

Spring 2016

**GEOL 2220**  
**Communicating Earth Science**

**Course Instructor: Dr. Erin Campbell-Stone**

**Contact information:** [erincs@uwyo.edu](mailto:erincs@uwyo.edu), 766-2053

**Office Hours:** T 1:30-3:30, T 10-10:50

**Class Meeting Times:** TR 11-12:10

**Class Location:** Geol 209

**Prerequisite:**

Grade of C or higher in GEOL 2010, COM 1

**Required Text:** None

**Course Description:**

This course fulfills the Communication 2 (COM2) requirement of the 2015 University Studies Program, and is specifically designed to help majors in Geology and Geophysics become proficient in communicating science to the public. Many public misconceptions about Earth Science stem from a lack of understanding, and it is the responsibility of scientists to make science understandable and accessible. In this course we will address the skills necessary to present earth science in a way that is interesting and comprehensible to people without a background in the field.

In the COM1 course, students have developed foundational skills in writing. COM3 will focus on communicating with academic or professional audiences. Through repeated instruction, practice, and feedback, the COM1-2-3 sequence emphasizes and progressively develops transferrable skills for students' academic work and future professions. This COM2 course offers an opportunity for students to develop skills for communicating science to nonscientists while emphasizing foundational oral and digital communication skills and continuing to build writing skills.

**Course Structure:**

Each semester or section of this course will have a different theme within earth science, and students will choose a topic within that theme. This semester the theme is National Parks; students will choose one National Park to research and present to the class.

Each student will make three presentations: written, digital and oral. The form of the presentations will be up to the students (with instructor approval), but they must be directed at the general public. For example, written presentations might be field guides, pamphlets, press releases, and newspaper and magazine articles. Digital presentations could be podcasts, websites, slide shows, radio reports (e.g. Star Date) and videos. Oral presentations could include simulated ranger talks, press conferences, museum talks, company spokesperson announcements, public forums and hearings.

Students will first present their work in workshop (described below), and then to the class as a whole:

- The written work will be presented in the “bookstore,” where work will be displayed around the classroom. Students will browse the bookstore, read their colleagues’ work, and will vote for what they consider to be the three most informative, well-written, and interesting pieces. The student votes will not affect grades, but we will discuss what made those pieces effective.
- Digital work will be presented at the “expo,” where students will view/hear/ experience the digital presentations. Again, students will vote for the top three, and we will discuss what makes those presentations especially successful.
- Oral presentations will be made to the class as a group at the “conference.” Each presentation will be 10-15 minutes long, with an additional five minutes of questions. Students in the audience will be assigned roles such as interested public, hostile public, a talkative audience, a protestor/heckler, children, etc. At the conclusion of the conference, the class will determine the three most effective oral presentations and discuss their merits.

### **Workshop:**

In workshop, students will be broken into groups of four people. The purpose of these groups is to present a draft of your work to your peers for suggestions and critiques, before presenting to the class as a whole. Each member of the workshop group will provide constructive written feedback to their colleagues. This feedback will be based on delivery rubrics, to be handed out in class.

**Learning objectives and outcomes:** This course is designed to fulfill the seven USP 2015 learning outcomes for COM2 courses.

1. Breadth: Students will make presentations to the class in the form of *written* field guides, pamphlets, press releases, and/or newspaper and magazine articles, in the form of *digital* communication through podcasts, websites, slide shows, radio reports (e.g. Star Date) and/or videos, and in the form of *oral* simulated ranger talks, press conferences, museum talks, company spokesperson announcements, and/or public forums and hearings.
2. Research: Students will choose their own topic within the theme of the course. Course themes may vary by semester or section and will include themes such as National Parks, Geologic Hazards, Geoengineering, or Earth’s Resources. Students will be assisted in their research, and will learn to find, evaluate, and analyze suitable resources. We will also address proper ways to cite sources within each form of communication.
3. Purpose and Audience: The goal of this course is for students to become proficient in communicating with the public. We will practice communication with various types of audiences (roles will be assumed by classmates), such as interested public, hostile public, talkative audiences, protestor/heckler, and/or children. Students will focus on presenting their topic clearly, presenting material appropriate and of interest to their audience, and in organizing their messages.
4. Process: Each assignment will be presented to a subgroup of the class during workshops. Students will receive feedback from their peers as well as their instructor, and will have

multiple opportunities to revise their work. They will also answer questions from the class on their oral presentations.

5. Conventions: Students will learn to find and follow guidelines for different forms of presentation, such as format, length, structure, and content.
6. Delivery: Students will present each phase of their research, writing, and presentations to their workshop groups before presenting to the class. Through providing constructive criticism to their classmates, they will learn to identify effective methods of presentation. Through repeated exposure to public speaking, collaboration with their peers, and suggestions from their instructor, they will develop skills for overcoming speaking anxiety.
7. Interaction: Students will develop skills in interacting with an audience through question and answer sessions after their oral presentations. During these sessions, their classmates will be assigned different audience roles in which they might strongly agree or disagree with the speaker, dominate the public discussion, or be uninterested in the topic. Students will also work on engaging their audience and adjusting their presentations based on audience response.

### **Course Schedule:**

#### Week 1

Introduction to the course and theme  
Discuss literature searches (visit from Geology Librarian)  
Discuss appropriate references  
Students select tentative topic and begin research

#### Week 2

Students present topics in workshop groups  
Discuss references, correct citation, how to avoid plagiarism  
Discuss written projects/Students choose a format  
Annotated Bibliography Due

#### Week 3

Written drafts due to workshop groups.  
Instructor shows examples of digital presentations  
Discuss effective digital presentations/Students choose a format  
Feedback from instructor on annotated bibliography

#### Week 4

Workshop written project drafts  
Discuss workshop feedback

#### Week 5

Workshop written project drafts  
Discuss workshop feedback

Week 6

Final version of written project due  
Class browses the “bookstore”  
Popular vote on written project (no grade implication)  
Discuss aspects of successful written material

Week 7

Digital presentations ready  
Workshop digital presentations  
Discuss workshop feedback

Week 8

Workshop digital presentations  
Discuss workshop feedback

Week 9

Digital presentations in the class “expo”  
Discuss oral presentations/Students choose a venue

Week 10

Digital presentations in the class “expo”  
Popular vote on digital presentations (no grade implication)  
Discuss aspects of successful digital presentations

Week 11

Workshop oral presentations  
Discuss workshop feedback

Week 12

Workshop oral presentations  
Discuss workshop feedback

Week 13

Oral presentations +Q&A at the “conference”

Week 14

Oral presentations +Q&A at the “conference”

Week 15

Oral presentations +Q&A at the “conference”  
Popular vote on oral presentations (no grade implication)  
Discuss aspects of successful oral presentations  
Complete annotated bibliography due

**Attendance:**

Because of the interactive nature of this course, attendance is required. You may miss three classes without a valid, university-excused absence. After those three missed classes, your grade will drop by 5% for each unexcused absence. After eleven absences (more than one third of the class meetings), you will automatically fail the course.

**Grading:**

**10%--Annotated bibliography of references** (average of scores on first and final version)—

During week three you will turn in an annotated bibliography of the references you plan to use. You will list each reference and follow it with brief (1-2 sentence) summary of the content that is relevant to your work. You will also turn in an updated annotated bibliography on the last day of class.

**25%--Written feedback to fellow students during workshop and presentations**—You will provide constructive written feedback to your workshop group, as well as for class presentations.

**20%--Written Assignment** (average of score on draft and final version)—You will create a written piece that informs the public about your topic. You will present a draft to your workshop group and the instructor, and the final version to the class as a whole.

**20%--Digital Presentation** (average of score on draft and final version) —You will present another aspect of your topic in a digital format, first to your workshop group, and the final version to the class as a whole. The content should not be identical to your written assignment, but a different aspect of the topic that you have chosen. You will have ten minutes to introduce your digital presentation to the class and answer questions.

**20%--Oral presentation**—You will give an oral presentation to the class on your topic. The content should not be identical to your written and digital assignments, but a different aspect of the topic that you have chosen. Your presentation to the class will be 10-15 minutes with an additional 5 minutes of questions.

**5%--Response to Q&A**—After your oral presentation, you will field questions from your audience. Your audience will assume assigned roles and ask questions based on those roles. For example, you may be presenting on fossils and could have a creationist in the audience. Or you might have someone in the audience who thinks they know more about the topic than you do.

**Grading System:**

A = 92% or higher

A- = 90-91.9%

B+ = 88-89.9%

B = 82-87.9%

B- = 80-81.9%

C+ = 78-79.9%

C = 70-77.9%

D = 60-69.9%

F = 59.9% or lower

### **Academic dishonesty**

Academic dishonesty is defined by UW regulation 802, revision 2, as “an act attempted or performed which misrepresents one’s involvement in an academic task in any way, or permits another student to misrepresent the latter’s involvement in an academic task by assisting the misrepresentation.” Academic dishonesty is not tolerated, and there is a well-defined university procedure to judge such cases.

### **Student Support Services**

The university offers a variety of services to assist students:

In case of an accident or anything that prevents you from attending class for an extended period, contact the Office of Student Life (307)766-3296, [dos@uwyo.edu](mailto:dos@uwyo.edu).

For free counseling, contact the University Counseling Center (307)766-2187, [uccstaff@uwyo.edu](mailto:uccstaff@uwyo.edu).

For disability support, the University Disability Support Services can be reached at (307)766-6189, [udss@uwyo.edu](mailto:udss@uwyo.edu).

The UW Veterans Services Center can be reached at (307)766-6908, [uw-vets@uwyo.edu](mailto:uw-vets@uwyo.edu).