

**University of Utah**  
**Department of Communication**  
**Course Syllabus**

<b>Course Number:</b>	COMM 3115 3.0 credit hours
<b>Title:</b>	Communicating Science, Health, & Environment
<b>Academic Term:</b>	Fall 2021
<b>Course Dates/Time:</b>	August 23 to December 9, 2021 Online only
<b>Professor:</b>	Kimberly Kaphingst Professor, Department of Communication Email (preferred): <a href="mailto:kim.kaphingst@hci.utah.edu">kim.kaphingst@hci.utah.edu</a> I can also be contacted via a Canvas message. Zoom Office Hours: Mondays 3-4pm or by appointment
<b>Graduate Teaching Assistant:</b>	Erin Spencer Email: <a href="mailto:e.spencer@utah.edu">e.spencer@utah.edu</a> Office Hours:

### **Course Description**

Communication plays a fundamental role in public perception of science, health, and the environment. This class provides students with an overview of how these topics are communicated in various contexts ranging from the mass media and social media, to public hearings, to interactions within families and with the healthcare system. Topics include climate change, science journalism, genetics, COVID-19, and vaccines. Emphasis will be placed on understanding what research describes as best practices in terms of persuasively and accurately communicating about science, health, and the environment to various audiences.

### **Course Objectives**

By the end of this class, students will be able to:

- **Think critically** about how issues related to science, health, and the environment have been communicated to various publics
- Discuss **central lines of research** related to science, health, and the environment
- Describe **different methodologies** that are commonly used in research on communication about science, health, and the environment
- Identify tactics that one might employ to **persuasively communicate issues** surrounding science, health, and the environment to a variety of different audiences

- **Identify scholars with whom they would like to study and careers they might pursue** if they were to receive an undergraduate or advanced degree in the study of communication about science, health, and/or the environment

### **Course Materials**

All readings are available via the course Canvas page, organized under weekly modules. You will find links for the required readings in each module.

Please check the Canvas page regularly for course updates.

### **Teaching Methods**

This course will be taught asynchronously. What this means is that for each module I will post lecture videos, links to readings, information about assignments, and discussion questions for students to complete. I will have scheduled Zoom office hours where you can discuss the information with me, and both the course TA and I can be reached by appointment.

### **Course Requirements**

Grades for this course will be based on three exams and completion of required discussion board activities.

(1) *Exams (75%)*. There will be three exams, all of which are open book and will be given via Canvas. The exams will focus on information covered in the lectures and your readings, and are not cumulative. Each exam will be worth 50 points.

Exam 1 (25%): Covers material from Unit 1 (Modules 1-5). Available Thursday 9/23 at 9am to Monday 9/27 at 9am.

Exam 2 (25%): Covers material from Unit 2 (Modules 6-10). Available from Thursday 11/4 at 9am to Monday 11/8 at 9am.

Exam 3 (25%): Covers material from Unit 3 (Modules 11-15). Available from Friday 12/10 at 9am to Tuesday 12/14 at 5pm

Each exam will be offered for a defined number of days and students may take the exam during any 90-minute period during this time. **By enrolling for this class, you have made a commitment to taking the exams during the scheduled times.** If a school-sponsored activity or religious holiday overlaps with an exam period, please let me know by **September 7**.

\*In the event of illness or an unavoidable emergency that overlaps with an exam period, it may be possible to reschedule your exam if you turn in an adequate packet of proof and justification to me. Please contact me immediately if such a situation arises.

(2) *Discussion board activities (25%)*. Completing ten discussion board activities is required for the course. These activities are designed to help you integrate and apply the materials from the lecture videos. You will receive up to 5 points for each of these discussion board activities, as described in more detail on

Canvas. Discussion board activities will be available for 12 of the modules and you are required to complete 10 of the 12 discussion board activities. You may complete all 12 discussion board activities for up to 10 extra credit points.

### **Extra Credit Assignments**

In addition to the course requirements, there will be opportunities for optional extra credit assignments. These may include attending seminars related to the course or completing short reflection papers. These opportunities will be described in class and on the course Canvas page.

### **Grading Scale**

A = 93-100%	B- = 80-83.9%	D+ = 67-69.9%
A- = 90-92.9%	C+ = 77-79.9%	D = 64-66.9%
B+ = 87-89.9%	C = 74-76.9%	D- = 60-63.9%
B = 84-86.9%	C- = 70-73.9%	E = 59% and below

### **Course Outline**

#### **UNIT 1: COMMUNICATING SCIENCE**

##### **Module 1 (Week of August 23): Introduction**

###### **Part 1. Introduction to course**

Review course syllabus

###### **Part 2. Introduction to science communication**

National Academies of Sciences, Engineering, and Medicine. (2017). Communicating science in a complex, competitive communication environment. In *Communicating Science Effectively: A Research Agenda* (pp.67-80). Washington, DC: The National Academies Press.

Funk, C., Gottfried, J., & Mitchell, A. (September 20, 2017). Science news and information today. Pew Research Center. <https://www.journalism.org/2017/09/20/science-news-and-information-today/>

##### **Module 2 (Week of August 30): Science Communication and Journalism**

###### **Part 1.**

Dunwoody, S. (2014). Science journalism. In M. Bucchi & B. Trench (Eds.), *Routledge handbook of public communication of science and technology* (pp. 27-39). New York: Routledge.

Hayden, T. & Hayden, E.C. (2018). Science journalism's unlikely golden age. *Frontiers in Communication*, 2, 24.

###### **Part 2.**

Secko, D.M., Amend, E., & Friday, T. (2013). Four models of science journalism. *Journalism Practice*, 7, 62-80.

### **Module 3 (Week of September 7): Science Communication and Social Media**

#### **Part 1.**

American Association for the Advancement of Science. Communicating science online.

<https://www.aaas.org/programs/center-public-engagement-science-and-technology/communicating-science-online>

Villa, R. (February 4, 2021). Social media: improving science communication by the tools of science. Quality and Effectiveness in Science and Technology Communication.

<https://questproject.eu/social-media-improving-science-communication-by-the-tools-of-science/>

#### **Part 2.**

Yeo, S.K. (2015). Public engagement with and communication of science in a Web-2.0 media environment. White paper prepared for the American Association for the Advancement of Science.

### **Module 4 (Week of September 13): Science Communication and Misinformation**

#### **Part 1.**

Tsipurksy, G. (July 5, 2018). (Dis)trust in science: Can we cure the scourge of misinformation? Scientific American.

<https://blogs.scientificamerican.com/observations/dis-trust-in-science/>

Scheufele, D.M., & Krause, N.M. (2019). Science audiences, misinformation, and fake news. *PNAS*, 116(16): 7662–69.

#### **Part 2.**

West, J.D. & Bergstrom, C.T. (2021). Misinformation in and about science. *PNAS* 118(15):e1912444117.

### **Module 5 (Week of September 20): Science Communication and Controversy**

#### **Part 1.**

National Academies of Sciences, Engineering, and Medicine. (2017). The nature of science-related public controversies. In *Communicating Science Effectively: A Research Agenda* (pp.51-66). Washington, DC: The National Academies Press.

#### **Part 2.**

**EXAM 1.** Exam 1 will be available from Thurs 9/23 at 9am to Monday 9/27 at 9am. You can complete the Exam during any 90-minute window during this period.

## **UNIT 2: COMMUNICATING HEALTH**

### **Module 6 (Week of September 27): Introduction to Health Communication**

#### **Part 1.**

Makri, A. (2021). What do journalists say about covering science during the COVID-19 pandemic? *Nature Medicine*, 27, 17-20.

Jang, S. M., Mckeever, B.W., Mckeever, R., & Kim, J.K. (2019). From social media to mainstream news: the information flow of the vaccine-autism controversy in the US, Canada, and the UK. *Journal of Health Communication*, 34, 110-117.

#### **Part 2.**

Kaphingst, K.A., McBride, C.M., Wade, C., Alford, S.H., Brody, L.C., & Baxevanis, A.D. (2010). Consumers' use of web-based information and their decisions about multiplex genetic susceptibility testing. *Journal of Medical Internet Research*, 12, e41.

### **Module 7 (Week of October 4): Health Communication in Journalism**

#### **Part 1.**

Jensen, J. D., Carcioppolo, N., King, A. J., Bernat, J. K., Davis, L. A., Yale, R., & Smith, J. (2011). Including limitations in news coverage of cancer research: Effects of news hedging on fatalism, medical skepticism, patient trust, and backlash. *Journal of Health Communication*, 16, 486-503.

#### **Part 2.**

Holton, A., Lee, N., & Cole, R. (2014). Commenting on health: a framing analysis of user comments in response to health articles online. *Journal of Health Communication*, 19, 825-837.

### **Module 8 (Week of October 18): Health Communication in Social Media**

#### **Part 1.**

Viswanath Lab, Harvard School of Public Health. Social media tips: Responsible use of social media at a time of COVID-19. <https://www.hsph.harvard.edu/viswanathlab/social-media-tips/>

Bonnievie, E., Gallegos-Jeffrey, A., Goldberg, J., Byrd, B., & Smyser, J. (2021). Quantifying the rise of vaccine opposition on Twitter during the COVID-19 pandemic. *Journal of Communication in Healthcare* 14, 12-19.

#### **Part 2.**

Lee, T.K., & Su, L.Y.-F. (2019). When a personal HPV story on a blog influences perceived social norms: the roles of personal experience, framing, perceived similarity, and social media metrics. *Journal of Health Communication*, DOI: 10.1080/10410236.2019.1567440

## **Module 9 (Week of October 25): Health Communication and Misinformation**

### **Part 1.**

Confronting health misinformation: The U.S. Surgeon General's advisory on building a healthy information environment.

### **Part 2.**

Chou, W-Y.S., Gaysynsky, A., & Cappella, J. (2020). Where we go from here: health misinformation on social media (2020). *American Journal of Public Health, 110*, S273-S275.

Jamison, A., Broniatowski, D.A., Smith, M.C., Parikh, K.S., Malik, A., Dredze, M., & Quinn, S.C. (2020). Adapting and extending a typology to identify vaccine misinformation on Twitter. *American Journal of Public Health, 110*, S331-339.

## **Module 10 (Week of November 1): Health Communication and Controversy**

### **Part 1.**

Nagler, R.H., Fowler, E.F., Marino, N.M., Mentzer, K.M., & Gollust, S.E. (2019). The evolution of mammography controversy in the news media: a content analysis of four publicized screening recommendations, 2009 to 2016. *Women's Health Issues, 29*, 87-95.

### **Part 2.**

**EXAM 2.** Exam 2 will be available from Thurs 11/4 at 9am to Monday 11/8 at 9am. You can complete the Exam during any 90-minute window during this period.

## **UNIT 3: COMMUNICATING ENVIRONMENT**

## **Module 11 (Week of November 8): Introduction to Environmental Communication**

### **Part 1.**

Jarreau, P.B., Altinay, Z., & Reynolds, A. (2017). Best practices in environmental communication: a case study of Louisiana's coastal crisis. *Environmental Communication, 11*, 143-165.

### **Part 2.**

Endres, D. (2012). Sacred land or national sacrifice zone: the role of values in the Yucca Mountain participation process. *Environmental Communication, 6*, 328-345.

## **Module 12 (Week of November 15): Environmental Communication in Journalism**

### **Part 1.**

Tschotschel, R., Schuck, A., & Wonneberger, A. Patterns of controversy and consensus in German, Canadian, and US online news on climate change. *Global Environmental Change, 60*, 101957.

**Part 2.**

Flusberg, S.J., Matlock, T, & Thibodeau, P.H. (2017). Metaphors for the war (or race) against climate change. *Environmental Communication*, 11, 769-783.

**Module 13 (Week of November 22): Environmental Communication and Social Media**

**Part 1.**

Recyclist. 3 social media tips for your environmental campaign.

<https://recyclist.co/blog/3-social-media-tips-for-your-environmental-campaign/>

Eight ways to make your climate change social media posts matter – from a communication expert. (June 17, 2021) <https://theconversation.com/eight-ways-to-make-your-climate-change-social-media-posts-matter-from-a-communication-expert-161026>

**Part 2.**

Yeo, S.K., Handlos, Z., Karambelas, A., Su, L.Y.-F., Rose, K.M., Brossard, D., & Griffin, K. (2017). The influence of temperature on #climatechange and #globalwarming discourses on Twitter. *Journal of Science Communication*, 16,

**Module 14 (Week of November 29): Environmental Communication and Misinformation**

**Part 1.**

Harvey, C., (January 4, 2016). Here's how scientific misinformation, such as climate doubt, spreads through social media. Washington Post.

Gramling, C. (May 18, 2021). Climate change disinformation is evolving. So are efforts to fight back. Science News.

<https://www.sciencenews.org/article/climate-change-disinformation-denial-misinformation>

**Part 2.**

Treen, K.M.d'I., Williams, H.T.P., & O'Neill, S.J. (2020). Online misinformation about climate change. *WIREs Climate Change*, 11, e665.

**Module 15 (Week of December 6): Environmental Communication and Controversy**

**Part 1.**

Brüggemann, M., & Engesser, S. (2017). Beyond false balance: how interpretive journalism shapes media coverage of climate change. *Global Environmental Change*, 42, 58-67.

**Part 2.**

**EXAM 3.** Exam 3 will be available from Friday 12/10 at 9am to Tuesday 12/14 at 5pm. You can complete Exam 3 during any 90-minute window during this period.

## Course Policies

**Participation in discussion board activities.** Discussion board activities for the course are designed to help you integrate and apply materials from the lecture videos. In 12 of the course modules, I will assign discussion board activities on Canvas, and you are required to complete 10 of these. You will receive up to 5 points for each of these discussion board activities, as described in more detail on Canvas.

**Canvas.** The official venue for instructor course communications is on Canvas. Any modifications to the syllabus or schedule will be posted on the course Canvas site. Students are expected to check the course site at least three times per week, at a minimum. Students are invited to communicate openly with instructor and/or course TA (via regular email or on Canvas) when needed. The instructor and course TA will respond to messages within one business day. Online communications, including e-mail, are equivalent to the classroom and are subject to the Student Code.

**Exams and assignments.** Exams must be taken within the designated periods and discussion board assignments submitted on scheduled due dates. In cases of unexpected hardship, a late assignment may be accepted with the permission of the instructor. Students will not lose any points for an absence due to illness. Please let the instructor know as soon as possible if illness is the reason for a missed exam or discussion board assignment.

**Dropping and withdrawing from course.** The last day to drop classes is September 3; the last day to withdraw from a class is October 22. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student's responsibility. Incompletes are given in accordance with University of Utah guidelines. See the following link for more information: <http://registrar.utah.edu/handbook/>

**Accommodation policy:** Curriculum accommodations take two forms: schedule accommodations and content accommodations.

- I am able to make schedule accommodations for those who have a conflict that involves religious/spiritual observances, University sanctioned activities, and personal or medical exigencies, provided that documentation is provided. If you anticipate or when you experience any scheduling conflict with this course, please speak with me as soon as possible. In every case, it is the student's responsibility to make these arrangements.
- As we study communication in its various forms and contexts, we will apply the concepts we engage to a variety of examples, including those that occur in the venue of popular culture. Some students may find some of the reading materials, presentations, lectures, or audio/visual materials controversial or in conflict with their values or beliefs. Please be assured that all the material that I present, assign, or require you to encounter and address has been selected for its pedagogical value and utility in relation to the concepts we are engaging. I will not make content accommodations for this material. It is your responsibility to review the syllabus, readings, assignments, and materials to be sure that this is a course you wish to take. Should you have questions or concerns, please see me immediately. Details on the university's accommodation policy are available at this link: <http://academic-affairs.utah.edu/wp-content/uploads/sites/3/2015/03/accommodations-policy-background.pdf>



**Student conduct.** All students are expected to maintain professional behavior on Canvas, according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. If at any time you are unsure whether your actions constitute academic misconduct, please see the professor in order to clarify the matter. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible student behaviors, beginning with verbal warnings and progressing to dismissal from class and failing grade. Students have the right to appeal such action to the Student Behavior Committee.

<http://www.regulations.utah.edu/academics/6-400.html>

**Department of Communication Anti-Racist Code of Conduct.** The Department of Communication Anti-Racist Code of Conduct (ARCC) is a collective commitment by faculty, staff, and students in the Department of Communication. We aim to create an intersectional anti-racist departmental culture in which members are active bystanders who identify and interrupt racism in all forms, including discriminatory actions such as microaggressions, microassaults, and microinsults. The ARCC empowers all members of the Department to create a safe, welcoming, and equitable learning and work environment. Read the [full ARCC here](#).

### **University Policies**

- 1. The Americans with Disabilities Act.** The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.
- 2. University Safety Statement.** The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).
- 3. Addressing Sexual Misconduct.** Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

*Note: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.*