discussions. We will have the opportunity to discuss some of the science communication and social challenges that have been highlighted in the COVID-19 pandemic. The pandemic has impacted us all, in ways deep and personal. While current events are important to discuss and understand, it can be very difficult to participate in academic conversations about crises we are still enduring. If you need to step away from or sit out a discussion on the pandemic, you may do so without penalty. In cases where you choose to opt out of a discussion, there will be an alternative reading and short response on the topic you will complete instead. It is your responsibility to ask for the alternative assignment by the end of the day of our discussion. In class, please remember that we don't know one another's stories and be mindful and respectful. Please let me know if you have questions or concerns regarding the difficult topics that we will address this semester.

## Assignments & Grading.

Course grades will be based on the following assignments, out of a total of 300 points. Detailed expectations, rubrics, and further resources are available on Canvas. Further assignment descriptions and resources will be provided during our class meetings.

Introductions

Sept. 3<sup>rd</sup>

*10 points*



Write a short response to a piece of science fiction or climate fiction and reflect on its potential and limitations in communicating science.

### SciComm Project

65 points

How will you communicate your topic beyond written papers and presentations? Define your audience and design a SciComm project to engage them with your topic. You will give a talk during the final period, introducing your topic and summarizing your project. Students who wish to may work in pairs for the final project; see instructor for expectations.

Project Update                      Dec. 3<sup>rd</sup>                                      15 points

Final Talks                              Dec. 15<sup>th</sup>                                      40 points

Final Talk Reviews                      Dec. 17<sup>th</sup>                                      10 points

### Participation

Every Class

40 points

Earn full credit for participation by attending class and engaging in discussions and activities to the best of your ability. You will not be evaluated on whether your insights are “right” or “wrong” during discussions, rather by your demonstrated willingness to think critically and be actively involved. If you are unable to join a class session, contribute to the Canvas discussion board on that topic and complete a participation make-up assignment. Please reach out if you have questions or concerns about participation expectations.

## Research Expedition: Alvin 6500 m.

The Expedition. My research centers on the physiology and ecology of deep-sea organisms. I study how animals are adapted to the deep-sea environment, including high pressures, cold temperatures, and lack of sunlight. To study deep-sea animals, I and my colleagues go to sea aboard research vessels for ~10–40 days at a time. We work with gear such as cameras, traps, remotely operated vehicles, and submersibles to understand deep-ocean environments.

Due to my expertise in hadal trenches and proposed research program, I have been invited to participate in an expedition to the Puerto Rico Trench and Mid-Cayman Spreading Center this October. We will be working with the crewed submersible *Alvin* and diving to depths of 6,500 meters, more than 21,000 feet below the ocean’s surface, to understand the biology, geology, chemistry, and physics of these incredible habitats.

An Opportunity to Communicate Science. This expedition includes telepresence, which allows scientists and classes like ours to actively participate from shore. Excitingly, this expedition is also an opportunity for our class to communicate science to a global audience. We will be contributing to the expedition's outreach efforts and producing original science communication pieces to share with the public. For example, each member of our course will interview an expedition scientist and create a social media post to communicate that scientist's research.

Course Logistics. I will be at sea aboard the *RV Atlantis* Oct. 5<sup>th</sup>–30<sup>th</sup>. During the expedition, our class meetings will include guest speakers and discussion leaders. I thank you for your active engagement and for welcoming guests into our classroom. Other class sessions will be held online during this period, including interviews with the science communication team aboard the ship.

Student Support. All assignment instructions, rubrics, and resources are available on Canvas. I will be available via email at [gerringer@geneseo.edu](mailto:gerringer@geneseo.edu) throughout the expedition. Synchronous office hours will resume when I am back onshore. Please expect a 24–48-hour response time. Email is the best way to get in touch with me at sea, as I may not have access to our Canvas course each day. Please reach out with any questions or concerns.

In case of communications loss while I am at sea, or if you need urgent support regarding our course from someone on campus, please contact Dr. Lytton Smith at [smithlj@geneseo.edu](mailto:smithlj@geneseo.edu). Dr. Smith has access to our Canvas course and is able to provide onsite support while I am away.

Participate in the Expedition. You are also encouraged to participate further in the expedition by joining dives via telepresence. We will discuss ways to participate in class. If you're interested in other ways to be involved or would like to propose a specific project, please come talk to me in office hours or by appointment.

## Resources & Policies.

COVID-19 & Course Format. Please be aware that due to the dynamic nature of the COVID-19 pandemic, it is possible that some changes to the syllabus and/or content delivery mode will need to be made after the semester has started. If this is the case, be assured that my priorities are student success, course continuity, and accessibility of information.

Geneseo Mission and Values. SUNY Geneseo has several core documents that articulate our shared commitments and learning objectives. These include:

- SUNY Geneseo Mission, Vision and Values: <https://www.geneseo.edu/about/mission-vision-and-values>
- Community Commitment to Diversity, Equity, and Inclusion: <https://www.geneseo.edu/diversity/commitment>
- Geneseo Learning Outcomes for Baccalaureate Education: <https://www.geneseo.edu/provost/globe-geneseo-learning-outcomes-baccalaureate-education>

Land Acknowledgment. Land acknowledgements are expressions of sorrow and remembrance to those whose historic territory one resides on. Geneseo resides on the homeland of the Seneca Nation of Indians and Tonawanda Seneca Nation. We are encouraged to learn more about these original occupants and those indigenous to other places we have lived. You may consider using the Native Land app and/or websites such as [sni.org](http://sni.org) to learn more about the community of more than 7,000 enrolled Indigenous Peoples.

Academic Support Services. The campus provides a range of support services to help students thrive in their classes. These services include tutoring, both drop-in and by-appointment, with student tutors in the Writing Learning Center, the Math Learning Center, and a range of department-based tutoring centers

- Online tutoring through the SUNY-wide STAR-NY system

([www.starny.org/tutoring\\_schedule](http://www.starny.org/tutoring_schedule))

- Supplemental Instruction, in which trained student assistants review lecture material from specific classes. Information on times and locations is available through the Center for Academic Excellence website at <https://www.geneseo.edu/academic-support-services>.

Additionally, the college offers a number of peer mentoring programs that are designed to reinforce good academic habits. These include:

- Academic Peer Mentors in the Office of Academic Planning and Advising provide students with promising study strategies and can host on-going appointments with students seeking an "accountability buddy". More information is available at: [https://www.geneseo.edu/dean\\_office/academic-peer-mentors-0](https://www.geneseo.edu/dean_office/academic-peer-mentors-0).
- The ONYX Academic Success workshop series sponsored by the GOLD Leadership Program introduces students to a variety of study skills, time management techniques, and instruction on how to access campus resources for academic and career guidance. A full list of GOLD workshops can be accessed at <https://www.geneseo.edu/gold/app/browse>.
- Tutoring, both drop-in and by-appointment, with student tutors in the Writing Learning Center, the Math Learning Center, and a range of department-based tutoring centers.

Library Research Help. Fraser Hall Library has an award-winning staff trained in finding the best information using library resources and advanced search strategies. Students may ask questions about using library services, locating materials, or conducting research projects. There is a librarian who specializes in the subject matter for each major. Librarians meet with students through a variety

of ways, including chat, email, and in-person and virtual one-on-one research consultations. Learn more at <https://www.geneseo.edu/library/help-students> or email [libraryhelp@geneseo.edu](mailto:libraryhelp@geneseo.edu). The librarian for our course is Dr. Jonathan Grunert, [grunert@geneseo.edu](mailto:grunert@geneseo.edu).

- Students, faculty, and staff can schedule research consultations with librarians in-person or via Zoom.
  - Special appointment hours for Biology research can be scheduled here— [JG Research Help Appointments](#)
  - General research help can be found here— <https://geneseo.edu/library/researchconsultations>
  - You can email Dr. Grunert directly with research help questions— [grunert@geneseo.edu](mailto:grunert@geneseo.edu)
- Librarians will be available for drop-in help in Fraser Hall 203 on weekdays during the semester.

Additionally, librarians will continue to staff LibChat, a service that allows for online, chat-based synchronous communication. LibChat is available weekdays during the semester. Access it by clicking on the green owl icon, located throughout the library website.

Academic Integrity and Plagiarism. The library offers frequent workshops to help students understand how to paraphrase, quote, and cite outside sources properly. With your Topic Proposal submission, you'll be asked to complete the [Avoiding Plagiarism Tutorial](#) on Canvas to help clarify expectations. These sessions are meant to educate about the importance of using original ideas and language, and how to incorporate paraphrases and quotes into writing. The complete list of library workshops can be found at [www.geneseo.edu/library/library-workshops](http://www.geneseo.edu/library/library-workshops).

Academic dishonesty includes cheating, knowingly providing false information, plagiarizing, and any other form of academic misrepresentation, including self-plagiarism. Academic dishonesty will not be tolerated in this course. Plagiarism will result in a zero for the assignment and reporting to the college and could be grounds for an E course grade. College policies and procedures regarding academic dishonesty are available at [www.geneseo.edu/handbook/academic-dishonesty-policy](http://www.geneseo.edu/handbook/academic-dishonesty-policy).

Technology Support. [CIT provides a range of technology support resources](#). When you are in Canvas, the Help menu on the left side of the screen will also direct you to a number of CIT supports, including self-help resources and options to request technology assistance. For assistance with your computer or mobile device, visit the CIT HelpDesk in Fraser. Geneseo students, faculty and staff have free access to the entire [LinkedIn Learning training library](#) (over 7,500 courses, including tutorials for software, digital tools, web development, programming, and design) through Geneseo's site license. For more information, [visit this self-help document](#).

<https://wiki.geneseo.edu/display/cit/LinkedIn+Learning+Training+Library>

Course Accessibility. SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities, as well as medical conditions related to pregnancy or parenting. Students with letters of accommodation should submit



a letter to each faculty member at the beginning of the semester and discuss specific arrangements. Please contact the Office of Accessibility Services for questions related to access and accommodations.

Office of Accessibility Services  
Erwin Hall 22  
(585) 245-5112  
[access@geneseo.edu](mailto:access@geneseo.edu)  
[www.geneseo.edu/accessibility-office](http://www.geneseo.edu/accessibility-office)

All course materials are available on Canvas and in our in-person classes and I've made every attempt to ensure that they are accessible to everyone. If you have difficulties accessing any materials (including needs for alternative formats), please let me know as soon as possible and I will rectify the situation.

Attendance at In Person Sessions. In the context of the COVID-19 pandemic, it is vital that we all do what we can to protect the health and safety of each other. If you are experiencing symptoms associated with COVID on a day that class meets in-person, do not attend. Remember that it is better to stay home if you are not feeling well than to attend class and risk spreading illness to others. Throughout the semester, please be proactive in communicating about absences and contact the Dean of Students if you expect to be out for an extended period of time.

Getting Help with Online Classes. CIT has developed a number of [resources that can help you formulate good strategies for success in online courses](#). These include general strategies for keeping on track with your courses as well as more specific resources about learning experiences that you may encounter in an online course. The Office of the Dean for Academic Planning and Advising has also introduced the new [KOALA \(Knights' Online Academic Learning Assistance\)](#) course support resource. Throughout the semester, if you need help with online learning strategies, you can contact the KOALA support desk, which will assist you with identifying resources and strategies for success.

[CIT also provides a range of technology support resources](#). When you are in Canvas, the Help menu on the left side of the screen will also direct you to a number of CIT supports, including self-help resources and options to request technology assistance.

Religious Observations and Class Attendance. New York State Education Law 224-a stipulates that "any student in an institution of higher education who is unable, because of [their] religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements" (see <https://www.geneseo.edu/apca/classroom-policies>). SUNY Geneseo has a commitment to inclusion and belonging, and I want to stress my respect for the diverse identities and faith traditions of students in my class. If you anticipate an absence due to religious observations, please contact me as soon as possible in advance to discuss your needs and arrange make up plans. The New York State Department of Civil Service maintains a calendar of major religious observations for [2021](#) and [2022](#).

Military Obligations and Class Attendance. Federal and New York State law requires institutions of higher education to provide an excused leave of absence from classes without penalty to students

enrolled in the National Guard or armed forces reserves who are called to active duty. If you are called to active military duty and need to miss classes, please let me know and consult as soon as possible with the Dean of Students.

Bias-Related Incidents.

*We are here to listen, to learn, to teach, to debate, to change, to grow. We should all be safe to pursue these goals at SUNY Geneseo while being who we are. Together, we commit ourselves to pluralism, cultivating a community that respects difference and promotes a sense of inclusion and belonging.*

As this excerpt from our Community Commitment to Diversity, Equity, and Inclusion states, here at SUNY Geneseo, we want to provide a space where everyone feels welcome to learn and grow in their identities as well as in their role as students, faculty, and staff. In the unfortunate instance you experience an incident of bias, we encourage you to reach out to the Chief Diversity Officer ([routenberg@geneseo.edu](mailto:routenberg@geneseo.edu)) and/or our University Police Department. You can also contact the Biology Department's Diversity, Equity, and Inclusion Committee at [bio-diversity@geneseo.edu](mailto:bio-diversity@geneseo.edu). In trying to create an environment that facilitates growth through diverse thoughts and ideas, reporting incidents of bias—including threats, vandalism, and microaggressive behaviors—can help bring a better understanding of our campus climate as well as provide opportunities for learning and restoring harm. Hateful speech or actions will not be tolerated in our class.

Everyone has the right to be addressed by the name and pronouns that correspond to their gender identity, including non-binary pronouns, for example: they/them/theirs, ze/zir/zirs, etc. Rosters do not list gender or pronouns so you may be asked to indicate the pronouns you use so that I don't make assumptions based on your name and/or appearance/self-presentation (you are not obligated to do so). If you use a chosen name, please let me know. Chosen names and pronouns are to be respected at all times in the classroom. Mistakes in addressing one another may happen, so I encourage an environment of openness to correction and learning. I will not however, tolerate repeated comments which disrespect or antagonize students who have indicated pronouns or a chosen name. Chosen name and personal pronouns may evolve over time, so if at any point during the semester you would like to be addressed differently, please let me know.

All-Gender Restroom Access. The nearest all-gender restroom to our classroom is ISC 116.

Student Well-Being is a priority in this class, to support the achievement of academic goals and alleviate stress. Eating nutritious foods, getting enough sleep, exercising, avoiding drugs and alcohol, maintaining healthy relationships, and building in time to relax all help promote a healthy lifestyle and general well-being. Concerns about academic performance, health situations, family health and wellness (including the loss of a loved one), interpersonal relationships and commitments, and other factors can contribute to stress. Students are strongly encouraged to communicate their needs to faculty and staff and seek support if they are experiencing unmanageable stress or are having difficulties with daily functioning. Please feel free to reach out to me if you have questions or concerns. The Dean of Students (585-245-5706) can also assist and provide direction to appropriate campus resources. For more information, see [www.geneseo.edu/dean\\_students](http://www.geneseo.edu/dean_students).

Mental Health Resources. As a student, you may experience a range of challenges that can impact your mental health and thus impact your learning; common examples include increased anxiety, shifts in mood, strained relationships, difficulties related to substance use, trouble concentrating, and lack of motivation, among many others. These experiences may reduce your ability to participate fully in daily activities and affect your academic performance.

SUNY Geneseo offers free, confidential counseling for students through the Lauderdale Center for Student Health and Counseling, and seeking support for your mental health can be key to your success at college. You can learn more about the various mental health services available at [health.geneseo.edu](http://health.geneseo.edu).

Health and Well-Being in a Stressful Time. The changes brought on by COVID-19 have impacted us all in a number of ways and will continue to do so at various times and to varying degrees during the upcoming semester. Your health and wellbeing are foundational to your ability to learn, and if you find that you are feeling unwell (physically or mentally) and it is impacting your ability to complete your coursework, please reach out. Because the learning environment will continue to be different than it has been in the past, the indicators that usually let you know something is wrong may not be as clear to you or those around you as they would be during a typical semester. Additionally, the ways in which you normally engage in self-care may have been disrupted. Please remember that it's never too late to ask for help. The [Dean of Students](#) (585-245-5706) can assist and provide direction to appropriate campus resources. The college also has collected resources in a [Coping with COVID webpage](#).

In a similar way, I may occasionally ask for some patience and flexibility on your part. The pandemic is affecting faculty as well as students and creating demands that would not be present in an ordinary semester. You will never suffer any disadvantage in the course because of delays on my part.

Parents. Students who are parenting will be supported in this class. I ask that all students work with me to create a welcoming environment that is respectful to all forms of diversity, including diversity in parenting status. All exclusively breastfeeding babies are welcome in our class sessions as often as is necessary. For older children and babies, I understand that unforeseen disruptions in childcare and pandemic-related changes often put parents in the position of having to miss class to care for a child. While not a long-term childcare solution, occasionally bringing a child to class to cover gaps in childcare is perfectly acceptable. If babies and children come to class, I ask that you be mindful to avoid disrupting learning for other students. Finally, I understand that often the largest barrier to completing your coursework as a parent is the tiredness many parents feel in the evening once children have gone to sleep. While I maintain the same high expectations for all students in my classes regardless of parenting status, I am happy to problem-solve with you in a way that makes you feel supported as you strive for school-parenting balance.

Food Security for SUNY Geneseo Students. There are resources available for students who are food insecure. If you're unfamiliar with the phrase "food insecurity," you can learn more at the following link: [Understanding Food Insecurity](https://hungerandhealth.feedingamerica.org/understand-food-insecurity/). (https://hungerandhealth.feedingamerica.org/understand-food-insecurity/) The Food Security Advocates (FSA) is a student group run out of the Center for Community who support access to food for those who are food insecure (on campus and in the

community). Food pantry interns facilitate an on campus pantry in collaboration with the local Geneseo Groveland Emergency Food Pantry.

Any student who is food insecure can submit a request here: [Food Pantry Request Form \(https://docs.google.com/forms/d/e/1FAIpQLSfFL6VrdsV5kxTLd6yK\\_mXOL8NGeZtv5x8mzYAhHyiRJepLxA/viewform?usp=sf\\_link\)](https://docs.google.com/forms/d/e/1FAIpQLSfFL6VrdsV5kxTLd6yK_mXOL8NGeZtv5x8mzYAhHyiRJepLxA/viewform?usp=sf_link) to receive a bag of food that will provide them with items that will last a few days. Once submitted, interns will connect directly with the student to communicate next steps and the time and location of your pick up (most pickups will take place in the MacVittie College Union). This program will provide individuals with a bag of food up to two times a month. We will do our utmost to ensure anonymity, while also working to destigmatize food insecurity in our community. Students are also able to access the Geneseo Groveland Emergency Food Pantry on their own if that is their preference. The pantry is open for walk-ins Tuesdays & Thursdays 10am - 2pm and Wednesdays 4 - 6:30. It is located at 31 Center Street, Geneseo, NY, lower level of Central Presbyterian Church. No appointment is necessary to access the pantry. If you have any questions about this process or anything relating to food insecurity, or have a need beyond what is outlined above, please contact Garth Freeman, director of student volunteerism and community engagement at [freeman@geneseo.edu](mailto:freeman@geneseo.edu) / 585-245-5893.

Emergency Funding. The college has two sources of emergency funding for students experiencing short-term financial crises. The [Camiolo Student Emergency Loan Fund \(SELF\)](#) provides short-term loans to students for situations both temporary and beyond their control. The SELF was established with the expectation that students who use the fund seek to "pay it forward" as soon as they are able by contributing to the fund so other students can be helped, too. While there is not a legal obligation, the donors hope that student loan recipients respect and honor the value of community and helping others in their time of crisis. The [One Knight Student Aid Emergency Fund](#) assists Geneseo students who are facing financial emergencies mainly related to the COVID-19 pandemic. The fund offers grants (one-time award) depending on a student's documented financial need. If you are experiencing financial hardship, please contact the Dean of Students (585-245-5706), who can assist and provide direction to appropriate campus resources.

US Election Day. Tuesday, November 2<sup>nd</sup> is Election Day in the US. Visit [vote.gov](https://www.vote.gov) to register and for further information.

Accessing Feedback on Canvas. Feedback will be provided through Canvas, in the form of general comments, rubrics, and through specific comments on the documents themselves. Access specific comments by following the 'View Feedback' link. Here is a video detailing this process: [https://www.youtube.com/watch?v=Jcl1NOUFYf8&ab\\_channel=RichardRafferty](https://www.youtube.com/watch?v=Jcl1NOUFYf8&ab_channel=RichardRafferty)

Diversity and Equity. It is my intent to create a learning environment that supports all students. I believe the diversity that you bring to this class should be viewed as a resource, strength, and benefit. I want to present materials and activities that are respectful of identity across gender, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Your suggestions are encouraged to improve the course's effectiveness, for you personally or for other students or student groups. I recognize that this feedback may not be easy to give. I will listen to feedback in whatever form it is given and work to be mindful of my own power and privilege. For

ideas, questions, or concerns related to diversity, equity, and inclusion in the Biology Department, please reach out to [bio-diversity@geneseo.edu](mailto:bio-diversity@geneseo.edu).

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# BIOL 384: SCIENCE COMMUNICATION

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## SCHEDULE

### Week 1: Communicating Science

Aug. 30	Welcome to Communicating Science	
Sept. 1	The Scientific Method	<i>Schimel Ch. 1</i>
Sept. 3	Perceptions of Scientists	
	Due: Introductions	

### Week 2: The Audience

Sept. 6	<i>Labor Day, No Classes</i>	
Sept. 8	Knowing Our Audience	<i>Schimel Ch. 20</i>
Sept. 10	Meet Them Where They Are	<i>Medin et al. 2014, Point of View</i>

### Week 3: Story

Sept. 13	Story	<i>Schimel Ch. 2</i>
Sept. 15	Narrative	<i>Schimel Ch. 3</i>
	Due: Semester Topic Proposal, <a href="#">Avoiding Plagiarism Tutorial</a>	
Sept. 17	Storyboarding	<i>Schimel Ch. 4</i>

### Week 4: Writing & Rewriting

Sept. 20	References & Reference Management	
Sept. 22	Science Writing	<i>Freeling et al. 2019, PNAS</i>
	<i>Bring an Example Scientific Paper</i>	
Sept. 24	Revision, Concision, & Critique	<i>Schimel Ch. 16</i>
	Due: Three Annotated References for Mini-Paper	

### Week 5: Writing & Rewriting

Sept. 27	Titles, Openings, & Jargon	<i>Schimel Ch. 5</i>
Sept. 29	Challenge & Action	<i>Schimel Ch. 6 &amp; 7</i>
Oct. 1	The Resolution	<i>Schimel Ch. 8 &amp; 9</i>
	Due: Mini-Paper Intro	

## Week 6: Ethics, Risk, & Connection

- Oct. 4 Ethics in Science Writing *West & Bergstrom 2021, PNAS*
- Oct. 5 *Dr. Geringer at Sea, Contact via Email at [geringer@geneseo.edu](mailto:geringer@geneseo.edu)*
- Oct. 6 Communicating Risk & Uncertainty *Schimmel Ch. 18*
- Oct. 8 Distilling, Not Dumbing Down: Dr. Lytton Smith

## Week 7: Research Outreach

- Oct. 11 *Fall Break – No Classes*
- Oct. 13 Outreach: Interview at Sea *Alvin SVE Website*
- Oct. 15 Open Access & Equity: Dr. Jon Grunert  
Due: Mini-Paper

## Week 8: Science News

- Oct. 18 Science Journalism: Dr. Lytton Smith
- Oct. 20 The Same Old Story *Dr. Bouman & The Black Hole*
- Oct. 22 Science Blogs: Scientist Spotlights  
Due: Mini-Paper Peer Reviews

## Week 9: Digital Media

- Oct. 25 Social Media & Science Communication
- Oct. 27 Apps & Games
- Oct. 29 Discussion: Digital Science Communication  
Due: Scientist Spotlight Post
- Oct. 30 *Dr. Geringer Returns*

## Week 10: Data Visualization

- Nov. 1 The Power of Visualization [BioRender Data Visualization Talk](#)
- Nov. 3 Infographics  
*Bring an Example Infographic*
- Nov. 5 Figure Building  
*Download/Update R & R Studio*  
Due: Revised Mini-Paper

## Week 11: Communication, Controversy, & Crisis

- Nov. 8 Climate Change *Climate Emergency Ripple et al. 2021*

Nov. 10 Climate Change in the News  
Nov. 12 Discussion: COVID-19, Communication, & Crisis *Yong, The Atlantic*  
Due: Infographic

Week 12: **Presentations**

Nov. 15 Public Speaking & The Elevator Pitch *Bring Seminar Reflection*  
Nov. 17 Performance Workshop  
Nov. 19 Elevator Pitches  
Due: Elevator Pitch & Reflection

Week 13: **Talk Preparation**

Nov. 23 Giving Your Best Presentations  
Nov. 25–27 *Thanksgiving Break – No Classes*

Week 14: **SciComm Beyond**

Nov. 29 Documentaries *[Our Planet](#); Jones et al. 2019*  
Dec. 1 Science for Young Audiences *Frontiers for Young Minds Article*  
Dec. 3 Unconventional Avenues for Science Communication  
Due: Project Updates

Week 15: **Science Fiction & Science Communication**

Dec. 6 Science Fiction as Science Communication *GATTACA (Film)*  
Dec. 8 Climate Fiction  
Optional: Project Updates & Presentation Draft  
Dec. 10 Discussion: SciFi/CliFi as Communication Mechanisms  
Due: SciFi/CliFi Response

Week 16: **The Resolution**

Dec. 13 Reflection: Communicating Science *Schimmel Ch. 21*  
Dec. 15 Project Presentations, 8:00 – 10:30 am  
Due: Final Talk Slides; Final Projects  
Dec. 17 Due: Final Talk Peer Reviews