

Science of SciComm

ECOL 5620-04 | ZOO 5890-08

Online | Th, 9:35am-12:25pm

Course offered in cooperation with the
UW Science Communication Initiative
www.uwyo.edu/wysci



WYSCI

All zoom links are provided in the WyoCourses course shell.

ECOL 5620-04 | ZOO 5890-08 | 1-4 credits (3-credit workload) | Letter graded
Thursdays, 9:35 am-12:25 pm | Location: online

Instructor: Bethann Garramon Merkle, MFA | bmerkle@uwyo.edu | Bio Sci 408
Office hours: 11 am-noon Wednesdays (zoom link same as WySCI scicomm drop-in) & 11:30 am-12:30 pm
(zoom link same as class); or by appointment (zoom or a meeting outdoors, with masks)

LA/Peer Mentor: Chelsea Duball, MSc | cduball@uwyo.edu | Office hours Mondays, time TBD with students

UWyo Tech Support: uwyo.edu/infotech/

Welcome!

We are excited to embark on this journey of thinking and communication with you! This course is predicated upon a widely held (though not unanimous) interpretation of the social contract scientists have with society – that is, that we as scientists have an obligation to engage with (not just talk at) those beyond our discipline.

Collaboration and engagement through visual, written, and oral communication is how we learn about, connect with, and inform change in, the world. Whether or not your ultimate goals are to work in academics, or even research, engaging people inside and outside of your field, and listening to people inside and outside of your field, is critical to professional and civic success.

Science of Science Communication will give you first-hand experience with literature from several disciplines (e.g., sociology, psychology, human behavior, science of scicomm, and more), along with a project on communicating science inside or outside your discipline. This course will operate like a typical seminar/discussion course, in that most of our time in class will be spent reading and discussing peer-reviewed literature and meeting with scicomm researchers and professionals. In Science of SciComm, you will continuously create, interpret, and share writing, research, and thinking about how your science impacts what we think, what we do, and how we do it. Throughout the course, you will push the boundaries of your creativity and critical thinking; assets for any professional, any citizen.

In order to support your efforts, this course, including affiliated online spaces, supports an inclusive environment that respects the dignity of every person regardless of faith, heritage, sexual orientation or other expressions of human identity and difference. In this learning community, we will welcome discourse and intellectual critique but reject harassment in all of its forms.

Authentic learning requires that we take risks, make mistakes, and learn from our experiences. Learning also requires flexibility, repetition, and exploration on our way to mastering skills and knowledge. In this class, we will all strive to contribute to a positive and productive learning environment for one another. This includes respecting and actively engaging with the people, ideas, topics, and issues in our course. Thanks for collaborating as together we use the Science of Science Communication to innovate and empower each other to enhance our science communication skills!

Bethann

INCLUSIVE LEARNING COMMUNITY

In order to support your efforts, this course, including affiliated online spaces, supports an inclusive environment that respects the dignity of every person regardless of faith, heritage, sexual orientation or other expression of human identity and difference. In this learning community, we will welcome discourse and intellectual critique but reject harassment in all of its forms. *If you have questions about how this works, how to contribute as a student to this approach to a learning community, etc., do feel free to reach out to me. I am happy to share what I know of for resources, etc.*

Intellectual Risk-Taking & Safe Learning Environment

Authentic learning requires that we take risks, make mistakes, and learn from our experiences. Learning also requires flexibility, repetition, and exploration on our way to mastering skills and knowledge. In this class, we will all strive to contribute to a positive, productive, and safe learning environment for one another. This includes respecting and actively engaging with the people, ideas, topics, and issues in our course. See Inclusive Learning Community statement (above) for details.

Indigenous Land Acknowledgement (updated 2/16/2021)

The University of Wyoming sits on land in the traditional territory of the Arapaho, Cheyenne & Lakota cultures. This territory is where I live and work, as well. These are lands impacted by the still-disputed Cession 426 and the 1851 and 1861 Treaties of Fort Laramie. More recently, the Eastern Shoshone were also relocated to this region. As your instructor, I acknowledge my presence here as a descendent of white settlers and colonial practices. Within the spheres of influence I may have, I work to counteract ongoing colonialism, in part through working to learn how to be a respectful guest in this place. In particular, acknowledging the traditional cultures of this place is not enough. Indeed, "Moving beyond territorial acknowledgments means asking hard questions about what needs to be done once we're 'aware of Indigenous presence'. It requires that we remain uncomfortable, and it means making concrete, disruptive change" (Vowel 2016). See this link for information about the importance of land and territory acknowledgements: (<https://native-land.ca/territory-acknowledgement/>) and this link for more on why acknowledgements are only a start (<https://apihtawikosisan.com/2016/09/beyond-territorial-acknowledgments/>).

Intellectual Acknowledgement (updated 2/16/2021)

I understand science communication as an umbrella that encompasses engagement, formal and informal teaching, writing, multimedia communications, and more. Science communication is necessarily intersectional and cannot be isolated from urgent social issues of equity, inclusion, and justice for minoritized individuals and demographics. My approach to the science of science communication has been enriched and informed by the intellectual and emotional labor of

numerous brilliant scholars and practitioners through their peer-reviewed publications and their inappropriately undervalued contributions to discourse in blogs, popular publications, and on social media. Our syllabus points to some of this work, and I here acknowledge the intellectual foundations provided by many who work in this arena now and in the past.

COURSE OVERVIEW

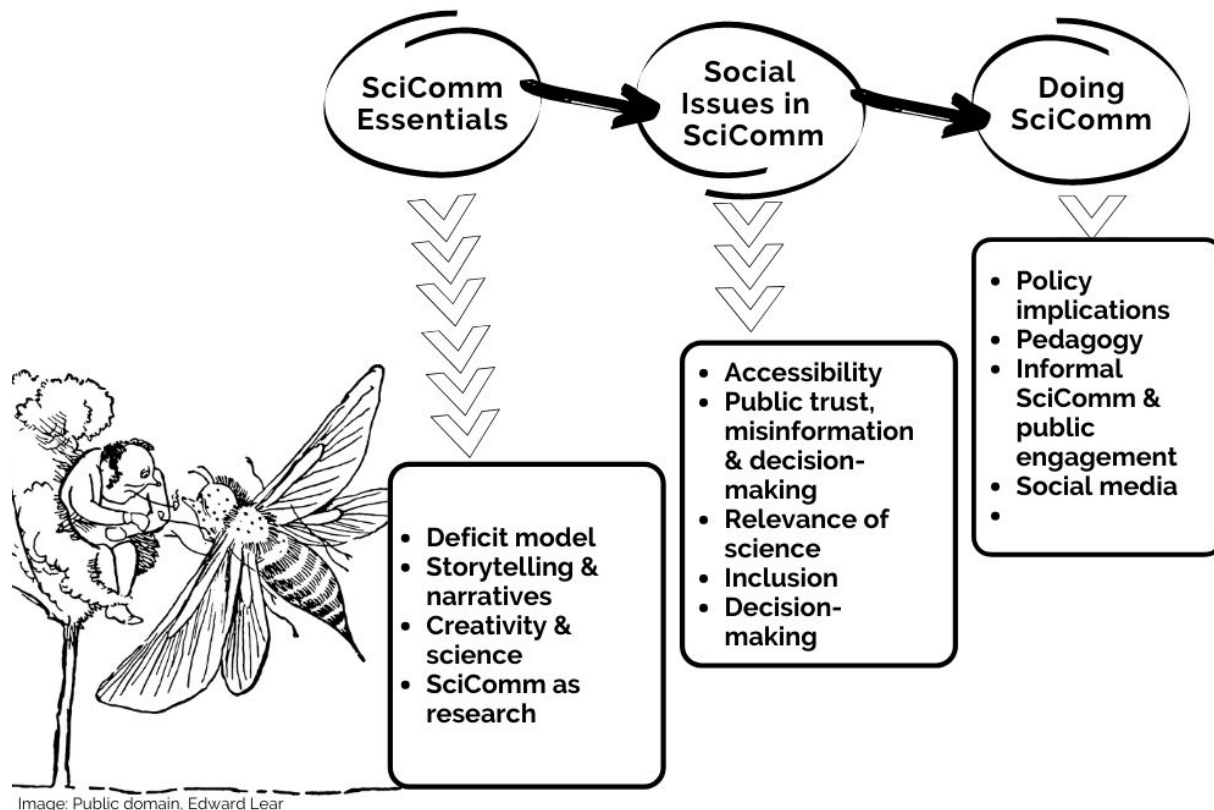
Open to students in all science disciplines, this graduate-level, seminar course will focus on research literature about science communication and social issues in science, with emphasis on non-specialist audiences. Skills developed in this course will also be useful for academic outlets.

Students will delve into public-facing science communication, issues of miscommunication, decision-making science, justice and equity in STEM and academia, and more. This course taps into best practices in fields as wide-ranging as sociology, psychology, creative writing, journalism, the science of science communication, education, and rhetoric and composition. Students will use what they learn in class to develop a communication project or publication about their own research.

Coursework centers around 1) in-class discussions, 2) weekly reflection exercises, and 3) development and completion of a final project. Students also meet individually with the course instructor to discuss individual goals, relevant resources, etc.

While this course is not exclusively focused on scientific/academic communication, students will develop and practice broadly transferable skills which may be valuable in grant writing, interacting with the media, and enhancing communication for popular and academic audiences.

Course themes will include:



COURSE FORMAT

COVID-19 is an on-going risk for all humans, and thus this course will take place online. We will use the WyoCourses platform, supplemented by Zoom and other digital communications and collaboration technologies. If it seems feasible while maintaining everyone's safety, we may be able to meet in person, in an extremely socially distanced fashion. But, considering the ongoing risk of transmission and increasing infection rates, the pandemic will likely compel us to conduct most or all of this course online. See [this section of the syllabus](#) for online course format/functionality.

COURSE OBJECTIVES

- Learn to synthesize, discuss, and apply peer-reviewed literature from the wide range of disciplines which contribute to the science of science communication.
- Reflect on your existing scicomm perceptions and skills and articulate steps you can take to enhance them in evidence-based ways.

Knowledge & Experience

- Awareness of how to do effective scicomm using evidence-based methods
- Awareness of best practices in science communication and public engagement
- Contribute to the development of an annotated bibliography of relevant science of scicomm literature that can inspire and inform your own scicomm efforts.
- Identifying and using models of the type of scicomm you aim to do.

COURSE SCHEDULE

This schedule is subject to change; circumstances may alter the schedule. Changes will be announced asap, in class and/or via a WyoCourses announcement (not by direct emails). Be sure your WyoCourses settings are such that you receive all email updates from WyoCourses regarding this class.

Typical* weekly agenda

9:35-10:00 am - group discussion of readings; read at least 2 of the 3 articles posted.

10:00-10:45 am - guest speaker/discussion

10:45-11:00 am - break

11:00-11:30 am - group discussion; reflection assignment completed in class.

*Class will usually wrap up around 11:30 am, but you should plan for class to run the full scheduled time, just in case.

Due dates

Due dates will never be on weekends. All assignments are due at 8:00 pm, with a grace period until 9:00 am the following morning.

SPRING 2021 COURSE SCHEDULE (updated 3/16/2021)

Guests who are marked with **bold, underlined text** are confirmed.

Week	Topic	In class	Assignments <i>See assignment links in the weekly WyoCourses module</i>
Week 1	Getting Started	<p><u>1/21</u>: NO CLASS SESSION</p> <p>In advance of next week's class, please do the following in the order listed:</p> <ol style="list-style-type: none"> 1. <u>Please do this first</u>. Complete the pre-course survey 2. Read the week 1 overview (link) 3. Reflect on your individual strengths and goals for this semester. 4. Read two articles in prep for our 1st discussion (1/28, 9:35 am). Articles are listed on this discussion page: 	<ol style="list-style-type: none"> 1. Survey due 1/25 2. No submission 3. Reflection/goals due 1/27 4. Read for 1/28 class: <ul style="list-style-type: none"> • Week 2 overview • Scheufele 2013. Communicating science in social settings. • Simis et al. 2016. The lure of rationality: Why does the deficit model persist in scicomm?
Week 2	Sci of SciComm: The Big Picture	<p><u>1/28</u></p> <ol style="list-style-type: none"> 1. Introductions & discuss goals 2. Course syllabus & website/shell overview 3. Introduction to final project 4. Discussion of articles: Scheufele 2013 and Simis et al., 2016. 5. Wrap-up/reflection 	<ol style="list-style-type: none"> 1. Discussion post <ul style="list-style-type: none"> • Reflection due 2/1 • Peer responses due 2/3 2. Syllabus discussion 3. Reading for next week: <ul style="list-style-type: none"> • Week 3 overview • Akerlof et al., 2021 - Categorizing professionals' perspectives on env. comm. w/ implications for grad education • Auerbach et al., 2019 - Foundational skills for scicomm • Yuan, Besley, and Dudo 2019 - scis' and comm scholars' views re scis' public engagement activities
Week 3	Perspectives on the Practice of SciComm	<p><u>2/4</u></p> <ol style="list-style-type: none"> 1. Discussion: Akerlof et al., 2021, Auerbach et al., 2019, and Yuan et al., 2019. 2. Discussion with guest: <u>Emily Cloyd</u> 3. Wrap-up discussion/reflection 	<ol style="list-style-type: none"> 1. Discussion post <ul style="list-style-type: none"> • Reflection due 2/8 • Peer responses due 2/10 2. Reading for next week: <ul style="list-style-type: none"> • Week 4 overview • Canfield et al., 2020 - SciComm demands critical approach centering inclusion • Humm and Schrögel 2020 - Practical recs on reaching underserved audiences • Tuck and Yang 2012 - Decolonization is not a metaphor.

Week	Topic	In class	Assignments
Week 4	Equitable Approaches to SciComm	<u>2/11</u> 1. Initial discussion: Canfield et al., 2020, Humm and Schrögel 2020, and Tuck and Yang 2012. 2. Discussion with guest: Dr. Michel Kohl 3. Brainstorming about end-of semester projects 4. Wrap-up/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 2/15 ● Peer responses due 2/17 2. Project ideas due 2/17 3. Reading for next week: <ul style="list-style-type: none"> ● Week 5 overview ● Dahlstrom 2014 - Using narratives and storytelling to communicate science ● Neeley et al., 2020 - Narrative and identity in science. ● Risien and Storksdieck 2018 - Impact identities: path for connecting science and society
Week 5	Storytelling	<u>2/18</u> (updated 2/16) 1. Goal setting exercise 2. Audience/stakeholder characterization exercise 3. Discussion: Dahlstrom 2014, Neeley et al. 2020, and Risien and Storksdieck 2018. 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 2/22 ● Peer responses due 2/24 2. Reading for next week: <ul style="list-style-type: none"> ● Week 6 overview ● Howell et al., 2020 - Deference and decision-making in science and society ● Iyengar and Massey 2019 - scicomm in a post-truth society
Week 6	Misinformation & Decision-making	<u>2/25</u> 1. Initial discussion: Howell et al., 2020, and Iyengara and Massey 2019. 2. Discussion with guest: Dr. Reyhaneh Maktoufi 3. Check-in on end-of semester project planning 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 3/1 ● Peer responses due 3/3 2. Updates on final project planning 3. Reading for next week: <ul style="list-style-type: none"> ● Week 7 overview ● Gerst et al., 2020. Visualization science to improve expert/public understanding re climate change ● Lupia 2013-scicomm in politicized environments ● Sarewitz 2004-How sci makes env. controversies worse
Week 7	Weaponization of & Use of Science in Policy	<u>3/4</u> 1. Initial discussion: Gerst et al., 2020, Lupia 2013., and Sarewitz 2004 2. Discussion with guest: Dr. Melissa Kenney 3. Final project work session 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 3/8 ● Peer responses due 3/10 2. Reading for next week: <ul style="list-style-type: none"> ● Week 8 overview ● Lehmann and Gaskins 2019 - Learning scientific creativity from the arts ● Loehle 1990 - increased creativity in research - inspiration or perspiration?

			<ul style="list-style-type: none"> ● Polfus...Merkle, et al. 2017. Exploring biocultural diversity through art
Week	Topic	In class	Assignments
Week 8	Creativity and SciArt integration in Science	<u>3/11</u> 1. Initial discussion: Lehmann & Gaskins 2019, Loehle 1990, and Polfus et al., 2017. 2. Panel with <u>Dr. Karen Vaughan</u> , Bethann, & Chelsea 3. Final project work session 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 3/15 ● Peer responses due 3/17 2. Reading for next week: <ul style="list-style-type: none"> ● Week 9 overview ● Côté and Darling 2018). Scientists on Twitter ● Updated 2/16: Jarreau et al., 2019. Using selfies to challenge scientist stereotypes ● Kotcher et al., 2017 - Engagement in advocacy + credibility of scientists
Week 9	Science & Social Media	<u>3/18</u> 1. Initial discussion: Côté and Darling 2018, Jarreau et al. 2019, Kotcher et al., 2017 2. Discussion with guests: <u>Dr. Virginia Schutte, Dr. Paige Jarreau</u> 3. Final project work session 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 3/22 ● Peer responses due 3/24 2. Reading for next week: <ul style="list-style-type: none"> ● Week 10 overview ● Dewsbury 2017 - faculty dev of STEM inclusive teaching practices ● Shirk et al., 2012 - public participation in sci research ● Wiggins and McTighe 1998 - What is backwards design
Week 10 updated 3/22	Pedagogy (teaching science)	<u>3/25</u> 1. Initial discussion: 2. Discussion with guest: <u>Rachel Watson</u> 3. Final project work session 4. Wrap-up discussion/reflection	1. Discussion post <ul style="list-style-type: none"> ● Reflection due 4/5 ● Peer responses due 4/7 2. Project plan/next steps due 4/6 3. Note: blog/ public-facing publication; draft due 4/20. 4. No readings for spring break.
Week 11 updated 3/22	Spring Break	3/31-4/4 - no classes	1. Note: blog/ public-facing publication; draft due 4/20. 2. Prep for project updates in-class in week 13
Week 12 updated 3/22	Graphic Design	<u>4/8</u> 1. Graphic design workshop/discussion 2. Wrap-up discussion/reflection	1. Updated 3/16: Reading for next week: <ul style="list-style-type: none"> ● Week 13 overview ● Yeo & McKasy in review. ● Yeo et al., 2020 - humorous scicomm on twitter 2. Self-assessment #2 (due 4/13) 3. Project updates in-class in week 13

Week	Topic	In class	Assignments
			4. Blog post/public-facing publication draft (due 4/20)
Week 13 updated 3/22	Humor and SciComm	<u>4/15</u> 1. Initial discussion: 2. Discussion with guest: Dr. Sara Yeo 3. Final project work session 4. Wrap-up discussion/reflection	1. Discussion post • Reflection due 4/19 • Peer responses due 4/21 2. Blog post/public-facing publication draft (due 4/20)
Week 14 updated 3/22	Work session	<u>4/22</u> 1. Final project work session 2. Wrap-up discussion/reflection	Be planning ahead: 1. Final blog post/public publication due 5/4 2. In-class presentation of your project due 5/6 3. Final project due 5/10 4. Self-assessment #3 due 5/10 5. Post-course survey and writing samples due 5/10
Week 15 updated 3/22	Work session	<u>4/29</u> 1. Final project work session 2. Wrap-up discussion/reflection	Be planning ahead: 1. Final blog post/public publication due 5/4 2. In-class presentation of your project due 5/6 3. Final project due 5/10 4. Self-assessment #3 due 5/10 5. Post-course survey and writing samples due 5/10
Week 16 updated 3/22	Presentation of final projects	<u>5/6</u> 1. Final project presentations in class	1. Final blog post/public publication due 5/4 2. In-class presentation of your project due 5/6 3. Final project due 5/10 4. Self-assessment #3 due 5/10 5. Post-course survey and writing samples due 5/10

GRADING

"The human need for affirmation is real [...In academic spaces] the pursuit of affirmation can be powerfully conflated with evaluation. I don't rely on the "gatekeepers" or assessors of the "currency" for affirmation. I distinctly separate my source(s) of evaluation from my source(s) of affirmation [...]. I arrive in professional spaces FULLY AFFIRMED! This allows me to engage in my work "from affirmation" or in pursuit of joy or fulfillment, rather than "for affirmation" which can often lead to operating from fear of being judged inadequate or unworthy."
– Dr. Beronda L. Montgomery ([source](#))

It is my goal for you to feel empowered to learn and grow in this course.

Setting your own goals for the course is one of the first assignments. Periodically, you should check back on those goals and see how you are doing, and whether those goals

still articulate your intentions for yourself in this course. This reflection will be built into our assignments and course progression.

To meet the goal of you pursuing your own initiative in this course, you will be reflecting on your own work and assessing your own grade in May. Within reason, what you assess for yourself will be your grade, though I reserve the right to adjust it as appropriate. Typically students under-estimate their earned grades when self-assessing, so I might even give you a *higher* grade than you assigned yourself. :)

Throughout the course, I, your peer mentor, and your peers will all be providing on-going feedback about your thinking, growth, and project. This feedback will be delivered in multiple modes: discussion threads, direct communication (individual emails and meetings, course discussions, etc.

This is a graded course with grading on a linear scale: A: $\geq 90\%$ B: 80-89.9% C: 70-79.9% D: 60-69.9% F: $< 60\%$. See this syllabus section for [major assignment details](#).

Your work will be assessed through the following mechanisms:

- Participation (35%)
- Discussion posts (reflections + peer responses) (15%)
- Pre/post course assessments (survey + writing samples) (10%)
- Final project (30%)
- Public-facing publication (15%) - can be combined with final project

PARTICIPATION

Your participation in class exercises and discussion is critical to the quality of your experience in the course and the success of your fellow students. Make every effort to attend and actively participate in each class meeting. Every week in class, and when you participate in office hours and co-working sessions, you will be responsible for engaging in discussion as an informed, thoughtful, and respectful¹ classmate. Participation expectations for this course are discussed in further detail in this section of the syllabus.

Attendance & assignment submissions are up to you. You are free to choose not to attend a class meeting if your circumstances warrant. You are responsible for classes you miss. If you are not in class, you will, of course, not be assessed for participation that day. The same policy applies for completing assignments. Nuances of this policy are detailed below.

I understand that life happens, and I am happy to be flexible in consideration of that.

However, regular failure to complete assignments (informal or formal) and/or low investment/participation in class will be considered when assigning final grades.

If low attendance becomes a persistent issue, a more restrictive policy may be put in place for the entire course. If you anticipate being absent, please plan ahead to turn in

¹ See the syllabus section about [the inclusive learning environment](#) we all commit to by being in this course together. Expectations for student behavior are detailed there and throughout the syllabus. Please contact me if you have questions or concerns.

assignments, etc. I reserve the right to lower your course grade for poor attendance or routinely late work.

You are expected to turn in drafts of assignments on the dates they are due. Failure to submit assignments on time can result in: 1) limited or no feedback, and 2) a reduction in your grade on that assignment and/or in your final course grade. In extreme circumstances, failure to turn in assignments and/or participate in class can result in failure of the course. If you anticipate needing a deadline extension, please make such arrangements at least one week prior to the due date.

In order to get the most out of class, and to be a valuable addition to your classmates' experiences, please arrive in class having engaged with any material assigned. Much of your in-class work will depend upon work you do outside of class. Thus, please come to class with completed assignments, readings, drafts, etc., available for your reference.

Deadlines will typically be weekdays at 8:00 pm. No late penalty will be imposed for any assignments submitted by 9:00 AM on the following day. These deadlines are set in order to respect that you have other responsibilities and priorities in addition to this course. They also aim to encourage time-management decisions that support healthy sleep habits.

File naming format matters. It might seem pedantic but naming files so that you and I can recognize them later will help streamline our interactions over your work. Specific, consistent file naming is useful for your own organization/data management and tracking your own growth over time. Similarly, knowing who submitted and for what assignment helps me keep my focus on providing feedback and resources.

Please submit files to WyoCourses as .doc, .docx, or .PDF files using the following (or a similarly specific) naming style:

YYYYMMDD_FirstLast_Assignment_1.

Date submitted Your name Identify assignment somehow #s if submission has 2+ parts

Key components of course participation include:

1. Reflection and peer response: Submitting your reflection (and responses to 2+ peers) through the discussion thread assigned for each week's class. I will not directly respond to your responses, but I will learn from them about what you see and are drawn to, and that can help me support your work in and beyond this course.
2. In-Class/Online Participation: including discussion threads on course website; active participation in discussions and activities in-class, per the rubric and guidelines below.

Participation Rubric & Guidelines

Assignments = in-class and out-of-class assignments and activities

element	exceeds (A)	satisfactory (B)	needs work (C)	unsatisfactory (D/F)
frequency	actively balances self and peers' participation	actively participates at appropriate times	sometimes participates, sometimes disengaged	seldom participates; generally not engaged
impact on class	expands conversation in novel, mutually productive ways	frequently helps advance conversation	sometimes advances conversation	does not advance or actively harmful to conversation
listening	holds space so peers are fully included, heard, and engaged	actively and respectfully listens to peers and instructor; does not interrupt	sometimes displays lack of interest or interrupts	projects lack of interest or disrespect for others
preparation	engages beyond what is assigned	fully prepared	sometimes unprepared or superficial prep	little evidence of thought about assigned material
quality	brings in new, relevant material and/or invests in self & peer growth	relevant; reflects understanding of assigned texts & peers' remarks	sometimes irrelevant or betrays lack of prep or lack of attention to peers' remarks	little understanding of, or engagement with, the assignment or peers' remarks

For additional context, a minimum of 3 posts (yours and at least two responses) are expected for discussions online. As a point of good citizenship in online discussions, please keep an eye out for posts by peers that haven't yet been engaged with and focus there. Just as in-person, be sure to hold space for everyone and not to dominate the discussion. Further, postings should be significant and add to the knowledge base in the discussion. Avoid simple statements such as "I agree," unless you build on that in more detail.

Online course structure:

- Some of us are learning in an online environment because we are compelled to by the pandemic, not because we opted in for online/distance learning. In any case, here we are. Please be candid about what is working for you and what isn't. We will work to make the course as mutually productive as possible.
- The online course shell is organized into the following sections: Announcements, Modules, Syllabus & Grades. All content needed for coursework, including assignments, discussions, etc., will be provided within the relevant, weekly module. The syllabus will be posted within the Syllabus tab. All assignments should be submitted to their relevant assignment pages. Discussions will be embedded within assignment pages so they are easy to find.
- Announcements are the only group communication method used to provide updates and the like. Please check your settings in WyoCourses to be sure you are receiving notifications of announcements from our course. See a WyoCourses help

guide on managing your notifications here:

<https://community.canvaslms.com/docs/DOC-26683-42121235713>.

- Email correspondence for individual matters is welcomed and encouraged. Similarly, you are welcome to use the inbox/messaging function within WyoCourses to contact and correspond with me. See a WyoCourses help guide on the inbox here: <https://community.canvaslms.com/docs/DOC-10705-67952720333>.

Course Websites

1. WyoCourses (uwyo.instructure.com/courses/542656)

I will use WyoCourses to post announcements, assignments, resources, and other course materials. To that end, be sure to check all your settings within WyoCourses, and adjust them to ensure you receive updates (via announcements, assignment postings, etc.) from within the course system. After the first week of classes, all announcements and assignments will be distributed via WyoCourses, not via emails.

2. Engage Laramie Science (<https://engagelaramie.science.blog/>)

This public-facing site is for sharing your work and practicing public/popular image curation and writing, etc. See the assignments section for [details](#).

REQUIRED MATERIALS

You!

Every day, you will be responsible for engaging in class discussion as an informed, thoughtful, and respectful classmate. In order to get the most out of class, and to be a valuable addition to your classmates' experiences, please arrive in class having engaged with the material assigned. Most importantly, strive to bring your enthusiasm, curiosity, and good will to class every day. But, I get it – life happens. We'll work together to mitigate.

Course texts

All course texts will be provided via WyoCourses. If you wish to use e-versions of course readings, you may use personal technology in class. Assigned "texts" will predominantly focus on peer-reviewed articles. On occasion, we may also discuss popular texts, as well as multimedia materials (videos, podcasts, etc.). Brief written or visual reflections on the texts will often be integrated into assignments, to stimulate your own metacognitive thinking about how you are applying the material.

Note-taking/drafting

Some research suggests that writing notes on paper helps you learn and study better. But if you have a need or preference to use a digital device, that's fine. Out of respect for everyone's privacy, audio or video recording in class is prohibited unless prior authorization is granted.

Technology

You will need consistent access to a working computer and printer for this course. Contact me well in advance if you need to trouble-shoot this. You will submit digital versions of your work for assignments.

Assignments

In-class work will depend upon the design, drafting, writing, revision, research, and other project development work you do outside of class. With this in mind, please come to class with assigned work completed. We will use YOUR work every day for full-class workshops, small-group discussions, peer review, and individual revision. Always bring a current draft of your work-in-progress to class in a format you will be able to share with a partner or in a small group (i.e., written work should be available as Google Doc or other sharable file format).

COURSEWORK

Thinking and communicating go hand-in-hand, and thus revision is an essential aspect of the composition and design process. Most assignments will involve a combination of drafts and peer and instructor feedback. Demonstrated engagement in this process will be a key component of how your work is graded. There is a standing rubric for discussion posts/peer feedback. You will receive rubrics and explanations of specific expectations, along with brainstorming, research, drafting, and revision assignments, at appropriate stages of the final assignment.

Images ~ Citations

For any assignment for which you reference images, you should include commentary or captions about how they are informing your work. Consider these images as references. Cite/treat them as you would text references from your discipline's literature. Doing this research, and thinking about how visualizations work and were created, will enhance your visual literacy and inform your own approach to using visuals. Learning from others' visualizations is fundamental to graphic design and art traditions which underpin visual sci-comm, just as learning from prior research is a key part of science. With that in mind, all visuals in this syllabus are by me, unless otherwise noted.

MAJOR ASSIGNMENTS

Additional, detailed assignment prompts will be provided, via WyoCourses, for individual assignments that scaffold up to completing major assignments.

- Participation (35%)
- Reflections and peer responses (15%)
- Pre-/post-course assessment (10%)
- Final project (30%)
- Public-facing publication (15%) - can be combined with final project

1. Participation (35% of final grade)

Discussed in detail above, in the [participation section](#).

2. Discussion posts: reflections + peer responses (15% of final grade)

Each week, you will post a reflection on the readings and discussion you engaged with. Most weeks, you will be responsible for responding to your peers' reflections as well. Detailed expectations will be posted with each discussion assignment. Some weeks, you will also be assigned additional reflections (e.g., checking in on your progress toward your semester goals, etc.). Ideally, at least one of these posts will be published on the UWyo

scicomm course blog: <https://engagelaramie.science.blog/>. [Details](#) are provided on the next page.

3. Pre-/post- course assessments (10% of final grade)

In order to better help understand what students learn from science communication courses, collaborators and I are conducting an on-going study of science communication courses taught at UWyo.

The two components of the assessment are also a valuable way for you to reflect on your own behaviors, attitudes, and motivations about science communication. We ask you to complete both parts of the assessment at the beginning and end of the course:

1. Pre-course Survey. This survey provides an opportunity for you to reflect on your current skills, interests, and what you hope to build on in this class and beyond. When paired with your post-course survey, it also provides us with important information about the impacts of this class and how we can make it better. Note: if you prefer not to complete the survey, you may submit a written reflection (1,500-2,000 words) discussing your past experiences with scicomm, prior scicomm training, along with your attitudes and motivations for doing scicomm. Written reflections should also discuss challenges, concerns, etc., relating to doing scicomm as a grad student or an early career scientist.
2. Pre-Course Writing Sample (click here to submit). The writing samples you submit will help you, and us, understand how your skills develop during this course, toward the task of communicating science with different audiences.

4. Final project (30% of final grade)

Over the course of the semester, you will research and develop a project proposal and final product that meets your own objectives. There are two options, and either may be pursued individually or in a team:

1. Select a skill and/or product you'd like to develop to communicate about your research and a specific target audience. E.g., you might draw a set of comics, produce a short video, design a video game, develop an interactive website, create artwork or music, write lesson plans, etc.
2. Work on a contribution to the science of science communication. E.g., you might draft a grant proposal, develop and implement a research plan for outreach you are currently doing, have done, or plan to do, conduct a literature review, write a publishable annotated bibliography, etc.

You should expect to invest significant time in all phases of this project. There will be scheduled check-in/update sessions in class, and there will be time to work on your project in class. However, your project will be self-directed, and you should plan to work on it outside of class, as well.

During the last week, you will present your project to the class (and possibly to invited viewers from within and beyond the department). You will prepare a 3-minute presentation introducing your project, goals, and self-assessment. While the project you present may

be a work-in-progress, you should treat this presentation seriously and have something substantive to present/report on. Practice, and be prepared for a brief Q&A.

While the project you propose may be longer, these final presentations must take no longer than 10 minutes to watch, listen to, or interact with to a meaningful level. We will plan on a panel-type discussion following presentations.

5. Public-facing publication (10% of final grade)

During the semester, you will identify one of your reflection posts as something that can be public-facing and contribute to the broader discourse about the science of science communication. I will also keep an eye out for reflections that look promising and may suggest one or more of yours to you.

This piece will be published in one of two venues, unless you identify a different outlet to target:

- [Engage Laramie Science](#), the public-facing course website/blog. This website hosts public-facing, regular updates from course activities, including projects in-progress, social media posts, reflections, plans, struggles, celebrations, etc. If you want to learn about the back end of using a website, let me know! We can arrange for you to do that part, too.
- the [Communicating Science section](#) of *The Bulletin of the Ecological Society of America*. I founded and edit this section of ESA's oldest journal, and I will happily work with any students interested in publishing in a tightly edited (though not peer-reviewed), academic outlet.

You will always have the option to indicate that you do not want your material (submitted homework) to be shared publicly/published on the blog or used as an example in class. *Please indicate this in the file or in a message accompanying your submission to WyoCourses. That will ensure that note stays with the material through and beyond the semester.*

Combo option: depending on the project you propose, this assignment can be combined with the final project. Option does not apply to course blog posts. Contact me asap if you decide to pursue the combo approach.

Preparation: Depending on the stage of the writing process your reflection is in when you submit it, 2) it may be directly posted to the course website/submitted to *The Bulletin* or 2) I will collaborate with you to edit and refine it into a single-authored, polished piece which you can include in the Popular Publications or Other Academic Publications section of your CV.

Components of Complete Publication	Complete
Image & image credit/attribution	√
Alt text for image	√
Caption for image	√
Title	√

Main text: ~250-500 words (Engage Laramie Science) <u>OR</u> ~500-3,000 words (Bulletin)	√
Social media post sharing your publication (if you are active on social media)	√
Byline (author attribution)	√

ACADEMIC INTEGRITY

Participating regularly in discussions and staying up to date on coursework is an important aspect of academic integrity. In addition, you must also follow UW's Academic Honesty Code (UW Regulation 2-114; bit.ly/uwyoreg-2-114), which prohibits acts of plagiarism. For the purposes of this course, plagiarism is presenting the writing, images, or other intellectual property of others as one's own without appropriate permission, attribution and/or citation. Just as you cite written sources, you are expected to attribute images with the same diligence. If you have questions about how to credit and/or cite sources and images in your work, please do not hesitate to seek my assistance.

SUPPORT

Disability Statement

If you have a physical, learning, sensory or psychological disability and require accommodations, please let us know as soon as possible. You will need to register with, and provide documentation of your disability to, University Disability Support Services (UDSS) in SEO, room 330, Knight Hall.

Email, Staying in Touch, and Instructor Support

University of Wyoming data indicates students who seek additional support for their coursework tend to do better.

I will be actively engaged in your work throughout the course, in class and in response to assignments. We will meet throughout the semester during one-on-one meetings dedicated to discussing your work as you progress through the course. I am also available for additional meetings during office hours or by appointment. I will provide regular feedback on your work, and I will bring in resources, suggest additional readings, etc., as I think you may find them useful.

I am willing to help if you're having any difficulty within or beyond the course, so please don't hesitate to schedule an extended meeting if you have questions, concerns, or difficulties with the class or beyond. I check email regularly on weekdays until ~4PM. Still, there are times when it may take a day or more to reply to your messages, so plan accordingly. Please check your email daily so you can stay abreast of any course updates.

Resources

There are a host of resources listed on the course website. These include campus resources for mental and physical health, academic tutoring, and all sorts of interest-focused resources (e.g., Data Science Club, Writing Center), along with writing and visual scicomm resources. They are all available [here](#).