

WRTG 3030-009: Climate Change, Environmental Health, and Resilience

2018 Fall Term ▪ Mon/Wed/Fri 12:00-12:50pm ▪ ECCR 1B08

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Course Overview

This interdisciplinary course has two overarching aims. The first objective is to teach students how to identify, critique, and apply common conventions of academic research, analysis, and writing in their respective fields of study, so as to develop a working understanding of the standards to which they are held in their majors. Students will develop these transferable skills by examining current national and international environmental health hazards engendered by global climate change—which challenge students to engage difficult texts in the health sciences, environmental policy, environmental law, and social justice. Some of the issue-areas we will explore include infectious diseases and emerging pandemics, antibiotic resistance, food insecurity, water scarcity, and natural disasters. Through diverse course readings, independent research, formative writing assignments, and the critical evaluation of contemporary scholarship on these issue-areas, students will learn what successful research and writing looks like in their respective majors. And in having students apply lessons of rhetorical analysis learned in the classroom to real-world complex policy problems, this course strives to motivate students to think critically about the role that science should have in creating public policy, the influence of corporate special interests on the decision-making process, and the responsibilities the educated citizen and researcher has to her community.

Moreover, as a service-learning or community-based writing class, students will have the unique opportunity to engage in professional (client-based) writing, which characterizes the writing many students will do in non-academic scientific careers. Students will be working with the Foothills United Way and the Boulder County Community Resilience Council to explore efforts CU is taking to become more resilient to environmental disasters and how it is working to safeguard student groups that lack resilience are remain vulnerable to the effects of these disasters. Taught as a writing seminar that emphasizes critical thinking, revision, and oral presentation skills, this course is structured around semester-long consulting projects for our Boulder-area clients, which will challenge students to draw on their own disciplinary expertise to the design problems they will collaboratively work to address, to create and sustain an independent research agenda, to complete and to effectively communicate with multiple stakeholders with different and sometimes competing interests and objectives, and to co-author a cohesive, persuasive, and high-quality deliverable (or consulting report) that meets their clients’ needs.

Writing Objectives

This writing course meets two sets of requirements here on the CU-Boulder campus.

The first set consists in the requirements established by the Colorado Commission on Higher Education for all third-level “Communication General Education ‘Guaranteed Transfer’” (CO-3) courses in the state. These CO-3 courses are designed to ensure that students understand “how to summarize, analyze, and synthesize the ideas of others” and “learn more sophisticated ways of communicating knowledge...in the context of a specific discipline” (par. 3). This is achieved by extending “rhetorical knowledge,” “writing processes [and] conventions,” and “comprehension of content knowledge at the advanced level” (par. 6).

The second set consists in the requirements established by the Program for Writing and Rhetoric (PWR), which is the home program for this course. These include your capacities to:

- *develop rhetorical knowledge*—analyzing and making informed choices about purposes, audiences, and context as you read and compose texts.
- *analyze texts in a variety of genres*—understanding how content, style, structure and format vary across a range of reading and writing situations.

- *refine and reflect on your writing process*—using multiple strategies to generate ideas, draft, revise, and edit your writing across a variety of genres.
- *develop information literacy*—locate and evaluate sources, critically analyze the merit of your sources and their relevance to your own writing, and successfully integrate your sources into your writing.
- *construct effective arguments*—using appropriate reasons, evidence, and logical analysis to support your positions while responding to multiple points of view.
- *understand and apply language conventions rhetorically*—including grammar, spelling, punctuation and format, (These several considerations are adapted from the PWR First Year Committee.)

In light of these requirements, our writing course this semester will ask you to:

1. develop rhetorical knowledge by reading and writing a range of arguments—which will attend to a variety of rhetorical considerations, including context, audience, purpose, rhetorical appeals, genre- and discipline-specific conventions of writing and research, and so forth—while using effective evidence and providing appropriate analysis;
2. develop an intimate understanding of writing processes and information literacy by drafting, revising, editing, and proofreading your own work; by reading and critiquing the work of others; and by engaging in a number of formative writing assignments using primary and secondary source materials;
3. develop a working understanding of the conventions and principles of academic research, analysis and writing in your discipline of study, and to implement these conventions and principles in your writing;
4. explore the broader implications of technical writing and our specific consulting projects, as well as our obligations to our communities as educated students and writers.

To accomplish these goals, you will spend extensive time this semester working alone and in groups. You are also encouraged to meet with me one-on-one to discuss your paper assignments.

Required Textbooks

There are two required texts for this course:

- Weston, Anthony. *A Rulebook for Arguments*, 4th ed. (Indianapolis: Hackett Publishing, 2009).
- Okasha, Samir. *Philosophy of Science: A Very Short Introduction*, 2nd ed. (Oxford: OUP, 2016).

All other required readings will be made available on Canvas (<http://canvas.colorado.edu>).

University and Course Policies

Attendance: While there is no formal attendance policy for this class, you are strongly encouraged to regularly attend class. For this is a writing seminar that requires students to engage in numerous writing workshops, peer-review workshops, small-group discussions, class presentations, and other various in-class assignments, in which students who miss class cannot participate—at the expense of their course participation grade. Further, many in-class assignments cannot be made-up *even if* an absence is excused, and major writing assignments (which must be submitted electronically on Canvas) will be treated as late—penalized 10%—for those students who upload their papers by the start of class but then miss class.

Canvas and Class Emails: You should regularly check your CU email account for class announcements and information, as well as regularly check our Canvas course webpage to access reading assignments, to view paper assignments, to view syllabus updates, and to keep track of your course grade.

Classroom Etiquette: Be respectful of and considerate toward your classmates. I am committed to establishing an atmosphere that fosters open, civil, and constructive lines of communication, and inappropriate or offensive conduct will not be tolerated. *If you feel uncomfortable at any time with any aspect of the class environment, I strongly encourage you to come discuss your concerns with me.*

Disability Accommodations: If you qualify for accommodations because of a disability, please submit a letter to me from Disability Support Services (DSS) in a timely manner so I can accommodate your needs. DSS requires that disabilities be documented. Visit dinfo@colorado.edu for details; call 303-492-8671 with questions. If you have a temporary medical condition or injury, review Disability Services' details about *Temporary Injuries* at <http://disabilityservices.colorado.edu/>, and discuss your needs with me.

Discrimination: No discrimination or harassment will be tolerated in this class. If you believe you have been discriminated against, you are strongly encouraged to speak with me and/or contact the Office of Discrimination and Harassment at 303-492-2127, or the Office of Student Conduct at 303-492-5550. Information about University policies and resources can be found at <http://hr.colorado.edu/dh/>.

Electronics: Students are expected to turn **OFF** all electronic devices when entering the classroom, with the exception of personal computers—which are to be used only for course-related purposes.

- You must bring either paper or electronic copies of each course reading with you to each class—you **will not be permitted to use cell phones to access course material**.
- Students who must be reminded not to use personal electronics for non-course-related purposes will be prohibited from using electronics in class, and their participation grade will be penalized.

Honor Code: Students are responsible for knowing and adhering to the academic integrity policy of this institution. Violations may include cheating, plagiarism, aiding others in academic dishonesty, deception, fabrication, and etc. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including, but not limited to, university probation, suspension, or expulsion). Further details can be found at <http://colorado.edu/policies/honor.html>, and at <http://honorcode.colorado.edu>.

Plagiarism: If students have *any* doubt about what constitutes plagiarism, it is their responsibility to ask *before* submitting work as their own. Plagiarism is the act of using others' words and/or ideas without proper attribution, either intentionally or unintentionally. The *MLA Style Manual and Guide to Scholarly Publishing* (Gibaldi 1999) requires that

[s]cholarly authors generously acknowledge their debts to predecessors by carefully giving credit to each source. Whenever you draw on another's work, you must specify what you borrowed—whether facts, opinions, or quotations—and where you borrowed it from. Using another person's ideas without acknowledging the source constitutes plagiarism (Gibaldi 151).

Intentional plagiarism will be strictly punished: a proven first offense will result in an automatic F for the final assignment grade, while a proven second offense will result in an automatic F for the course. Moreover, depending on the nature of the offense, engaging in plagiarism may result in further disciplinary action by the University. Consult the PWR or Campus Honor Code websites for more info.

Further resources are available on our Canvas course page, under "Additional Student Resources," or at https://levszentkiralyi.com/teaching/student_resources/.

Punctuality: persistent tardiness is unacceptable. The participation grade of students who consistently arrive to class late will be penalized.

Religious Observances: Campus policy requires that faculty make every effort to reasonably and fairly accommodate students who have scheduling conflicts because of religious observances. Students who need to reschedule exams or assignments should inform me as soon as possible.

Service-Learning Protocol: Although not formally designated as a "service-learning" course, the course design calls upon many principles of service learning as you interact with on-campus and off-campus clients. Service learning relates academic study to work in the community in ways that enhance both. We learn best and most deeply by constructing knowledge and rooting it in the immediacies of our personal experience. In terms of this course, you will be serving either campus clients or non-profit clients in the Boulder community by helping them with consulting projects. Your own learning will be served by having a real-life organizational context in which to apply your design and project management skills. For more information on service learning, visit <http://www.colorado.edu/servicelearning/index.html>.

As a significant portion of this course involves your interaction with a campus or community client, it is imperative that you keep the following in mind:

- **Professionalism and Confidentiality.** You are expected to act, dress, and communicate professionally with our clients and those involved in their organizations *at all times regardless of the context*. This

semester you will not only be representing yourself, but also your classmates, your instructor and his department, and other faculty and staff involved in the consulting project. Take seriously the fact that there are many people with vested interests in the quality of your performance, and you should conduct yourself accordingly. Also, be discreet as you use and communicate information about the client and your consulting project: respect any client requests concerning confidentiality.

- **Tact and Organizational Mission.** Understand that the client has deep knowledge of his or her organization and the stakeholders it serves—so be very cautious about criticizing or disparaging the client or organization, as you may not have full knowledge of the organizational context and the role or mission of the organization. Your role is to learn about that mission and to further the work of the organization through your consulting project.
- **Safety and Travel.** Always follow safety regulations and other rules or guidelines as communicated by your client and her organization. Students will have a number of meetings with their respective clients over the course of the semester, and if your client is not here at CU and you must travel off campus for a meeting with your client organization, then travel safely, using public transportation whenever possible. I have selected clients with their accessibility to RTD bus routes in mind.

Your safety and well-being are key expectations for me, and you should contact me immediately if you experience difficulties of any kind when interacting with your client and her organization.

Writing Center: Students are strongly encouraged to utilize the Writing Center—a free campus service offering one-on-one sessions with professionally-trained writing consultants—as a supplement to their learning in this course. Visit <https://colorado.edu/pwr/writing-center> for details. Appointments are available at the Norlin Writing Center, which is located in Norlin E111 (visit <http://ucb.mywconline.com>). Drop-in hours are also available Monday-Thursday evenings, and Sunday afternoons and evenings, at select residence halls and the C4C.

- Note that the Norlin Writing Center (by appointment only) books up quickly, so plan accordingly.
- Note that you should bring your working draft, regardless of how complete or incomplete it is and regardless of the subject, as well as assignment guidelines or any other information about the purpose and audience
- Call or email the Norlin Writing Center with questions at 303-735-6906 or wrtghelp@colorado.edu.

Written Work and Due Dates: Students must type all writing assignments using single spacing, 1-inch margins, and a consistent citation style (MLA, APA, or Chicago), and they must upload all assignments to our Canvas course dropbox by the assigned dates and times.

- Late work will be penalized one full letter grade (10%) for each day that it is late.
- Computer problems, broken printers, empty toner cartridges, or other technology problems will not excuse you from completing your assigned work on time.
- If you require an extension, you must contact me 48 hours before the deadline to request one and your request must explain why your circumstance warrants extra time to finish the assignment,
- A timely request for an extension does not guarantee that one will be provided: any decision to grant an extension will be made solely at my discretion.

Course Requirements

- **Paper 1: Conventions of Research and Writing Executive Summary** (5% of final course grade):
 - Students will explore scholarship in their majors—identifying what counts as evidence within their respective fields of study, as well as some universal and discipline-specific conventions of research, analysis, and writing.
 - 1-2 pages in length—single-spaced
 - Only a final draft will be collected (no rough draft will be peer-reviewed)
 - This is a collaborative (co-authored) project

- **Paper 2: Research Paper** (30% of final course grade)
 - Students write a brief research paper that develops an academic argument in defense of a thesis statement related to a subject of their choice—though, preferably a subject in their respective majors—successfully applying principles of good writing, discipline-specific conventions of research and analysis, and general conventions of rhetorical analysis and information literacy
 - 5-6 pages in length—single-spaced
 - Students must submit a rough draft and substantively revised final draft
 - Rough draft will be peer-reviewed and conferencing with me to discuss rough draft is mandatory

- **Team Project for Client** (50% of final course grade)
 - A semester-long consulting project that addresses and speaks to the needs of a real client. Several client projects will be available, with 4-5 students forming an interdisciplinary team for each. Clients will identify a specific need or problem that would lend itself to a design task, one that would be appropriate in scope given your skill sets and the time frame of the course. Clients will be drawn from campus academic departments and administrative units, and on occasion from nonprofit and educational organizations in the Boulder community. The semester-long consulting project involves ongoing client communication (e.g. progress reports), producing a high-quality consulting report for the client, and presenting the findings of your report to the client.

The project will involve several phases and multiple oral presentations:

- Progress Report (15%—assigned as a group grade). This involves activity analysis, user interviews, needs assessment, design constraints and specifications, interviews and secondary research, and a presentation to the class.
 - Final Consulting Report (15%—assigned as a group grade). This involves conducting interviews and extensive second research, analyzing this data to answer the central questions or address the key points of emphasis from your client regarding your respective projects—as well as explaining a few key results or important findings, and limitations to your study—developing a few recommendations for your client, and presenting your consulting report to the class and your client.
 - Deliverable (15%—assigned as a group grade). This involves a substantively revised final consulting report that incorporates constructive feedback you receive from your client and classmates, and submitting your collaborative project as a professional consulting report.
 - Project management and team contributions (10%—assigned individually). Students will evaluate the semester-long contribution of each team member.
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- **Course Participation** (15% of final course grade)
 - This is a writing seminar in which students engage in extensive collaboration with each other—co-authoring a paper together, peer-reviewing draft papers, and helping each other work through difficult course readings. Students are expected to be actively involved in our class discussions, workshops, and in-class assignments; and since this is a highly interdisciplinary class, students are expected to contribute to our collective learning by drawing on content knowledge in their majors.
 - Arriving to class late, arriving unprepared to discuss the readings, neglecting to contribute substantively to our class discussions, demonstrating a lack of engagement, and failing to complete in-class assignments will all result in deductions in your course participation grade.
 - **Examples of behavior that indicates to me your lack of engagement:** not taking notes; using cell phones during class; being generally disengaged (staring off into space, chatting with others, falling asleep, etc.); failing to make an effort to answer questions asked of you.

- **Examples of behavior that indicates to me you are actively engagement:** taking detailed notes (not just writing down what's provided on the slides); being generally engaged (active listening, making eye contact, responding to comments other students may make, etc.); making an effort to answer questions directly asked of you.
- **Annotations.** Part of your required participation consists in collaboratively annotating our course readings. Each assigned reading posted on Canvas is hyperlinked to a pdf file in Google Drive, which allows you to annotate the reading. For each assigned reading, students must add at least two comments—clicking on the “Add a comment” icon  in the top-right corner of the webpage.

With your annotations, please note the following.

1. Only the assigned readings posted on Canvas require annotation (our two required texts do not).
2. Each comment must consist in 2-3 *complete* sentences—no sentence fragments will count toward your participation. You must invest time and thought into your annotations.
3. Comments can take the form of statements or questions, and they can be new comments or replies to existing comments your classmates have made on the reading.
4. Comments must focus on constructively critiquing the substance of the author's argument: that is, they must critique the author's thesis or hypothesis, conceptual reasons, descriptive and empirical evidence, logical analysis, research methodology, and/or possible objections, etc..
5. Keep in mind that the overarching purpose of annotating course readings is to practice your critical reading and critical thinking skills—which means that your comments must demonstrate that you have carefully read each assigned reading, that you understand the argument the author is trying to defend, and that you have thought about possible weaknesses of the argument.
6. Superficial comments that give no impression that the student has invested time and energy into trying to understand and critique our readings will receive no credit.

Final class grades will be based on the following scale:

≥ 93% = A	87 – 89% = B+	77 – 79% = C+	67 – 69% = D+	< 60% = F
90 – 92% = A-	83 – 86% = B	73 – 76% = C	63 – 66% = D	
	80 – 82% = B-	70 – 72% = C-	60 – 62% = D-	

Reading, Assignment, and Exam Schedule

Note: the assigned readings that follow are subject to revision.

Details about how course readings and assignments satisfy CCHE guidelines are provided below.

Note the shorthand for CCHE goals:

1: Rhetorical Knowledge, 2: Writing Processes, 3: Writing Conventions, 4: Content Knowledge

- Black bullet points refer to assigned readings or podcasts—which we will discuss on the specified date.
- White bullet points refer to in-class assignments and/or assignment deadlines.

[^a] This bracketed superscript denotes course readings that must be annotated (see course requirements above)

WEEK 1: CONVENTIONS OF RESEARCH AND WRITING

Monday, 27 August: Course Introduction¹

- No readings assigned
- Students receive directions for Paper 1²

¹ Purpose: preview course and outline expectations

² Purpose: understand requirements of first major writing assignment; CCHE Goal: 2

Wednesday, 29 August: Writing Workshop 1

- No readings assigned
- Class activity (bring computers to class): students explore the research background of a CU faculty member in their home department and begin to answer questions in parts 1 and 2 of the paper directions¹

¹ Purpose: make progress on Paper 1; CCHE Goals: 2, 3, 4

Friday, 31 August: Writing Workshop 2

- No readings assigned
- Class activity (bring computers to class): students select and summarize (3) publications of the CU faculty member they have chosen and begin to answer questions in parts 2 and 3 of the paper directions¹

¹ Purpose: make progress on Paper 1; CCHE Goals: 2, 3, 4

WEEK 2: CLIMATE CHANGE AND ENVIRONMENTAL HEALTH HAZARDS

Monday, 3 September: No Class—Labor Day

- No readings assigned

Wednesday, 5 September: Academic Argument ▪ Introduction to Climate Change and Public Health

- *Rulebook for Arguments*, Chapter 1: Short Arguments—Some General Rules¹
- NPR, “As Colorado’s Climate Changes, Our Collective Health Will Be Connected To It” podcast (2017)²

¹ Purpose: review components of academic arguments; CCHE Goals: 1, 2, 4

² Purpose: critically analyze reading; CCHE Goals: 1, 4

Friday, 7 September: Types of Arguments ▪ Geographical Distribution of Infectious Disease Events

- Review full course syllabus—bring what questions you have to class¹
- Jones et al., “Global Trends in Emerging Infectious Diseases” (2008)²

¹ Purpose: review course expectations

² Purpose: critically analyze reading; CCHE Goals: 1, 4

WEEK 3: TYPES OF ARGUMENTS, AND INFECTIOUS DISEASES

Monday, 10 September: Types of Arguments ▪ Infectious Diseases and Malnutrition

- *Rulebook for Arguments*, Chapter 5: Arguments About Causes¹
- [a] Rice et al., “Malnutrition as an Underlying Cause of Childhood Deaths Associated With Infectious Diseases in Developing Countries” (2000)²

¹ Purpose: review types of arguments and their purposes; CCHE Goals: 1, 2, 4

² Purpose: critically analyze readings; CCHE Goals: 1, 4

Wednesday, 12 September: Complicating the Correlation between EIDs and Climate Change

- [a] Altizer et al., “Climate Change and Infectious Diseases: From Evidence to a Predictive Framework” (2013)¹
- Optional (for an opposing view): Lafferty, “The Ecology of Climate Change and Infectious Diseases” (2009)
- **Paper 1 [final](#) draft due—upload to Canvas drop-box before class²**
- Class activity: groups prepare list of one-line descriptions of conventions of good academic writing³

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: complete first major writing assignment; CCHE Goals: 1, 2, 3, 4

³ Purpose: reflect on first major writing assignment and conventions of academic writing; CCHE Goals: 1, 4

Friday, 14 September: Generalizations ▪ Complicating Our Understanding of Public Health Effects

- *Rulebook for Arguments*, Chapter 2: Generalizations¹
- [a] McMichael et al., “Climate Change and Human Health: Present and Future Risks” (2006)²

¹ Purpose: review types of arguments and their purposes; CCHE Goals: 1, 2, 4

² Purpose: critically analyze readings; CCHE Goals: 1, 4

WEEK 4: CONSULTING PROJECTS, RHETORICAL ANALYSIS, AND ANTIBIOTIC RESISTANCE

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Meet as a consulting team, review samples of previous student reports, and familiarize yourself with the directions and expectations of the overarching consulting project.

Monday, 17 September: Consulting Projects ▪ Growing Antibiotic Resistance

- [a] Spellberg, et al., “The Epidemic of Antibiotic-Resistant Infections” (2008)¹
- **Students receive consulting project descriptions and directions for this overarching assignment²**

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: understand requirements of our formative community-based writing assignment; CCHE Goal: 2

Wednesday, 19 September: Human-Centered Design ▪ Reader-Based Writing

- [a] Norman, *The Design of Everyday Things*, Chapter 6 (2013)¹
- [a] Tebeaux and Dragga, *Essentials of Technical Communication*, Chapter 1²

¹ Purpose: review the rhetorical situation and types of rhetorical appeals; CCHE Goals: 1, 3, 4

² Purpose: understand parallels between user-based design and reader-based writing; CCHE Goals: 1, 2, 3

Friday, 21 September: Complicating Frameworks of Design Thinking ▪ Consulting Projects

- “CU Resilience Initiatives and Opportunities for Collaboration,” and “Resilience and Vulnerability: At-Risk CU Student Populations” project descriptions¹
- Brown and Wyatt, “Design Thinking for Social Innovation” (2010)²
- *Guardian*, “Design Innovation: New Ways of Thinking Can Change the World” (19 Jun 2014)²
- Buchanan, “Wicked Problems in Design Thinking (1992)—only pp.14-19²

¹ Purpose: understand nature of each community-based writing project; CCHE Goal: 4

² Purpose: understand parallels between user-based design and reader-based writing CCHE Goal: 1, 2, 3

WEEK 5: RESILIENCE CONSULTING PROJECTS, MEETING CLIENTS, AND ANTIBIOTIC RESISTANCE

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Draft and send an introductory email to your client (CC-ing me)—including brief profiles of each team member—requesting an initial meeting with your client.

Monday, 24 September: Informational Session with Foothills United Way Client

- No readings assigned
- Class activity: Q&A with Tiernan Doyle and Guillermo Estrada-Rivera with Foothills United Way¹

¹ Purpose: better understand nature of each community-based writing project; CCHE Goal: 4

Wednesday, 26 September: Guidelines for Initial Client Contact ▪ Interacting with Vulnerable Groups

- *Essentials of Technical Communication*, Chapter 7—only pp. 137-44 and Cases 7-1, 7-3, 7-5, and 7-6¹
- Class activity: sensitivity training with Dr. Karen MacClune
- Class activity: consulting teams workshop introductory client emails

¹ Purpose: critically analyze reading; CCHE Goals: 1, 2, 3, 4

Friday, 28 September: Science on Antibiotic Resistance ▪ Disclaimers about Collaborative Work

- ^[a] Batt et al., “Evaluating the Vulnerability of Surface Waters to Antibiotic Contamination” (2006)¹
- Students receive handout from *Essentials of Technical Communication* (pp. 206-8) with suggestions about how to manage and divide the workload³

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: understand that scientific research and writing is inherently interdisciplinary; CCHE Goal: 2, 3

³ Purpose: clarify expectations and challenges of group work; CCHE Goal: 2, 3

WEEK 6: INHERENT INTERDISCIPLINARY NATURE OF SCIENTIFIC RESEARCH

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Independent research: begin gathering, recording, and analyzing information about your client organization and your specific project.

Monday, 1 October: Policy on Antibiotic Resistance ▪ Popularization of Science

- ^[a] Pruden et al., “Management Options for Reducing the Release of Antibiotics and Antibiotic Resistance Genes to the Environment” (2013)¹
- *BBC*, “How We Can Stop Antibiotic Resistance” (8 Jun. 2017)^{1, 2}

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: understand that scientific research and writing is inherently interdisciplinary; CCHE Goal: 1, 3

Wednesday, 3 October: Policy on Antibiotic Resistance ▪ Popularization of Science

- ^[a] Smith and Coast, “Antimicrobial Resistance: A Global Response” (2002)¹
- *Guardian*, “I Believed We Would Face an Antibiotics Apocalypse—Until Now” (20 Nov. 2015)^{1, 2}

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: understand that scientific research and writing is inherently interdisciplinary; CCHE Goal: 1, 3

Friday, 5 October: Ethics on Antibiotic Resistance ▪ Broader Implications of Scientific Research

- ^[a] Littmann, “Antibiotic Resistance; An Ethical Challenge” (2015)^{1, 2}
- *Rulebook for Arguments*, Chapters 7-8: Extended Arguments and Argumentative Essays³

¹ Purpose: critically analyze readings; CCHE Goals: 1, 4

² Purpose: understand importance of exploring broader relevance of scientific findings ; CCHE Goal: 1, 3

³ Purpose: review nature of academic argumentation; CCHE Goals: 1, 2, 3, 4

WEEK 7: TECHNICAL REPORTS, PROGRESS REPORTS, AND INFORMATION LITERACY

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

(1) Conduct client and user interviews/surveys to clarify the nature of the project and your group's responsibilities, (2) if necessary clarify scope and focus of project with client, (3) conduct an analysis of the activities associated with your project, (4) locate or request additional information as needed.

Monday, 8 October: Technical Reports and Progress Reports ▪ Preparing for Initial Client Meeting

- *Essentials of Technical Communication*, Chapter 9—only pp. 236-51¹
- *Essentials of Technical Communication*, Chapter 8—only pp. 158-62, 183-6, 188-94 (chapter text only)¹

¹ Purpose: understand common components of technical and progress reports; CCHE Goals: 1, 3, 4

Wednesday, 10 October: Information Literacy and Research Databases ▪ Project Work Day

- *Rulebook for Arguments*, Chapter 4: Sources¹
- Class activity—bring your computer: students begin their initial research for their consulting projects²

¹ Purpose: review how to effectively locate, evaluate, and use sources; CCHE Goals: 1, 2, 4

² Purpose: make progress on draft consulting reports (progress reports); CCHE Goal: 1, 2, 3

Friday, 12 October: Conducting Interviews ▪ Project Work Day

- [a] Seidman, *Interviewing as Qualitative Research*, Chapters 1 and 6¹
- Class activity—bring your computer: students continue their research for their consulting projects²

¹ Purpose: explore suggestions on how best to conduct interviews for consulting project; CCHE Goals: 1, 3, 4

² Purpose: make progress on draft consulting reports (progress reports); CCHE Goal: 1, 2, 3

WEEK 8: SCIENTIFIC REASONING AND STARTING YOUR RESEARCH PROJECT

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Continue making progress on draft consulting report—which involves submitting a formal progress report to your client and an oral presentation for the class.

Monday, 15 October: Thinking and Reasoning Scientifically

- [a] Dewey, "Empirical and Scientific Thought" (1933), pp. 190-202¹
- **Students receive directions for Paper 2**²
- Class activity: students brainstorm possible topics for Paper 3³

¹ Purpose: understand processes of induction, deduction, and scientific reasoning; CCHE Goals: 3, 4

² Purpose: review requirements of our formative writing assignment; CCHE Goals: 1, 2, 3, 4

³ Purpose: make progress on Paper 2; CCHE Goals: 2, 3

Wednesday, 17 October: Scientific Method and Inference-Drawing ▪ "Un-Research" Workshop #1

- *Philosophy of Science*, Chapter 2: Scientific Inference¹
- Class activity: pre-research writing exercise²

¹ Purpose: understand processes of drawing scientific inferences; CCHE Goals: 3, 4

² Purpose: learn value of articulating one's argument before reviewing literature; CCHE Goals: 1, 2, 3, 4

Friday, 19 October: Realist Debate ▪ "Un-Research" Workshop #2

- *Philosophy of Science*, Chapter 4: Realism and Anti-Realism¹
- Class activity—bring your computer: pre-research writing exercise²

¹ Purpose: understand the intuition behind and limitations of truth as correspondence; CCHE Goals: 3, 4

² Purpose: learn value of articulating one's argument before reviewing literature; CCHE Goals: 1, 2, 3, 4

WEEK 9: SCIENTIFIC WRITING AND EXTREME WEATHER EVENTS

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Continue making progress on draft consulting report—which involves submitting a formal progress report to your client and an oral presentation for the class.

Monday, 22 October: Scientific Writing for Scientific Audiences ▪ Extreme Weather Events

- [a] Gopen and Swan, “The Science of Scientific Writing” (1990)¹
- [a] Greenough et al., “The Potential Impacts of Climate Variability and Change on Health Impacts of Extreme Weather Events in the United States” (2001)¹

¹ Purpose: understand (problematic) conventions of scientific writing; CCHE Goals: 1, 3, 4

² Purpose: critically analyze reading; CCHE Goals: 1, 4

Wednesday, 24 October: Scientific Writing for Scientific Audiences ▪ Food Insecurity

- [a] Sollaci et al., “The IMRAD Structure: A Fifty-Year Survey” (2004)¹
- [a] Lesk et al., “Influence of Extreme Weather Disasters on Global Crop Production” (2016)²

¹ Purpose: critically analyze reading with focus on IMRAD and descriptive evidence; CCHE Goals: 1, 4

² Purpose: critically analyze reading; CCHE Goals: 1, 4

Friday, 26 October: Writing for Academic Audiences ▪ Revisiting Conventions of Academic Writing

- Review “Rules of Citation” slides on Canvas (under additional student resources)¹
- [a] Bartholomae, “Inventing the University” (1985)—only pp. 8-20²
- [a] Thonney, “Teaching the Conventions of Academic Discourse” (2011)—skim only¹

¹ Purpose: review general and discipline-specific standards of good writing; CCHE Goals: 1, 3, 4

² Purpose: review rhetorical situation and satisfying conventions of academic writing; CCHE Goals: 1, 3, 4

WEEK 10: PROGRESS REPORT AND PEER-REVIEW

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Finalize your progress report and send it to your client by the start of class next Monday (11/05), requesting a follow-up meeting with client to identify problem-areas.

Monday, 29 October: Peer-Review Process ▪ Project Work Day

- [a] Sommers, “Responding to Student Writing” (1982)¹
- Class activity—bring your computer: consulting teams work on respective consulting projects²

¹ Purpose: review how to provide helpful and constructive peer-review feedback; CCHE Goal: 4

² Purpose: make progress on progress report; CCHE Goals: 2, 3

Wednesday, 31 October: Progress Report Presentations for the Class¹

- No readings assigned

¹ Purpose: receive feedback and make progress on consulting report; CCHE Goals: 2, 3

Friday, 2 November: Progress Report Presentations for the Class¹

- No readings assigned

¹ Purpose: receive feedback and make progress on consulting report; CCHE Goals: 2, 3

WEEK 11: SCIENCE AS IMPARTIAL & OBJECTIVE (?) AND RESEARCH PAPER WRITING WORKSHOPS

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Complete follow-up meeting with client organization, and begin to prepare your final consulting report—which involves an oral presentation for the class *and your client*.

Monday, 5 November: “Private-Interest” v. “Objective” Science

- [a] Pielke, “When Scientists Politicize Science” (2006)¹
- Shrader-Frechette, *Taking Action, Saving Lives*, Chapter 3 (2007)—only pp. 91-112
- **Progress report final draft due—upload to Canvas drop-box and email a copy to your client before class**²

¹ Purpose: critically analyze reading; CCHE Goals: 1, 3, 4

² Purpose: complete second major writing assignment; CCHE Goals: 1, 2, 3, 4

Wednesday, 7 November: Research Ethics and Duties of the Scientists ▪ Writing Workshop

- [a] Haerlin and Parr, “How To Restore Public Trust in Science” (1999)¹
- [a] Bird, “Socially Responsible Science Is More than ‘Good Science,’” (2014)¹
- National Society for Professional Engineers, “Code of Ethics for Engineers” (2007)
- **Students must bring two hard copies of their introductions to Paper 2 (1-2 paragraphs)**
- Class activity—bring your computer: students work to develop an engaging introduction for Paper 3²

¹ Purpose: critically analyze reading; CCHE Goals: 1, 4

² Purpose: critically analyze reading with focus on introductions; CCHE Goals: 1, 4

Friday, 9 November: Writing Workshop and Conferencing

- No readings assigned
- **Students must bring one hard copy of the list of assumptions they make in their Paper 2 arguments**
- Class activity—bring your computer: students will work to scrutinize the assumptions they make in their arguments and to make their logical analysis explicit¹

¹ Purpose: appreciate importance of making one’s assumptions and logical analysis explicit; CCHE Goals: 1, 4

WEEK 12: PEER-REVIEW AND REVISION PROCESSES

NO OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Monday, 12 November: Collaborative Peer-Review Workshop

- Sample Student Writing¹
- [a] Sommers, “Revision Strategies of Student Writers and Experienced Adult Writers” (1980)²
- Class activity—bring your computer: collective critique of student sample of Paper 2 rough draft¹
- **Paper 2 rough draft due—upload to Canvas drop-box and respective discussion group before class**

¹ Purpose: critically analyze reading, review expectations of third writing assignment; CCHE Goals: 1, 4

² Purpose: discuss writing as a process and common difficulties novice writers have; CCHE Goals: 1, 4

³ Purpose: engage in peer-review; CCHE Goal: 2

Wednesday, 14 November: Small-Group Peer-Review Workshop

- [a] Classmates’ rough drafts in respective discussion groups¹
- Class activity—bring your computer: small-group peer-review workshops of Paper 2 rough draft²

¹ Purpose: critically analyze student writing; CCHE Goals: 1, 2, 4

² Purpose: engage in peer-review; CCHE Goal: 2

Friday, 16 November: Individual Peer-Review Workshop

- No readings assigned
- **Students must bring one hard copy of their Paper 2 rough drafts to class**
- Class activity: individual peer-review workshops of Paper 2 rough draft¹

¹ Purpose: engage in peer-review; CCHE Goal: 2

WEEK 13

NO OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Monday, 19 November through Friday, 23 November: Fall Break—no classes

No readings assigned

WEEK 14: FINALIZING DRAFT CONSULTING REPORT AND CLIENT PRESENTATIONS

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Finish your *complete* rough draft of your final consulting report, and prepare your in-class presentation for your client organization.

Monday, 26 November: Project Work Day

- No readings assigned
- Class activity—bring your computer: consulting teams work on respective consulting projects¹

¹ Purpose: make progress on final consulting report; CCHE Goal: 2, 3

Wednesday, 28 November: Presentations for Client¹

- Assigned reading: rough drafts of classmates' consulting reports²

¹ Purpose: receive feedback and make progress on final consulting report; CCHE Goals: 2, 3

² Purpose: critically analyze student writing; CCHE Goals: 1, 2, 4

Friday, 30 November: Presentations for Client¹

- Assigned reading: rough drafts of classmates' consulting reports²
- **Consulting report rough draft due—upload to Canvas drop-box and email a copy to your client by 5:00pm**

¹ Purpose: receive feedback and make progress on final consulting report; CCHE Goals: 2, 3

² Purpose: critically analyze student writing; CCHE Goals: 1, 2, 4

WEEK 15: BOULDER COUNTY COMMUNITY RESILIENCE COUNCIL PRESENTATIONS

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

(1) Incorporate feedback from your client to substantively revise your draft consulting report, (2) finalize your deliverable, and (3) prepare your formal presentation for Foothills United Way and the Boulder County Community Resilience Council.

Monday, 3 December: Environmental Health Hazards and Responsibilities of the Public Citizen

- [a] Sunstein, *Laws of Fear: Beyond the Precautionary Principle*, Chapter 4: Fear As Wildfire (2005)¹
- President Kennedy, "[Responsibilities of Education Citizens](#)" (18 May 1963)¹

¹ Purpose: critically analyze reading and speech; CCHE Goals: 1, 4

Wednesday, 5 December: Revisions of Form—Grammar and Illustrations

- Gerson and Gerson, *Technical Communication: Process and Product*, Chapter 8 (2017)—skim only¹
- Class activity: start grammar and style workshop^{1 2}

¹ Purpose: better understand how to implement non-text-based media into our writing; CCHE Goals: 1, 3, 4

² Purpose: rhetorical grammar, review punctuation and sentence components; CCHE Goal: 3

Friday, 7 December: Individual Peer-Review Workshop

- No readings assigned
- **Revised Paper 2 rough draft due—bring one hard copy to class; no upload to Canvas is required**
- Class activity: individual peer-review workshop of revised Paper 2 rough draft¹

¹ Purpose: engage in peer-review; CCHE Goal: 2

WEEK 16: BROADER IMPLICATIONS AND FINALIZING CONSULTING REPORT

OUT-OF-CLASS CONSULTING PROJECT ACTIVITIES FOR THIS WEEK

Revise consulting report—incorporating client feedback from oral presentation.

Monday, 10 December: Environmental Health Hazards and Responsibilities of the Public Citizen

- ^[a] Shrader-Frechette, *Taking Action, Saving Lives*, Chapter 4 (2007)—only pp. 113-24, 141-8¹
- **Students should bring two hard copies of their working conclusion to Paper 2 (1-2 paragraphs)**
- Class activity—bring your computer: students work to develop a cohesive conclusion for Paper 2, which explores the broader relevance or implications of their argument²

¹ Purpose: critically analyze reading; CCHE Goals: 1, 4

² Purpose: consider broader implications of student writing and their college studies; CCHE Goals: 2, 3

Wednesday, 12 December: Writing Workshop and Conferencing

- No readings assigned
- **Consulting report final draft due—upload to Canvas-drop-box before class, and bring two professionally-bound hard copies to class¹**
- Class activity—bring your computer: students will continue revising Paper 2²

¹ Purpose: complete third major writing assignment; CCHE Goals: 1, 2, 3, 4

² Purpose: make progress on Paper 2; CCHE Goals: 2, 3

Friday, 14 December: Reading Day—No Classes

- Very best wishes on your final exams this semester!

FINALS WEEK

Tuesday, 18 December: No final exam is scheduled—our class does not meet during finals week.

- **Paper 2 final draft due—upload to Canvas by 4:30pm (allotted final exam time); no hard copy is required¹**

¹ Purpose: complete fourth major writing assignment; CCHE Goals: 1, 2, 3, 4