

Course Information: This course is a 3-credit, upper-division capstone course in geology and geophysics that satisfies the C3 requirement in the University of Wyoming's University Studies Program (USP).

Prerequisites: Enrollment in GEOL or EGGH major; senior status (within 2 semesters of planned graduation).

Meeting Times:	Communications workshop	Monday	11:00–11:50 am	TBD
	Discussion	Wednesday	11:00–11:50 am	TBD
	Discussion	Friday	11:00–11:50 am	TBD

Instructor Information:

Instructor: Dr. Cliff Riebe, Professor

Contact: criebe@uwyo.edu

Office:

Office hours: T 11–1 pm and by appointment

Graduate Student Instructor: TBD

Contact: TBD

Office: TBD

Office hours: TBD and by appointment

Course Overview: This course meets three times per week: once for a writing workshop; once for discussion of recorded lectures and assigned readings; and once for deep dive presentations led by students. All of these meetings will be held via Zoom. The synchronous online course content means attendance of Zoom meetings is required for all scheduled class meeting times.

This course embraces Earth science as a transdisciplinary field—one that requires integration of physics, chemistry, and biology for a comprehensive understanding. To be successful in the course, students will need to build on concepts learned in previous and concurrent geology and geophysics coursework. In readings, discussions, and in oral and written presentations, you will gain new perspective on key discoveries and their impacts on the field. Topics to be discussed include the formation of the elements, global tectonics, extinctions in the geologic record, the Earth as a system, and uncertainty in science.

In addition, this course meets all seven of the required C3 Student Learning Outcomes identified in the 2015 University Studies Program, which are quoted here from USP guidelines:

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.

Disability Statement: If you have a physical, learning, sensory, or psychological disability and require accommodations, please let the instructor know as soon as possible. You will need to register your disability with University Disability Support Services.

WyoCourses: We will use the *WyoCourses* system to post your grades; to make announcements about course organization, reading assignments, and due dates; and to provide electronic copies of course materials, including readings, assignments, and recorded lectures. ***It is required that you read and understand any course advisories, updates, and materials that are distributed via WyoCourses or directly from us by e-mail.***

Contacting the Instructors Outside of Class: As your instructors for the course, we are committed to responding to student queries as quickly as possible. To make this possible in an interconnected world where there are so many

ways to contact people, it is important to establish a preferred method of contact. For interactions about this course, if you need to contact us outside of the classroom, please do so **during office hours, or at the end of class**, particularly if you have a complicated question or if you have specific questions about an assignment. **If regularly scheduled office hours do not work for you, you are welcome to arrange another time to meet.** If you have a simple (e.g., “yes-or-no”) question, or if you need to contact us about missing a class (e.g., because you are sick) or about setting up an appointment outside of office hours, please feel free to contact us by e-mail at the addresses listed on above. **Please do not use** the e-mail system that is built into *WyoCourses*. We will not be checking it! We will respond to e-mails sent to the addresses above as quickly as possible, but it may take up to 24 hours on weekdays or 48 hours on weekends to get back to you. So, please plan ahead and do not expect a response if you send us an e-mail the night before an assignment is due.

Readings and Recorded Lectures: You should carefully read any assigned readings and watch any recorded lectures before class, so that you are adequately prepared for discussions, **which will be graded** (see below). **All materials posted on WyoCourses are required reading and/or viewing.** In addition, there will be required reading from the required textbooks: *How to Build a Habitable Planet: The Story of Earth from the Big Bang to Humankind*, by Charles Langmuir and Wally Broecker; and *Writing Tools, 50 Essential Strategies for Every Writer*, by Roy Peter Clark. You may be held responsible for understanding material in assigned readings and recorded lectures even if we don’t address it explicitly in class.

Graded Coursework: To be successful in this course, students will need to develop skills in written, oral, and digital communication with an emphasis on proficiency in both academic and professional communication, consistent with the seven USP C3 criteria on page 1.

Communication workshops: 25% of course grade. Every week, usually on Mondays, we will have workshops focused on developing oral, written, and digital communication skills. Presentation exercises will build on the three-point approach detailed in online lectures. Writing exercises will build upon lessons from the *Writing Tools* book. There will be graded assignments, including short exercises in writing and graphical presentation.

Discussion sessions: 25% of course grade. Once a week, our attention will focus on discussion of readings and recorded lectures. Grades will be assessed based on written summaries of readings; student engagement in discussion; and/or demonstration of active listening to the instructors and other students during discussion.

Presentations: 25% of course grade. Once a week, generally on Fridays, students will rotate through leadership of deep-dive presentations about selected topics each week. Grades will be assessed based on demonstration of oral and digital communication skills and on content.

Term Project: 25% of course grade. The term project will involve a report based on a literature review and is due on the last day of class. **Late term projects will not be accepted (i.e., will receive a score of 0).** Grading on the final project will be weighted as follows: one paragraph describing selected topic (10%); annotated bibliography (20%); report outline (10%) quality of the content (30%) and the quality of the writeup (30%).

Grading: We will grade and return your assignments as soon as possible, usually within one week of the time it is due. You can keep track of your grades in this course on *WyoCourses*. Each assignment will receive a whole-number score between 0 and 5 **based on the rubrics posted on WyoCourses**. Some example rubrics are provided in Table 1, to give you a general idea of what to expect in the more specific rubrics.

At the end of the semester, in recognition of the fact that we all trip up sometimes even as we grow, **we will drop your lowest non-zero score for the writing workshops and discussion sessions** (so they are not counted against you) before calculating your final grade. After doing this, we will average your scores in each assignment group (i.e., labs, problem sets, exams, and project), then scale them according to the percentages in each category (i.e., 25% for workshops, 25% for discussions, 25% for presentations, and 25% for the project) to calculate your final weighted-average score. After rounding these averages to the nearest tenth of a point, we will use them to assign a final grade for the course as follows: A = 4.5–5.0; B = 3.5–4.4; C = 2.5–3.4; D = 1.5–2.4; F = 0.0–1.4.

We will set *WyoCourses* up so that it shows your total score as a percentage of 5 points in real time, with scaling according to the rules outlined here. The instructor reserves the right to change the grading policy. Any changes will be announced in writing via *WyoCourses*.

Table 1. Example rubrics for assignments in GEOL 4820*

Score	Workshop exercises	Discussion sessions (summaries and participation)	Student presentations (design, content, and performance)	Term project (content)	Term project (writing)
5 Master communicator	Exercise is completed without any errors.	Written assignments are well supported and free of grammatical errors. Student was engaged in and contributed to discussion.	The presentation is well designed around a clear, three-point plan and is well supported by relevant documentation. The student	The topic is well researched. No key references are missing. All references are relevant to the stated goal of the project.	The content is well supported by a concise, cogent, grammatically correct, and therefore well-written report.
4 Accomplished Communicator	Exercise has at most one error.	Written assignments are well supported but could be improved and are not free of grammatical errors. Student offered cogent responses when asked but was otherwise not engaged in discussion.	The presentation is designed around a three-point plan but could be better organized or better supported by relevant documentation. The student's performance was smooth and confident.	The topic is well researched, but a key reference is missing, or one reference is irrelevant to the stated goal of the project.	The report rambles at times or could be more efficiently organized or has some significant grammar errors.
3 Communicator	Exercise has at most three errors.	Written assignments need additional support or are not entirely relevant and/or have multiple grammatical errors. Student offered reasonable but erroneous responses when asked and was otherwise not engaged in discussion.	The presentation is well organized but not designed around a three-point plan and could be better supported by relevant documentation. The student's performance was solid, but would have benefited from more practice	One or more key references are missing and/or one or more references are irrelevant to the stated goal of the project.	The report rambles or and/or is disorganized or has many grammatical errors.
2 Aspiring communicator	Exercise has at most five errors.	Written assignments are not relevant and/or have many grammatical errors. Student offered patently erroneous responses when asked and was otherwise not engaged in discussion.	The presentation is not well organized and is not well supported by relevant documentation or the student could have been better prepared to present the work.	Multiple references are missing and/or multiple references are irrelevant to the stated goal of the project. There is at most one inaccuracy in discussion of cited references.	The report is unfocused and poorly organized and/or is riddled with grammatical errors.
1 Novice communicator	Exercise has more than five errors.	Written assignments are not relevant and/or have many grammatical errors. Student was unwilling to respond to queries and was otherwise not engaged in discussion.	The presentation is not well organized and is not well supported by relevant documentation and the student was not well prepared to present the work.	The topic is poorly researched. References are inappropriate to stated goal of the project. There is more than one inaccuracy in discussion of cited references.	The report is poorly written, with incomplete sentences, poorly structured paragraphs and other grammatical errors.
0 Incomplete**	The exercise is incomplete, or student did not attend class and did not have an excused absence.	Written assignments are inaccurate, irrelevant, and/or incomplete. Or student did not attend class and did not have an excused absence or did not pay attention during class or did not contribute to or dominated discussion despite requests by instructors.	The presentation is unintelligible. The content was incomplete, irrelevant, or inaccurate. Or the student not prepared.	The report is unacceptable due to incomplete research and/or inaccurate representation of findings in cited reference.	The report is unintelligible, is written by hand instead of on a word processor, and/or is irrelevant.

*A more detailed rubric for each type of assignment will be included with each assignment on *WyoCourses*.

**Assignments with a score of "0" are not eligible for being dropped.

Missed and Late Assignments: If you miss a class, the burden is on you to make up any missed work and turn it in on time. This is true *even if you have a University-sponsored excuse*. You still need to turn your work in on time! This means you will need to plan ahead (if you have an upcoming excused absence) or scramble to make up lost time (due to illness and other unforeseen issue). All materials will be posted on *WyoCourses* when they are assigned, so there is no way you can receive an assignment late. Therefore, the work will be due at the same time for you and your classmates, even if you did not attend class on the day the assignment was made. We will accept late work, *but only up until graded work is returned to other students*. Note: credit for late work will be docked 25% per day late. We therefore strongly recommend that you turn your work in on time. See University Regulation 6-713, available on the Office of General Council website, for the University's official Student Absence Policy. If you think you have a valid excuse for turning in an assignment late, we will be happy to entertain the possibility on a case-by-case basis. An example of a potentially valid exception is exposure covid-19. Students who have tested positive for covid-19 or have been exposed to someone who has tested positive may need to isolate for up to two weeks (<https://www.uwyo.edu/alerts/campus-return/index.html>). Students who need to self-quarantine for either reason will not be penalized but are nevertheless expected continue to complete course work on time, to the extent possible, for the duration of their isolation as they are able.

Academic Honesty: *The work you turn in must always be your own*. If you fail to adhere to this rule on any assignment, we will initiate a case of Academic Dishonesty against you with the College of Arts and Sciences. Both the university and the college have well-defined procedures for judging cases of suspected academic dishonesty, and serious sanctions, including failure of the course and even expulsion from the university may be assessed to offenders. For the university's official policy on academic honesty, see University Regulation 6-802, revision 3. It defines Academic Dishonesty as "*an action attempted or performed which misrepresents one's*

involvement in an academic endeavor in any way, or assists another student in misrepresenting his or her involvement in an academic endeavor.” Section IV of regulation 6-802 has definitions of seven distinct acts of academic dishonesty. One that is particularly relevant to this course is **plagiarism**, because of the focus on writing. In this course, you are expected to use the following guidelines on using other peoples’ ideas in your writing and presentations: either paraphrase the idea or put the exact words into quotation marks. In either case you must cite the source. Scientific endeavors are often collaborative, but, in this course, it is never acceptable to work on an assignment together unless we expressly and unambiguously allow it. Because a central goal of this course is to polish your reputation and skills as a professional scientist, our minimum recommendation as a penalty for any instance of Academic Dishonesty will always be harsh: **failure of the course**.

Conduct: An official *Student Code of Conduct* has been established under University Regulation 8-30. Like other regulations, it is available online from the University Office of General Council. There is also a code of conduct for this course, encapsulated in a document entitled *A&S – Students and Teachers Working Together*, published by the College of Arts and Sciences. A copy is included in your handouts on day one.

Statement on Diversity: UW Regulation 2-117 contains the following statement: “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.” This course embraces this statement, both in the way we expect students and instructors to interact and in the material that is covered in the readings, labs, and lectures.

In this classroom, you have the right to determine your own identity. You have the right to be called by whatever name you wish and to have that name pronounced correctly. You have the right to be referred to by whatever pronouns you wish. You have the right to adjust any of these things at any point in your education. If you find that there are aspects of course instruction, subject matter, or classroom environment that result in barriers to your inclusion, please contact the instructor privately without fear of reprisal.

Duty to Report: The instructors of this course are committed to upholding the university’s non-discrimination policy. This includes supporting victims of sexual discrimination, harassment, and violence. 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. For example, there are people on campus who can meet with you while preserving your privacy and confidentiality. Faculty members can help direct you to these resources, and you can find information about them at <http://www.uwyo.edu/reportit>. Please note that instructors are required as “Responsible Employees” of the university by federal law (i.e., Title IX of the Education Amendments Act of 1972) to report any suspected instances of sex- or gender-based discrimination and sexual harassment or violence to the university’s Title IX Coordinator.

COVID-19 Policies: During the ongoing pandemic, you must abide by all UW policies and public health rules put forward by the City of Laramie, the University of Wyoming, Albany County, and the State of Wyoming to promote the health and well-being of fellow students and yourself. The current policy is provided for review at: <https://www.uwyo.edu/alerts/campus-return/index.html>. We will alert you to any course format changes in response to UW decisions about community safety during the semester.

As with other disruptive behaviors, we have the right to dismiss you from the classroom (Zoom and physical), or other class activities if you fail to abide by these covid-19 policies. These behaviors will be referred to the Dean of Students Office using the UW Cares Reporting Form for Student Code of Conduct processes: https://cm.maxient.com/reportingform.php?UnivofWyoming&layout_id=5.

Zoom and WyoCourses Expectations: As with all UW coursework, the instructors strive to provide an educational and useful experience for everyone enrolled in the course. Our responsibilities include making this true and responding to questions, concerns, and feedback in a timely manner.

Your responsibilities include, but are not limited to:

- Interact with your instructor, your TA, and your classmates respectfully and constructively at all times. This includes in Zoom chats and on *WyoCourses* boards.

- Actively engage in discourse in a respectful manner. Use professional language in all course-related forums and on all course-related e-mails.
- Communicate professionally. Whenever you send class-related email or messages, please include a clear, specific subject line and use the body of the email or message to explain the purpose for the email and any attached materials. Conduct yourself professionally.
- Meet assignment deadlines. We expect you to interact with course material multiple times during the week.
- Ask for help when you need it. For assistance on academic aspects of this course please contact me for available resources. For Dean of Students assistance please see: <https://www.uwyo.edu/dos/student-resources/covid-19-student-resources.html>.
- Please let the university know if you know of another student who needs help using our (anonymous) WyoCares referral system <https://www.uwyo.edu/dos/students-concern/index.html>.

Information Technology (IT): If you have any IT-related challenges, please contact the UWIT Service Center: <https://uwyo.teamdynamix.com/TDClient/1940/Portal/Requests/ServiceDet?ID=8890>.

Changes in the Syllabus: The instructor reserves the right to change the syllabus as the course proceeds. Any changes will be announced in class. Substantive changes shall be communicated in writing by e-mail.

Tentative Schedule of Topics:

Week	Days (M W F)	Topics	Week	Days (M W F)	Topics
1	Jan 25, 27, 29	Earth System; Big Bang	9	Mar 22, 24, 26	Energy; Oxidation; <i>Writing Tools 26–28</i>
2	Feb 1, 3, 5	Elements; Molecules; <i>Writing Tools 1–4</i>	10	Mar 29, 31, Apr 2	Catastrophes; <i>Writing Tools 29–32</i>
3	Feb 8, 10, 12	Planet Formation; Radiometric Dating; <i>Writing Tools 5–8</i>	11	Apr 5, 7, 9	Natural Climate Change; <i>Writing Tools 33–36</i>
4	Feb 15, 17, 19	Planet Differentiation; Planet Rebooting; <i>Writing Tools 9–11</i>	12	Apr 12, 14, 16	The Rise of Humans; <i>Writing Tools 37–41</i>
5	Feb 22, 24, 26	Earth's Atmosphere; Plate Tectonics; <i>Writing Tools 12–14</i>	13	Apr 19, 21, 23	Control of Earth by Humans; <i>Writing Tools 42–46</i>
6	Mar 1, 3, 5	Earth's Circulation; <i>Writing Tools 15–18</i>	14	Apr 26, 28, 30	Human Civilization; <i>Writing Tools 47–51</i>
7	Mar 8, 10, 12	Connections Between Layers; <i>Writing Tools 19–22</i>	15	May 3, 5, 7	Are We Alone? <i>Writing Tools 52–55</i>
8	Mar 15, 17, 19	Origins of Life; Evolution; <i>Writing Tools 23–25</i>	16	May 10 – 14	Finals Week

Add deadline: January 28, 2021 | Drop deadline: February 3, 2021 | Early alert deadline: February 19, 2021 | Midsemester grades due: March 25, 2021 | Advising Week: March 29 – April 2, 2021 | Last day to withdraw from individual classes: April 16, 2021 | Last day to withdraw from all classes: April 28, 2021.

Schedule is tentative. The instructor reserves the right to change it at any time. Minor changes will be announced in class. Substantive changes will be communicated in writing by e-mail.

Required Books: Required readings, assigned on *WyoCourses*, will be from two sources:

Langmuir and Broecker, *How to Build a Habitable Planet: The Story of Earth from the Big Bang to Humankind*, Princeton University Press; Revised and Expanded Edition, 2012
Clark, *Writing Tools: 55 Essential Strategies for Every Writer*, Little, Brown Spark, 2008

Additional Books and Resources:

Dreyer, *Dreyer's English: An Utterly Correct Guide to Clarity and Style*, Random House, 2019
University of Wyoming Writing Center www.uwyo.edu/ctl/writing-center/