

## **ZOO/BOT 4100: Scientific Communication**

Spring 2019 | 3 credits | Must also enroll in ZOO/BOT 4101

Wednesdays, 3:10-6 pm | Joint sessions held in Engineering 3111

4100-03: Engineering (EN) 3105 | Dr. Brian Cherrington | 404 BioSci | bcherrin@uwyo.edu

4100-02 & 4100-05: EN 3106 | Bethann Garramon Merkle, MFA | 16 BioSci | bmerkle@uwyo.edu

4100 and 4101 course coordinator: Diane Gorski, MS | 416a BioSci | dpgorski@uwyo.edu

Office hours: BC - by appoint. (email) | BGM - open door, appoint. (email) | DPG - by appoint. (email)

### **Welcome!**

We are excited to embark on this journey of writing, thinking, and communication with you! This won't be your typical academic experience. While you will do research, present arguments, and think carefully about how an audience will respond, you won't write standard academic research papers, and you won't be writing just to your course instructors.

Instead, ZOO/BOT 4100/4101 will give you first-hand experience communicating inside and outside your discipline. Collaboration and engagement through visual, written, and oral communication is how we learn about, connect with, inform, and affect change in the world.

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. Regardless of your ultimate career ambitions or career paths, engaging with and listening to people inside and beyond your field is critical to professional and civic success.

This semester, you will continuously create, interpret, and share your writing, research, and thinking about how science impacts what we think, what we do, and how we do it. Throughout this course, you will push the boundaries of your creativity and critical thinking; assets for any professional, any citizen.

What we're going to work on together won't make for the easiest class you've been in. But that's okay. 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. For this class, we will all strive to contribute to a positive and comfortable learning environment for one another. This includes respecting and actively engaging with the people, ideas, topics, and issues in our course.

We really can't wait to get started! Thank for collaborating with us as we all together use ZOO/BOT 4100/4101 to enhance our science-related communication skills!

***Bethann, Brian & Diane***

### **Why a communications course like this?**

Zoology and Physiology, with Botany, have offered a discipline-specific communications course for over a decade, to ensure you will graduate better prepared to communicate within and beyond your discipline. In 2019, this COM 3 course was re-designed to the format you are currently taking. This redesign was conducted because Zoo/Phys and Botany are committed to providing students with a communication experience that better prepares you for communicating across science topics, disciplines, and perspectives.

There are a lot of approaches to Zoo/Phys and Botany, as the department's diverse student body and program specialties demonstrate. And, there are a lot of perspectives on how these disciplines are (and have been) involved with historical and modern developments in fields as disparate as wildlife management, resource extraction, urban development, warfare, telecommunications, photography, and space exploration. Your instructors this semester are trained in both academic and popular (non-specialist) science communication. This combination is an essential skill set for professionals-in-training about to enter a rapidly changing field. In particular, you need to be able to communicate productively with non-specialists, even about contentious topics. And, you need to be able to do that in a wide range of forums.

The current curriculum takes into account student, faculty, and employer feedback, and the course now emphasizes cross-disciplinary writing, visual communication, and public speaking. In ZOO/BOT 4100, your instructors are committed to offering you real-world communication experience and training that will contribute to your marketable skills.

### **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. As the instructor, we have the right to dismiss you from the classroom, study sessions, electronic forums, and other areas where disruptive behavior occurs. 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 us. We are happy to share what we know of for resources, etc.

Furthermore, the University of Wyoming's policy on classroom diversity is: "The University of Wyoming values an educational environment that is diverse, equitable, and inclusive. The diversity that students and faculty bring to class, including age, country of origin, culture, disability, economic class, ethnicity, gender identity, immigration status, linguistic, political affiliation, race, religion, sexual orientation, veteran status, worldview, and other social and cultural diversity is valued, respected, and considered a resource for learning.

### **Duty to Report**

UW faculty are committed to supporting students and upholding the University's non-discrimination policy. Under Title IX, discrimination based upon sex and gender is prohibited. If you experience an incident of sex- or gender-based discrimination, we encourage you to report it. While you may talk to a faculty member, understand that as a "Responsible Employee" of the University, the faculty member **MUST** report information you share about the incident to the university's Title IX Coordinator (you may choose whether you or anyone involved is identified by name). If you would like to speak with someone who may be able to afford you privacy or confidentiality, there are people who can meet with you. Faculty can help direct you or you may find info about UW policy and resources at [www.uwyo.edu/reportit](http://www.uwyo.edu/reportit). You do not have to go through the experience alone. Assistance and resources are available, and you are not required to make a formal complaint or participate in an investigation to access them.

### **Course Format**

This capstone course is designed to bring together and refine your experience in written, oral, and digital communication in the biological sciences (4100-03: Physiology; 4100-02 and 4100-05 : Biology, Botany, Zoology and Wildlife & Fisheries Biology & Management). In order to do so, you will spend the semester focused on an issue which you will choose in collaboration with your 4100 Instructor and your 4101 Discussion Section Mentor. This issue will relate to your degree and be an issue that exists in your hometown that you would

like to see solved, but you don't know exactly how to solve it. You will research the issue, identify at least one solution to argue for, and develop a number of related communications products for a stakeholder (ex: client, policy maker, wildlife manager, grant funder) who is in a position to contribute to the solution you propose.

These communications products will include: a final poster presentation and several project-in-progress products. Your poster will be presented during an all-class poster session (to which your Discussion Section mentor and others in the department will be invited). Your project-in-progress products will include drafts and a final version of:

1. a project proposal,
2. a poster and a one-page summary/overview of your issue and proposed solution which you could send to/give to your stakeholders,
3. informal presentations to your classmates, and
4. an annotated bibliography identifying your sources and how you used them.

The course includes two parts: a “lecture” session which meets weekly for the first 11 weeks of the semester and a “discussion” section with flexible one-on-one meeting times with your faculty mentor. Your mentor for the discussion sections will serve as a mentor and reviewer for your research project and in-progress products. Your 4100 Instructor, which will function more like a workshop, will work with you to develop drafts before you present them to your 4101 Discussion Section Mentor. You should have secured that faculty member’s agreement to supervise and evaluate your work before you enrolled in the discussion section.

### **Student Learning Outcomes**

Students in this course will develop skills in written, oral, and digital communication as appropriate to a 4000-level class. Through classroom instruction, student practice, and peer and instructor feedback, this COM3 course emphasizes and progressively develops transferable skills for students’ general academic work and future professions. As a course developed for students with a wide range of career goals, ZOO/BOT 4100 emphasizes general, professional conventions in writing, oral, and digital communication, though it emphasizes conventions specific to the departments.

By the end of the course we hope that you will achieve these goals as writers:

- Purposefully use and understand the composing process and appreciate the importance of revision.
- Develop an awareness of yourself as a communicator in written, oral, and digital forms so that you can successfully navigate future communicative situations in your field and life.
- Know how to provide and use constructive feedback on a variety of tasks.
- Create a body of personal work which elaborates how your major relates to aspects of daily life, civic engagement, the environment, and/or other topics of interest to you.

You will learn about the mechanics of technical and scientific writing, about how to give effective oral presentations, and how to use digital tools for research and writing during a series of interactive lectures and individual and group exercises. You will be expected to constructively evaluate your peers' communication skills and to respond to constructive criticism as you improve your own communication skills.

University Studies 2003 Statement: This course meets the University Studies 2003 WC writing requirement, a requirement designed to “assist students to achieve competence in rhetorical knowledge, composing processes, knowledge of conventions, and critical thinking, reading, and writing.”

University Studies 2015 Statement: This course fulfills the Communication 3 (COM3) requirement of the 2015 University Studies Program. Students will develop skills in written, oral, and digital communication as appropriate to specific disciplines and courses at the introductory, intermediate, and advanced level. Through repeated instruction, practice, and feedback, the communication sequence will emphasize and progressively develop transferable skills for students’ academic work and future professions. Advanced courses (COM3) will emphasize using the discourse of a discipline or interdisciplinary field to communicate to academic or professional audiences through written, oral, and digital communication.

This course addresses the following COM3 learning outcomes:

1. Use the discourse of a discipline or interdisciplinary field to communicate that field's subject matter to academic or professional audiences through written, oral, and digital communication.
2. Find, analyze, evaluate, and document information appropriately as applicable to the discipline, interdisciplinary field, or professional setting as demonstrated by completing a substantial communication project that requires appropriate research skills.
3. Recognize and evaluate more advanced aspects of communication that respond to the purposes and needs of audiences in a discipline, interdisciplinary field, or professional setting.
4. Make effective use of multiple drafts, revision, computer technology, peer and instructor comments, and collaboration to show understanding of communication standards in a discipline or interdisciplinary field.
5. Observe the accepted conventions of spelling, grammar, organizational structure, punctuation, delivery and documentation expected in disciplinary, interdisciplinary, or professional contexts.
6. Deliver presentations in a confident and professional manner, consistent with the standards of the discipline or interdisciplinary field.
7. Interact effectively with audience members, engage opposing viewpoints constructively, and demonstrate active listening skills.

### **Required Materials**

#### *You!*

Every class 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 1) come to class every week, and 2) 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, we get it – life happens. We'll work together to mitigate. See page 6 for complete attendance policy.

#### *Texts*

Required readings, lecture notes, etc., will be available on the WyoCourses website. Assigned "texts" may include a mix of peer-reviewed and popular writings, as well as multimedia (videos, podcasts, etc.). Brief written or visual reflections on the texts may be integrated into assignments, to stimulate your own metacognitive thinking about how you are applying the material.

#### *Course websites*

- WyoCourses ([uwyo.instructure.com/courses/522651](http://uwyo.instructure.com/courses/522651)): We will use WyoCourses to post announcements, assignments, resources, readings, 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.
- Engage Laramie Science ([engagelaramiescience.weebly.com/](http://engagelaramiescience.weebly.com/)): This public-facing site is for sharing your work with an audience beyond the classroom. Throughout the semester, your instructors will identify work that you have submitted to feature on this blog..

#### *Technology*

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. Students whose excessive in-class use of electronic devices distracts themselves, other students, or the instructor will receive lower participation grades, may be requested to leave the classroom, etc., as the situation warrants.

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

## Coursework

Submit files to WyoCourses as .doc, .docx, or .PDF files using the following naming style:

YYYYMMDD\_FirstLast\_Assignment\_1.

Diagram illustrating the naming convention: YYYYMMDD\_FirstLast\_Assignment\_1.

- YYYYMMDD: Date submitted
- FirstLast: Your name
- Assignment: Identify assignment somehow
- 1: #s if submission has 2+ parts

### *Importance of revision*

Coursework will often build upon previous work, so that you can create final projects and prepare for presentations. Because thinking and communicating go hand-in-hand, and because revision is an essential aspect of the composition process, most assignments will involve a combination of drafts, peer reviews, and instructor feedback. Demonstrated engagement in the composition process will be a key component of how your work is graded.

### *In-class work builds on assignments.*

In-class work will depend upon the design, drafting, writing, revision, research, and other 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 printed and brought to class. Visuals can be printed or displayed in their analog or digital form.

### *Attendance, Deadlines & Submitting Assignments*

*Deadlines* will typically be Tuesdays at 5:00 p.m. This time/date provides time for us to review your submission before our next class. It also respects that you have other things to do with your time in the evenings.

However, regular failure to complete assignments (informal or formal) and/or low investment or participation in class will be considered when assigning final grades. You are expected to turn in drafts of assignments on the dates they are due and to attend class weekly. Failure to submit assignments on time can result in 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.

As a guideline, two or more absences or incomplete assignments may impact your grade.

### *Major Assignments*

See page 2 for an overview of the project-based format of this course. The course will be comprised of the following major project components. Detailed assignment prompts and/or rubrics will be provided, via WyoCourses, for individual assignments that scaffold up to completing these major assignments.

Project Component	Graded In	Points	Percentage of Grade
1. Participation & informal assignments	4100	10	10%
2. Project proposal	4101	15	15%
3. Annotated bibliography	4101	15	15%
4. Informal presentations (in class)	4100	10	10%
5. One-page summary/overview for stakeholders	4100	10	10%

6. Final poster presentation	4101	40	40%
		100	100%

1. Participation and Informal Assignments (10% of final grade)

Every Wednesday, and when you participate in office hours, you will be responsible for engaging in 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. Much of your in-class work will depend upon the design, drafting, writing, revision, research, and other project development work you do outside of class. Thus, please come to class with completed assignments.

2. Project Proposal (15% of final grade)

During weeks 1-4, you will draft, refine, and finalize multiple iterations and versions, leading to a visualization of a key concept or process in your discipline, research, or results. Your final visual may be one of myriad possible visualization types. See separate Resources doc (also posted on WyoCourses) for a list of some of these possibilities. Through assignments and in-class work, you will establish a foundational toolkit of visualization skills, both analog and digital.

3. Annotated Bibliography (15% of final grade): An Annotated Bibliography is a list of sources, like any other bibliography – except, each source is accompanied by your own annotation. An Annotated Bibliography helps you to: a) Think critically and strategically about your sources, both in terms of how they support your proposed solution and with regards to the source’s credibility. b) Identify at least 5 credible sources to support your argument. c) Be able to explain to yourself and someone else why you chose the sources you chose.

4. Informal Presentations (10% of final grade): Throughout the semester (see course schedule for dates), you will have several opportunities in class to present project updates and two opportunities to practice your final poster presentations. During these presentation sessions, you and your classmates will be guided to focus on specific aspects of each others’ presentation style, in order to provide meaningful peer review. Your instructor will also provide feedback.

5. One-Page Summary/Overview for Stakeholders (10% of final grade): “One-pagers”, in formats such as policy briefs and fact sheets, are designed to increase the accessibility of policy-relevant research. The project you are working on, and the solution you propose, likely has policy implications. One-pagers can also enhance your ability to collaborate and communicate with diverse stakeholders. After all, distilling all your research and ideas into a single page is valuable skill. This assignment will provide you with the tools to craft your own, personalized 1-pager.

6. Final Poster Presentation (40% of final grade): You will design and present a poster presenting your research and your proposed solution during one of two public presentation days at the end of the semester. This presentation will provide you an opportunity to present your semester-long project to an authentic, diverse audience beyond your classroom. Focusing on a poster, versus a slide-based presentation enables you to: a) practice your visual communication skills, b) practice one-on-one and small group presentation skills including discussion, answering questions, and establishing personal relationships, and c) push yourself to create a stand-out presentation and poster. This final outcome is based on the fact that there will be an opportunity to win awards, provided by the department, for several categories which may include: graphic design, figure/image use and design, text, in-person presentation, feasibility and/or innovative solution, etc.

**Grading Scale and Policies**

Percentage scale: A 90+% | B 80+% | C 70+% | D 60+% | F <60%

See the Characteristics of ABCD Writing handout for details on how to self-assess your own work in this course.

Note that your grade for ZOO/BOT 4101, assigned by your Discussion Section Mentor, will be based on the same project components as those you will work on in ZOO/BOT 4100 with us. This grade will be merged with your

grade for 4100, for an overall final grade for both courses. A passing grade in both is required to pass. See the Major Assignments table on page 6 for details.

Failure to complete any of the major project components outlined on pages 6-7 will result in a half-letter grade deduction per missing project component. Failure to complete components marked with an asterisk (\*) will result in failure of the course.

### **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](http://uwyoereg-2-114)), which prohibits acts of plagiarism.\* The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated. Teachers and students should report suspected violations of standards of academic honesty to the instructor, department head, or dean. Regulations and other guidance can be found at: <http://www.uwyo.edu/generalcounsel/support/clean%20uw%20regulations/UW%20Reg%208-30.pdf> and <http://www.uwyo.edu/AS/student-appeals/academic-dishonesty.html>. The penalties for academic dishonesty can include, at our discretion, an "F" on an exam, an "F" on the class component exercise, and/or an "F" in the entire course.

\*Academic dishonesty means anything that represents someone else's ideas as your own without attribution. It is intellectual theft – stealing – and includes (but is not limited to) unapproved assistance on examinations, plagiarism (use of any amount of another person's writings, blog posts, publications, and other materials without attributing that material to that person with citations), or fabrication of referenced information. Facilitation of another person's academic dishonesty is also considered academic dishonesty and will be treated identically. 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 our assistance.

### **Support**

#### *Email, Staying in Touch, and Instructor Support*

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

We 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. We are also available for additional meetings during office hours or by appointment. We will provide regular feedback on your work, and we will bring in resources, suggest additional readings, etc., as we think you may find them useful.

We are 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. We check email at least once per day, M-F, unless circumstances prevent doing so. 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.

#### *Disability Statement*

The University of Wyoming is committed to providing equitable access to learning opportunities for all students. If you have a disability, including but not limited to physical, learning, sensory or psychological disabilities, and would like to request accommodations in this course due to your disability, please register with, and provide documentation of your disability as soon as possible to, Disability Support Services (DSS), Room 128 Knight Hall. You may also contact DSS at (307) 766-3073 or [udss@uwyo.edu](mailto:udss@uwyo.edu). It is in the student's best interest to request accommodations within the first week of classes, understanding that accommodations are not retroactive. Visit the DSS website for more information at: [www.uwyo.edu/udss](http://www.uwyo.edu/udss).

#### *Recommended Reading*

- Beebe, Steven A., and Susan J. Beebe. 2014. *A concise public speaking handbook*. 4th ed. Pearson.
- Greene, Anne, E. 2013. *Writing Science in Plain English*. University of Chicago Press, Chicago. Latest edition.
- Truss, Lynn. 2006. *Eats, Shoots & Leaves: The zero tolerance approach to punctuation*. Penguin Random House, New York.
- While past versions of this course required or encouraged students to own style guides such as Hacker or Strunk and White, we recognize that most writers (including ourselves) are using online versions of these or other resources, including online dictionaries with their audio of how to pronounce words, etc. If you have questions or would like advice about the accepted, top references in these genres, don't hesitate to ask your instructor.

### *Campus Resources*

- Student Assistance Programs and Services: [www.uwyo.edu/dos/studentassistance/](http://www.uwyo.edu/dos/studentassistance/)
  - Academic Affairs: 766-4286, 312 Old Main, [www.uwyo.edu/acadaffairs](http://www.uwyo.edu/acadaffairs)
  - Counseling Center: [ucstaff@uwyo.edu](mailto:ucstaff@uwyo.edu), 766-2187, 766-8989 (After hours), 341 Knight Hall, [www.uwyo.edu/ucc](http://www.uwyo.edu/ucc)
  - Dean of Students Office: [dos@uwyo.edu](mailto:dos@uwyo.edu), 766-3296, 128 Knight Hall, [www.uwyo.edu/dos](http://www.uwyo.edu/dos)
  - Disability Support Services: [udss@uwyo.edu](mailto:udss@uwyo.edu), 766-3073, 128 Knight Hall, [www.uwyo.edu/udss](http://www.uwyo.edu/udss)
  - Student Welfare: [www.uwyo.edu/dos/student-welfare/](http://www.uwyo.edu/dos/student-welfare/)
- UW Police Department: [uwpd@uwyo.edu](mailto:uwpd@uwyo.edu), 766-5179, 1426 E Flint St, [www.uwyo.edu/uwpd](http://www.uwyo.edu/uwpd)
- Student Code of Conduct: [www.uwyo.edu/dos/conduct](http://www.uwyo.edu/dos/conduct)
- UW Science Communication Initiative: [www.uwyo.edu/wysci](http://www.uwyo.edu/wysci)

Data Science Club, RSO | 432 Ross Hall: Weekly meetings: Tuesday, 12:30-1:30. Consultation hours can be scheduled outside meetings. Join mailing list by emailing [datascienceclubwyo@gmail.com](mailto:datascienceclubwyo@gmail.com).

EcoInfo Working Group | AG 316: Thursdays, 10-12. This drop-in is staffed by faculty and staff from WyGIS and INBRE. It is a great place to go to get support for visuals produced in, or relying on work done in, R. You can also get support for a lot of other aspects of informatics, working in R and other coding languages, etc.

UW Writing Center | 302 Coe Library: Helps writers at any stage of the writing process. With a focus on teaching and learning, the Writing Center is not a "fix-it shop," but they help writers identify, articulate, and implement improvements and corrections to their writing. You can drop in to see if a consultant is available and/or schedule an appointment online at <http://www.uwyo.edu/ctl/writing-center/>.

UW Oral Communication Center | 422 Ross Hall: Helps speakers at any stage of the presentation process, including prep for proposal presentations and thesis defenses. Not a fix-it shop, but can help you practice responding to questions, identifying unclear aspects of presentations, etc. You can drop in to see if a consultant is available and/or schedule an appointment online at [www.uwyo.edu/cojo/occ/](http://www.uwyo.edu/cojo/occ/).

## Course Schedule

Subject to change; circumstances may alter the schedule. You are expected to check WyoCourses at least once a week. You should also ensure your WyoCourses settings are such that you receive all email updates from WyoCourses regarding this class.

Week	Topic	In class	Assignments <i>Submit to WyoCourses by 5:00 pm, Tuesday, each week.</i>
1-1/30 COM3 SLO1	Communicating Science within and beyond your discipline	<p>All-class session together in EN 3111</p> <ol style="list-style-type: none"> <li>1. Introduction of instructors</li> <li>2. SciComm attitudes, motives &amp; behaviors pre-course survey: <a href="https://uwyocommunications.co1.qualtrics.com/jfe/form/SV_5paTcOR43eOh2AZ">https://uwyocommunications.co1.qualtrics.com/jfe/form/SV_5paTcOR43eOh2AZ</a>.</li> <li>3. Pre-course assessment: 1 paragraph (abstract style) about a science topic that interests you and 1 paragraph (press release style) about that same topic.</li> <li>4. Introduction to science of scicomm <ul style="list-style-type: none"> <li>● No such thing as “the general public”</li> <li>● Facts and numbers aren’t convincing.</li> <li>● Core vocabulary</li> </ul> </li> </ol> <p>3. Course syllabus overview</p> <p>4. Introduction to major project for the semester, including in-class work time: start thinking about topic ideas.</p>	<p>Submit to 4100 Instructor by 2/5:</p> <ol style="list-style-type: none"> <li>1. Submit pre-course assessment (both paragraphs)</li> <li>2. Individual strengths and goals for improvement this semester.</li> <li>3. 3-5 possible issues to consider for this project. Indicate top two choices and explain.</li> <li>4. Developing a draft list of 10+ likely sources. Using the abstracts of these sources, rank the sources in the order of most likely to be useful to your research to least likely. Print off two of these sources (research articles) and bring them to class next week.</li> </ol> <p>Submit to 4100 Instructor: 3-5 possible issues to consider for this project. Indicate top two choices and explain.</p>
2-2/6 COM3 SLO 1, 2	Selecting and communicating about interesting science issues and questions	<p>All-class session together in EN 3111</p> <ol style="list-style-type: none"> <li>1. Selecting interesting science issues: what to avoid and why, differences between a topic and an issue, framing a research question, etc.</li> <li>2. Identifying good sources: determining credibility, scope of issue and existing research on it, counter arguments, etc.</li> <li>3. Annotated Bibliography – what it is, how to use it as a tool for communicating science, using other’s bibliographies to ID references for your own project, etc.</li> <li>4. Audience/stakeholder characterization - what it is and why it matters.</li> </ol>	<p>Due 2/12:</p> <ol style="list-style-type: none"> <li>1. Draft Project Proposal sections 1-2, including thesis statement, topic identified, etc.</li> <li>2. Complete Audience Characterization worksheet, as part of Project Proposal draft.</li> <li>3. Begin Annotated Bibliography with complete entries for at least two sources. Were any of these sources from your initial list? Why or why not?</li> </ol>

		5. Facilitated discussion to finalize your project focus and in-class work time: identifying sources/drafting Annotated Bibliography.	
<b>Week</b>	<b>Topic</b>	<b>In class</b>	<b>Assignments</b> <i>Submit to WyoCourses by 5:00 pm, Tuesday, each week.</i>
3-2/13 COM3 SLO2	Finalizing Project Proposal	1. Informal presentations of project proposals 2. Discussion of/refinement of projects 3. In-class work time: Annotated Bibliographies and Research Proposals	Submit to 4100 Instructor by 2/19: 1. First full draft of Project Proposal 2. First full draft of Annotated Bibliography (4-5 sources) 3. Submit to 4101 Discussion Section Mentor by 5/19: draft Project Proposal and draft Annotated Bibliography
4-2/20 COM3 SLO2, 4	Writing Center presentation  In-class conferences	1. In-class work time, with 1:1 meetings with 4100 instructors planned throughout class time, in regular classrooms (3105/3106).  1. 5:10 PM - All-class session in EN 3111: Writing Center presentation: science writing tips and what the Writing Center offers	Submit to 4100 Instructor your Response to Reviewer by 2/26: 1. Cover Letter 2. Point-by-Point Response Table 3. Tracked-changes, revised drafts of Full Project Proposal <u>and</u> Full Annotated Bibliography  Both should have been revised based on feedback from 4101 Discussion Section Mentor.
5-2/27 COM3 SLO1, 4, 5	Writing Mechanics	1. All-class session on grammar and other writing mechanics issues and opportunities in EN 3111: a. Consistent grammar errors b. Strategic writing opportunities: active voice, strong verbs, etc.  2. In-class work work time	Due 3/5: First draft of outline for project report, based on report checklist.
6-3/6 COM3 SLO4, 5	Outlines as a Science Communication Tool	1. Refining project report outlines: informal presentation of project outlines 2. In-class work time with 1:1 meetings with 4100 instructor during class time	1. Submit revised outline to 4100 Instructor by 3/12. 2. Submit revised outline to 4101 Discussion Section Mentor by 3/12.
7-3/13 COM3 SLO1, 3, 7	Communicating Science in Professional Settings	All-class session with panelists, in EN 3111	Due 3/19: Reflection on 1 piece of advice from each panelist and how you can incorporate it into your project and future professional communication.
8-3/20	Spring Break	Spring Break	Spring Break
9-3/27	Graphic Design and Sharing Science with a Broader Audience	All-class session in EN 3111: 1. Graphic design basics: <ul style="list-style-type: none"> <li>● color-blind design</li> <li>● Simplifying color schemes</li> <li>● Only 1-2 typefaces</li> </ul>	Due 4/2: Draft of poster design

		<ul style="list-style-type: none"> <li>Organizing your information and adjusting your text for nonspecialists</li> <li>Strategic use of visuals (including intellectual property rights considerations)</li> </ul> <p>2. In-class work time</p>	
<b>Week</b>	<b>Topic</b>	<b>In class</b>	<b>Assignments</b> <i>Submit to WyoCourses by 5:00 pm, Tuesday, each week.</i>
10-4/3 COM3 SLO1, 3, 4, 6, 7	Graphic Design workshop	All-class session; workshop and revision time with Bethann Garramon Merkle and Zoo/Phys grad students, in EN 3111	Assignment TBA, due 4/9
11-4/10 COM3 SLO1, 3, 4, 5, 6, 7	Poster revisions and practice presentations	<p>1. In-class presentations of posters, along with peer-review on posters and presentations.</p> <p>2. In-class work time to revise posters and presentation plan.</p>	Due 4/16: Submit revised poster designs to 4100 Instructor and Discussion Section Mentors.
12-4/17 COM3 SLO1, 3, 4, 5, 6, 7	Poster revisions and practice presentations	<p>1. In-class presentations of posters, revised based on feedback from 4101 Discussion Section Mentors.</p> <p>2. SciComm attitudes, motives &amp; behaviors post-course survey</p> <p>3. Post-course assessment: 1 paragraph (abstract style) about a science topic that interests you and 1 paragraph (press release style) about that same topic.</p>	Due 4/23: Submit final poster designs to 4100 Instructor and Discussion Section Mentors.
13-4/24 COM3 SLO1, 6, 7	Poster session 1	<p>All-class session; attendance required – location TBD</p> <p>Assigned students presenting posters to judges/audience from departments, campus, and community</p>	All posters were due via WyoCourses on April 22 at 5:00 p.m.

POSTER SESSION RUBRIC – COMPLETED BY FACULTY AND  
GRAD STUDENTS DURING FINAL, PUBLIC PRESENTATIONS

Reviewer Name: \_\_\_\_\_

Student Name: \_\_\_\_\_

Students have spent the semester researching a problem in their hometown in order to identify a science-informed solution. Their poster and handout have been designed for a specific (and not necessarily academic) audience.

Component	Expectations √+ Exceeds   √ Meets   0 Does not meet	Notes <i>Feedback, questions, etc. Use reverse for more space.</i>
<b>Audience</b> May not be academic	Audience is clearly defined. Who is audience? _____	
<b>2-3 Big Ideas</b> Students have distilled their research and solution proposals. They are focusing on only 1-3 big ideas for this presentation.	Only 1-3 big ideas	
	Clearly articulated in poster &/or handout	
	Ideas are presented appropriately for target audience.	
	Ideas are clearly based in solid science.	
<b>Science &amp; Society</b> Regardless of target audience, students should address Broader Impacts and/or Relevance to Human Health.	Clearly articulated in or addressed by poster &/or handout	
	Presented appropriately for target audience	
	Reasonable, feasible connection to scientific basis	
<b>Design</b> Please provide comments on design, within the context of the target audience.	Possible topics to address in your feedback: <ul style="list-style-type: none"> <li>• Distilling ideas for target audience</li> <li>• Use of color, text, images &amp; layout to guide target audience through the poster &amp; handout</li> </ul>	
<b>Strongest Attribute(s)</b> Please provide comments on what stood out to you as the strongest attribute(s) of the student's presentation and work.		
<b>People's Choice Award</b> Please indicate if think this student's work should be considered for a PCA.	If yes, please indicate why.	

PROPOSAL 1<sup>ST</sup> DRAFT RUBRIC

Criteria	<u>5 pts</u> Polished Concept & Text (accept w/ few or no revisions)	<u>3 pts</u> Strong 1 <sup>st</sup> Draft (accept w/ revisions)	<u>1 pt</u> Needs More Work (invite to resubmit)
<p><b>SECTION 1a – Issue Exploration: Presentation of Problem and Student's Interest in It</b> Explains the following: The problem/challenge in a way that ensures the student's audience will understand why it is not yet solved and should be solved. (I.e., what is the importance or value of answering the student's question/solving their problem?)</p>			
<p><b>SECTION 1b – Issue Exploration: Presentation of Problem and Student's Interest in It</b> Explains the following: Why student has a stake/interest in this problem/challenge. Could include: What student already knows; questions and concerns student has about topic; why the topic/question interests the student; what is most exciting or intriguing about the project to the student; and what the student thinks they will be able to add to the existing conversation/research on this topic.</p>			
<p><b>SECTION 2a – Stakes: The Critical Importance of the Project</b> Explains the following: • Who else cares about the problem and why? • The moral, social, economic, and/or cultural stakes involved for these possible stakeholders. • One specific stakeholder/audience group that student is going to focus on for their project this semester, in 4100/4101. Student has described this group in detail without stereotyping.</p>			
<p><b>SECTION 2b – Stakes: The Critical Importance of the Project</b> Explains the following: The existing conversations (and/or research) about student's problem and how those conversations relate to student's Project Proposal concept.</p>			

<p><b>SECTION 3 – Scope: Connection to Other Ideas</b>  Explains the following: • What new topics and questions might be generated (or have been already) as student conducts research into this problem/question. • The topic-based directions student could go to research and answer their question? (I.e., Which other topics, that might be related or even seem tangential, will the student need to explore?) • What research will the student need to do to address counter arguments as they start developing ideas for their proposed solution? • What topics will the student probably want to avoid and/or have to leave out? (I.e., how will they focus their research?)</p>			
<p><b>SECTION 4 – Stance: Originality and Tension</b>  Explains the following:  • Potential counterarguments to student's probable solution.  • What student hopes to add to the existing conversation about this problem/question. (I.e., what will they have to say about this problem/question without a) repeating themselves and b) parroting what others have said?)  • What tension exists around this problem/question, especially the student's aspect of it?  • What nuance exists in the student's focus which cannot immediately be answered with a "yes" or "no," even with lots of data and analysis?  • What are the possible arguments that would develop out of the student's research into their problem?</p>			
<p><b>SECTION 5 – Research Question</b>  States student's finally formed research question, informed by the rest of the proposal. (I.e., the question the student will pose to themselves, to direct their focus as they research possible solutions to the problem they have identified.)</p>			

**SECTION 6 - Annotated Bibliography**

Includes the following:

- An entry for every source the student mentioned in their proposal.
- All entries in the bibliography are cited somewhere in the proposal text.
- At least 5-10 sources in this draft
- What additional sources, including whole disciplines and/or bodies of literature, should the student explore next/in addition to those in this draft?