Term Information

Effective Term   Spring 2023
Previous Value   *Spring 2015*

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Inclusion of Comm 2596 as part of the new GE theme in Sustainability. Minor update to course title and description to better describe course and its content.

What is the rationale for the proposed change(s)?

Course aligns with the expected learning outcomes of this GE theme area.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Communication
Fiscal Unit/Academic Org	School Of Communication - D0744
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	2596
Course Title	Introduction to the Communication of Science, Health, Environment, & Risk
Previous Value	*An Introduction to Health, Environment, Risk & Science Communication*
Transcript Abbreviation	Comm SciHltEnv&Rk
Previous Value	*Hlh Env Rsk Sc Com*
Course Description	This course provides a general introduction to the fields of science, risk, environmental and health communication from multiple perspectives including psychological, social, cultural, and sustainability sciences. Students will apply theories and research covered in class to address real-world challenges of communicating science, health, environment, and risk to wide audiences.
Previous Value	*Provides a general introduction to the fields of science, risk, environmental and health communication from multiple perspectives including psychological, social, and cultural. Students will develop a prototype communication intervention or campaign to address a health, safety, or environmental issue drawing on theories and research covered in the course.*
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 Week, 8 Week, 7 Week, 6 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No

Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus, Lima, Mansfield, Marion, Newark, Wooster
Previous Value	*Columbus*

Prerequisites and Exclusions

Prerequisites/Corequisites	
Exclusions	
Electronically Enforced	Yes
Previous Value	**No**

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	09.0101
Subsidy Level	Baccalaureate Course
Intended Rank	Freshman, Sophomore

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors
General Education course:
    Cross-Disciplinary Seminar (597 successors and new); Sustainability
The course is an elective (for this or other units) or is a service course for other units

Previous Value

Required for this unit's degrees, majors, and/or minors
General Education course:
    Cross-Disciplinary Seminar (597 successors and new)
The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes	• Know the range of contexts in which scholarship from communication, psychology, sociology, environmental studies, and health sciences can be applied to science, risk, environmental and health communication.
	• Understand and be able to explain how foundational and emerging theories and methods of communication, psychology, sociology, environmental studies, and health sciences can be used to improve health, safety, and environmental outcomes.
	• Effectively apply theory and research findings in science, risk and/or health communication to a practical health, safety, or environmental concern.

Content Topic List	• Risk perception & uncertainty (psychological & sociological approaches)
	• Risk communication
	• Development risk messages
	• Approaches to science communication
	• Public engagement and science
	• Science and entertainment
	• Science, health, and environmental literacy
	• Environmental communication
	• Media coverage of environmental issues
	• Crisis communication
	• Environmental advocacy
	• Interpersonal and organizational health communication
	• Diversity and cultural issues
	• Media and health outcomes
	• Health and environmental campaigns
	• New communication technology and health, science, and environmental communication
Sought Concurrence	No

Attachments

• Communication 2596 Sustainability Theme Submission.docx: GE course submission form

(Other Supporting Documentation. Owner: Jackson,Kylie M.)

• Comm Curriculum Map UPDATED 2020.docx: Curriculum Map

(Other Supporting Documentation. Owner: Jackson,Kylie M.)

• Regional campus GE memo.docx: Regional campus memo

(Memo of Understanding. Owner: Jackson,Kylie M.)

• AU21 Comm 2596 Syllabus Dixon.docx: Syllabus

(Syllabus. Owner: Jackson,Kylie M.)

• AU22 Comm 2596 Syllabus Dixon Gd 7.27.22.docx: Syllabus

(Syllabus. Owner: Ralph,Matthew)

• Regional campus GE memo.docx: Regional Campus Memo

(Memo of Understanding. Owner: Ralph,Matthew)

• Comm Curriculum Map UPDATED 2020.docx: Curriculum Map

(Other Supporting Documentation. Owner: Ralph,Matthew)

• Communication 2596 Sustainability Theme Submission Gd 7.27.22.docx: GE Course Submission Form

(Other Supporting Documentation. Owner: Ralph,Matthew)

Comments

• Please see Panel feedback email sent 12/03/2021. *(by Hilty,Michael on 12/03/2021 02:39 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Jackson,Kylie M.	10/05/2021 01:05 PM	Submitted for Approval
Approved	Garrett,Robert Kelly	10/05/2021 01:05 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	11/10/2021 01:47 PM	College Approval
Revision Requested	Hilty,Michael	12/03/2021 02:39 PM	ASCCAO Approval
Submitted	Ralph,Matthew	07/28/2022 08:04 AM	Submitted for Approval
Approved	Ralph,Matthew	07/28/2022 08:04 AM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	09/16/2022 04:29 PM	College Approval
Pending Approval	Cody,Emily Kathryn Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	09/16/2022 04:29 PM	ASCCAO Approval

THE OHIO STATE UNIVERSITY

School of Communication

3016 Derby Hall
154 N. Oval Mall
Columbus, OH 43210

614-292-3400 Phone
614-292-2055 Fax

comm.osu.edu

October 18, 2021

MEMO

TO: College of Arts and Sciences Curriculum Committee

FROM: Susan Kline, Undergraduate Program Committee Chair, School of Communication

RE: COMM 3597.02 GE Theme Submission

Regarding the availability of this course for the OSU regional campuses, it is our understanding that the offering of this course by non-tenure-track faculty on the Ohio State regional campuses requires the approval of the home department.

The School of Communication would request that any regional campus wishing to offer this course first send their proposed course syllabus to the School Director for their review and comments prior to offering the class.

Sincerely,

Dr. Susan Kline
Associate Professor
Undergraduate Program Committee Chair
School of Communication

Autumn 2022

Communication 2596: An Introduction to Health, Environment, Risk & Science Communication

Wednesday & Friday 12:45pm– 2:05pm, Dreese Lab, 305
Instructor: Dr. Graham Dixon
Derby Hall 3045A
Email: dixon.716@osu.edu
Office Hours: Wednesdays 2:00pm – 3:30pm

Format of Instruction: In-Person Lecture; 3 hours/week

Course Description

This course provides a general introduction to the fields of science, risk, environmental and health communication from multiple perspectives including psychological, social, cultural, and behavioral sciences. Students will apply theories and research covered in class to address real-world challenges of communicating science, health, environment, and risk to wide audiences.

As a GE sustainability-themed course, instruction will focus on the fundamental dependence of humans on earth and environmental systems and address aspects of the interdependence of human and natural systems. This includes exploring the role of communication in the formation of people's attitudes and beliefs toward several dimensions of sustainability, including environmental and earth systems; economy and governance; society and culture; engineering, technology and design; and health and well-being. As such, this course examines the continually evolving information environment and how it impacts our conceptualization of and approach toward sustainability within the context of the environment, scientific technology, health, and risk.

More specifically, this course involves deep engagement-with issues central to sustainability dimensions such as climate change (e.g., environmental and earth systems), vaccination (e.g., health and wellbeing), genetically modified foods (e.g., society and culture), and transportation technology (e.g., engineering, technology, and design). While many of the topics we discuss are controversial and polarizing, the purpose of the course is to understand the communication processes and effects behind these topics. For example, we address why so many sustainability topics become controversial; what role do cultural and political values play in polarizing people's views?; and how do communication interventions impact people's views on various dimensions of sustainability?

Rather than advocate for a particular position, our goal is to explore these topics through an objective lens as academic observers.

Content from this course benefits students with an interest in a variety of careers, including public policy, public health, communication research, advertising, science education, and public relations, to name a few.

GE category: Sustainability Theme

Sustainability Theme Goals
1. Successful students will analyze an important topic or idea at a more advanced and in-depth level than the foundations.
2. Successful students will integrate approaches to sustainability by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in the future.
3. Students will analyze and explain how social and natural systems function, interact, and evolve over time; how human wellbeing depends on these interactions; how actions have impacts on subsequent generations and societies globally; and how human values, behaviors, and institutions impact multi-faceted, potential solutions across time.

Sustainability Theme Expected Learning Outcomes
1. Students will engage in critical and logical thinking about sustainability.
    a. Readings, lectures, and in-class activities provide opportunities for critical thinking towards sustainability dimensions.
2. Students will engage in an advanced, in-depth, scholarly exploration of sustainability.
    a. In-class discussion and activities provide opportunity for in-depth, scholarly exploration of sustainability dimensions.
3. Students will identify, describe, and synthesize approaches or experiences as they apply to sustainability.
    a. In-class discussion with an emphasis on real-world application will be used to identify, describe, and synthesize approaches/experiences to sustainability.
4. Students will demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.
    a. In-class discussion and activities provide opportunities for students to demonstrate their creative work and generating a sense of self as a learner.
5. Students will describe elements of the fundamental dependence of humans on Earth and environmental systems and on the resilience of these systems.
    a. In-class discussion and paper assignments will provide opportunities for students to assess elements of fundamental dependence of humans on environmental systems.
6. Students will describe, analyze and critique the roles and impacts of human activity and technology on both human society and the natural world, in the past, currently, and in the future.
    a. Instruction includes assessing the communication of topics related to human activity and technology on society and the natural world, including climate change, GMO foods, autonomous vehicles, and vaccination.

7. Students will devise informed and meaningful responses to problems and arguments in the area of sustainability based on the interpretation of appropriate evidence and an explicit statement of values.
   a. Assignments and in-class discussion regarding problems and arguments around the communication of sustainability dimensions are used heavily in this course.

Grading

Assignments	Points	% of Final Grade
Movie Review	25	25%
In-Class/Online Assignments	25	25%
Exam I	25	25%
Exam II	25	25%
Final Exam	25	25%

lowest exam score is dropped

A = 93-100; **A-** = 90-92; **B+** = 87-89; **B** = 83-86; **B-** = 80-82; **C+** = 77-79; **C** = 73-76; **C-** = 70-72; **D+** = 67-69; **D** = 60-66; **E** = Below 60

Assignments and Exams

Required Readings. There is no textbook for this course. Instead, PDFs of selected chapters and articles will be posted on Carmen for each class – refer to the course schedule <u>on Carmen</u> for each day's assigned readings. Students are expected to complete all readings prior to class so that they will be prepared to discuss the material in class. If any student is interested in additional readings on the assigned or related topics, please feel free to contact me and I can suggest additional resources.

In-class activity assignments. Throughout the semester, I will stop lecturing and pass out in class assignments. Some assignments will involve solo work with class discussion; other times I will break the class up into groups. You will be graded on your participation and completion of the assignment. There will be ten in-class assignments in total and they will occur without prior announcement. I will excuse one missed in-class assignment. Because of this, no make-ups are allowed.

Movie Review. Students will conduct an academic review of a science and sustainability-based film from a list of approved films (e.g., The Day After Tomorrow). Specifically, students will apply theories and concepts learned in class when assessing their chosen film. Importantly, this is a fun assignment that gets students thinking more deeply about how popular films/entertainment might impact public understanding of science, perceptions of sustainability, and policy stances. The paper will be between 10-12 pages double spaced, not including references. You will turn in your paper digitally through Carmen.

Exams. You have three online exams in this course. However, I drop your lowest score. This means that if you do well on the first two exams, you can skip the final exam. Also, if you miss

one exam, then that will be treated as your dropped exam. Because of this policy, I <u>do not</u> allow makeup exams. All exams will be assessed with multiple choice, fill in the blank, and short answer questions. Access to exams will be for a 9 hour period on a specific date (see course schedule). The first exam covers our science and environmental sections; the second exam covers our health and risk sections. The final is cumulative, covering all material taught in class. Students are given 80 minutes to complete the exam. All exams are open book and are administered on the course's Carmen site.

All exams cover in-class material as well as content from your readings. To do well in this course means you will need to read every assigned reading.

<div align="center">Course Policies</div>

Mutual Respect. Students in this class come from a variety of personal, political, and academic backgrounds, so realize that there will be different perspectives. Your responsibility is to be civil to others and to opinions that differ from yours.

Technology use and General Politeness. Technology (phones, laptops, etc) use for non-class related reasons can be very distracting for the professor and for classmates. You're paying a lot of money for this course, so don't waste it on Facebook and texting with friends that you'll see later in the day. The professor reserves the right to take off grade points for repeat offenders.

Professor and Teaching Assistant's Use of Electronic Mail and Messaging. There may be occasions where I will need to get in touch with you outside of regular class hours. Email will usually be the first means by which contact will be initiated. It is important that you check your OSU email account regularly, and make sure you purge your account of unneeded email so that new email can get through. If you do not use your OSU email address as your primary email account, please arrange through OIT to have your OSU email forwarded to your preferred account. For instructions on how to have your email forwarded, see http://8help.osu.edu/forms/mail_forwarding.html.

Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct http://studentlife.osu.edu/csc/."

All instances of cheating and plagiarism will be reported to COAM for a formal hearing. Please do not cheat or plagiarize. Maximum grade penalty is failing the entire course.

Statement about disability services. The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately

discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Diversity. The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Mental Health Statement: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org.

Title IX. Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

COVID-19 Accommodations. The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so

that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Course Schedule (Tentative)

Week	Week Overview	Readings/Major Assignments
1	Introduction to the course (8/24) What is Science Communication? (8/26)	Burns et al. (2003) Brossard & Scheufele (2013)
2	The (counter)norms of scientists (8/31) Public perception of scientists (9/2)	Mitroff (1974) Suldovsky et al. (2019) Pew Research Report (2019)
3	Public understanding of science (9/7) Entertainment media and science (9/9)	Bullock et al. (2019) Funk & Goo (2015) Landrum et al. (2021) Leiserowitz (2004)
4	News reporting on science: (9/14) Framing, agenda setting, and cultivation theory (9/16)	Boykoff & Boykoff (2004) Hart et al. (2020)
5	Science "denialism" :Exploring climate change skepticism, flat earth movement, anti-vaccination, and others (9/21) Science communication persuasion (9/23)	Pennycook et al. (2020) Hart & Nisbet (2012) Nisbet et al., (2015) Basol et al., (2020)
6	Environmental communication introduction (9/28) Environmental values (9/30)	Feinberg & Willer (2013) McCright et al. (2013)
7	Environmental organizations (10/5) Green marketing (10/7)	 Schuldt (2013)
8	Environmental campaigns (10/12) Autumn Break, No Class (10/14)	Dixon et al. (2015)

9	Risk perception (10/19)	**Exam 1 link available on 10/19 from 8am to 10pm EST**
	Risk and the environment (10/21)	McComas (2006) Slovic (1987)
10	Risk and Rationality part 1 (10/26)	Kahneman (2011)
	Risk and Rationality part 2 (10/28)	**Movie Review Due by 10/28, 11:59PM Eastern time, on Carmen**
11	Risk perception of emerging technology (11/2)	
	Communicating risks (11/4)	
12	Health communication: why is it necessary? (11/9)	Drope & Chapman (2001)
	Public health campaigns (11/11)	Byrne et al. (2019)
13	Digital health, Virtual reality (11/16)	Nowak et al. (2020)
	Digital health, Social Media (11/18)	
14	Thanksgiving (11/23)	
	Indigenous Peoples Day (11/25)	
15	Health controversies, vaccines (11/30)	Islam et al. (2020)
	Health controversies, Covid-19 (12/2)	Nyhan et al. (2014)
16	Health controversies, Covid-19 (12/6)	**Exam 2 link available on 12/6 from 8am to 10pm EST**
Final Exam	Monday December 12th	**Final exam link available on December 12 from 8am to 10pm EST.**

Reading List

Basol, M., Roozenbeek, J., & Van der Linden, S. (2020). Good news about bad news: Gamified inoculation boosts confidence and cognitive immunity against fake news. *Journal of cognition*, *3*(1).

Burns, T. W., O'Connor, D. J., & Stocklmayer, S. M. (2003). Science communication: a contemporary definition. *Public understanding of science*, *12*(2), 183-202.

Boykoff, M. T., & Boykoff, J. M. (2004). Balance as bias: Global warming and the US prestige press. *Global environmental change*, *14*(2), 125-136.

Brossard, D., & Scheufele, D. A. (2013). Science, new media, and the public. *Science*, *339*(6115), 40-41.

Bullock, O. M., Colón Amill, D., Shulman, H. C., & Dixon, G. N. (2019). Jargon as a barrier to effective science communication: Evidence from metacognition. *Public Understanding of Science*, *28*(7), 845-853.

Byrne, S., Greiner Safi, A., Kemp, D., Skurka, C., Davydova, J., Scolere, L., ... & Niederdeppe, J. (2019). Effects of varying color, imagery, and text of cigarette package warning labels among socioeconomically disadvantaged middle school youth and adult smokers. *Health Communication*, *34*(3), 306-316.

Dixon, G. N., Deline, M. B., McComas, K., Chambliss, L., & Hoffmann, M. (2015). Using comparative feedback to influence workplace energy conservation: A case study of a university campaign. *Environment and Behavior*, *47*(6), 667-693.

Drope, J., & Chapman, S. (2001). Tobacco industry efforts at discrediting scientific knowledge of environmental tobacco smoke: a review of internal industry documents. *Journal of Epidemiology & Community Health*, *55*(8), 588-594.

Feinberg, M., & Willer, R. (2013). The moral roots of environmental attitudes. *Psychological science*, *24*(1), 56-62.

Funk, C., & Goo, S. K. (2015). A look at what the public knows and does not know about science. Pew Research

Hart, P. S., & Nisbet, E. C. (2012). Boomerang effects in science communication: How motivated reasoning and identity cues amplify opinion polarization about climate mitigation policies. *Communication research*, *39*(6), 701-723.

Hart, P. S., Chinn, S., & Soroka, S. (2020). Politicization and polarization in COVID-19 news coverage. *Science Communication*, *42*(5), 679-697.

Islam, M. S., Sarkar, T., Khan, S. H., Kamal, A. H. M., Hasan, S. M., Kabir, A., ... & Seale, H. (2020). COVID-19–related infodemic and its impact on public health: A global social media analysis. *The American journal of tropical medicine and hygiene*, *103*(4), 1621.

Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.

Landrum, A. R., Olshansky, A., & Richards, O. (2021). Differential susceptibility to misleading flat earth arguments on youtube. *Media Psychology*, *24*(1), 136-165.

Leiserowitz, A. A. (2004). Day after tomorrow: study of climate change risk perception. *Environment: Science and Policy for Sustainable Development*, *46*(9), 22-39.

Mitroff, I. I. (1974). Norms and counter-norms in a select group of the Apollo moon scientists: A case study of the ambivalence of scientists. *American Sociological Review*, vol 579-595.

McCright, A. M., Dentzman, K., Charters, M., & Dietz, T. (2013). The influence of political ideology on trust in science. *Environmental Research Letters*, *8*(4), 044029.

McComas, K. A. (2006). Defining moments in risk communication research: 1996–2005. *Journal of Health Communication*, *11*(1), 75-91.

Nisbet, E. C., Cooper, K. E., & Garrett, R. K. (2015). The partisan brain: How dissonant science messages lead conservatives and liberals to (dis) trust science. *The ANNALS of the American Academy of Political and Social Science*, *658*(1), 36-66.

Nowak, G. J., Evans, N. J., Wojdynski, B. W., Ahn, S. J. G., Len-Rios, M. E., Carera, K., ... & McFalls, D. (2020). Using immersive virtual reality to improve the beliefs and intentions of influenza vaccine avoidant 18-to-49-year-olds: Considerations, effects, and lessons learned. *Vaccine*, *38*(5), 1225-1233.

Nyhan, B., Reifler, J., Richey, S., & Freed, G. L. (2014). Effective messages in vaccine promotion: a randomized trial. *Pediatrics*, *133*(4), e835-e842.

Pennycook, G., McPhetres, J., Zhang, Y., Lu, J. G., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy-nudge intervention. *Psychological science*, *31*(7), 770-780.

Slovic, P. (1987). Perception of risk. *Science*, *236*(4799), 280-285.

Suldovsky, B., Landrum, A., & Stroud, N. J. (2019). Public perceptions of who counts as a scientist for controversial science. *Public Understanding of Science*, *28*(7), 797-811.

Schuldt, J. P. (2013). Does green mean healthy? Nutrition label color affects perceptions of healthfulness. *Health Communication*, *28*(8), 814-821.

SCHOOL OF COMMUNICATION GE Theme Application

6/2022

Theme: Sustainability

Communication 2596: Introduction to the Communication of Science, Health, Environment, & Risk

Overview

Courses that are accepted into the General Education (GE) Themes must meet two sets of Expected Learning Outcomes (ELOs): those common for all GE Themes and one set specific to the content of the Theme. This form begins with the criteria common to all themes and has expandable sections relating to each specific theme.

A course may be accepted into more than one Theme if the ELOs for each theme are met. Courses seeking approval for multiple Themes will complete a submission document for each theme. Courses seeking approval as a 4-credit, Integrative Practices course need to complete a similar submission form for the chosen practice. It may be helpful to consult your Director of Undergraduate Studies or appropriate support staff person as you develop and submit your course.

Please enter text in the boxes to describe how your class will meet the ELOs of the Theme to which it applies. Please use language that is clear and concise and that colleagues outside of your discipline will be able to follow. You are encouraged to refer specifically to the syllabus submitted for the course, since the reviewers will also have that document Because this document will be used in the course review and approval process, you should be _as specific as possible_, listing concrete activities, specific theories, names of scholars, titles of textbooks etc.

General Expectations of All Themes

GOAL 1: Successful students will analyze an important topic or idea at a more advanced and in-depth level than the foundations.

Please briefly identify the ways in which this course represents an advanced study of the focal

As a sustainability-themed course, instruction will center on the fundamental dependence of humans on earth and environmental systems and address aspects of the interdependence of human and natural systems. Broadly, this course will address how communication impacts the formation of people's attitudes and knowledge toward several dimensions of sustainability, including environmental and earth systems; society and culture; engineering, technology and design; and health and well-being. As such, this course examines the continually evolving information environment and how it impacts our conceptualization of and approach toward sustainability within the context of the environment, scientific technology, health, and risk.

More specifically, this course represents advanced study of the sustainability theme by providing students a thorough grounding on:

(1) How communication impacts our knowledge of different dimensions of sustainability.

(2) The evolving information environment on sustainability and communication challenges it poses.

(3) Role of communication in the polarization of support/opposition for sustainability sciences, practices, and technologies.

(4) How persuasive theories are used to impact public opinion on sustainability issues.

This course uses communication/psychological theories and research on issues central to sustainability dimensions such as climate change (e.g., environmental and earth systems), vaccination (e.g., health and wellbeing), genetically modified foods (e.g., society and culture), and transportation technology (e.g., engineering, technology, and design). These theories include psychological priming, framing, psychological reactance, risk-as-feelings, among many others.

By exploring theories and research within the subfields of science and environmental communication, this course provides more in-depth discussion of communication theories than lower-level communication courses (e.g., Comm 1101 and 1100).

theme. In this context, "advanced" refers to courses that are e.g., synthetic, rely on research or cutting-edge findings, or deeply engage with the subject matter, among other possibilities. *(50-500 words)*

ELO 1.1 Engage in critical and logical thinking about the topic or idea of the theme. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

This course includes in-class activities that demonstrate various theories and concepts from lecture. Many of these activities provide clear examples of decision making and information processing biases that students frequently engage in. For instance, we perform a demonstration on priming and framing effects, which is used to highlight concepts such as the naturalistic fallacy and prospect theory. In doing so, students are shown how subtle cues in messaging can have a profound impact on people's attitudes toward environmental sustainability, such as greater support for climate mitigation policies. Another activity involves the omission bias, which suggests reactions to outcomes related to inaction are less arousing than identical outcomes related to action. Students are asked to consider various hypothetical scenarios involving identical outcomes, but different causes. Class discussion is used to explain concepts related to utilitarianism and consequentialism, and how such concepts can relate to environmental decision making and communication. In particular, this activity is used to demonstrate the difficulties in communicating the risks associated with climate change inaction, and how different theoretical approaches toward sustainability, such as use of immersive virtual environments, might be necessary for encouraging sustainability actions among the public.

Exams are also used to assess students' ability to apply the lecture content and readings to relevant examples. Instead of testing rote memorization, the exams engage students in critical thinking by having them consider how theories and concepts from class apply to other sustainability issues. For example, an exam question from AU21 asked students to identify the likely effect of individualistic worldviews on attitudes toward autonomous vehicles.

Course subject & number Comm 2596

ELO 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of the theme.
Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

This course has students engage in an advanced, in depth, scholarly exploration with the topic and theme of sustainability by having them articulate the role of communication media in how the public understands, reacts, and supports issues representing key dimensions of sustainability (e.g., environment, health and wellness, and technology). For their main paper, students will conduct an academic review of a science or environment-based film that deals with sustainability topics. Specifically, students will (1) provide a summary of the film's plot, (2) assess the accuracy of the scientific/environmental claims made in the film, (3) consider the effects of the film on audience attitudes and behavior by drawing on communication theory – specifically, how the film might impact audience's attitudes and behaviors toward planetary sustainability needs.

 Importantly, this is a fun assignment that gets students thinking more deeply about how popular films/entertainment might impact public understanding of science and sustainability attitudes. For instance, films such as *The Day After Tomorrow*, *Jurassic Park*, and *Contagion*, which are popular choices among students, deal with themes related to sustainability that students can assess. For Jurassic Park, students have assessed the film's role in sparking public debate on genetic engineering. Students who have reviewed, "The Day After Tomorrow" have addressed the extent to which the film's content encouraged greater pro-environmental behaviors. The paper is 10 pages double spaced, not including references.

Course subject & number Comm 2596

GOAL 2: Successful students will integrate approaches to the theme by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

ELO 2.1 Identify, describe, and synthesize approaches or experiences as they apply to the theme.
Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

Students in Comm 2596 are constantly reminded of how the course content, specifically communication theories (e.g., priming, framing, motivated reasoning, etc.), connect with topics relevant to dimensions of environmental, health, and technological sustainability. For instance, one specific assignment has students find different news media frames of climate change from prominent news outlets using their personal computers or smartphones in class, and then discussing in class how the different frames might impact people's attitudes and policy support. Accompanying this activity are a series of articles that students are required to read that explore how different news frames (e.g., conflict framing, episodic framing, and thematic framing) can impact public perception of and support for environmental sustainability-based policies and technology. In another assignment, students are asked to consider the relationship between science knowledge and beliefs, and how the two are not necessarily correlated for politically-polarized sustainability topics. For instance, students are asked to estimate how increased science knowledge associates with attitudes and risk perceptions toward issues like climate change, which are highly polarizing among Democrats and Republicans. Most students predict a positive linear relationship between the two, meaning that higher knowledge will lead to more favorable attitudes and scientifically consistent risk perceptions However, students are surprised to learn that for politicized sustainability issues (e.g., climate change and nuclear power), increased science knowledge often does little to reduce climate change skepticism among Republicans, and in some cases greater knowledge can increase, rather than decrease, climate change skepticism. This activity allows for greater discussion on how our assumptions about the relationship between knowledge and beliefs regarding politicized sustainability issues is often challenged by evidence. It also demonstrates the complexity of human communication and persuasion.

ELO 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

A prominent way in which students engage in self-assessment and reflection is through their participation in class activities. These activities are designed to help students develop a greater sense of themselves as learners by encouraging greater critical thinking and introspection. To do so, these activities are often designed to challenge students' assumptions about human communication as well as demonstrate the biases inherent in how we process information. In one activity, I demonstrate gain/loss framing effects which suggests that people typically prefer certain gains over probabilistic losses (on the hand, people prefer probabilistic losses over certain losses) – even when information framed as a gain versus a loss is communicating the same numerical outcome. By using students as participants and discussing their responses, I'm able to illustrate heuristic processing of information, as well as connect it to broader science and environmental issues (e.g., challenges in communicating gains versus losses with climate change risks versus mitigation policies).

Specific Expectations of Courses in Sustainability

GOAL 1: Students analyze and explain how social and natural systems function, interact, and evolve over time; how human wellbeing depends on these interactions; how actions have impacts on subsequent generations and societies globally; and how human values, behaviors, and institutions impact multi-faceted, potential solutions across time.

1.1 **Describe elements of the fundamental dependence of humans on Earth and environmental systems and on the resilience of these systems.** Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

This course fits nicely within the sustainability theme because it focuses on the intersection of science, risk, and the environment as it relates to human communication. Specifically, this course examines the complexity of human communication of science, health, and environmental issues, with a focus on the consequences of and solutions toward human dependence on environmental resources, as well as the interplay between human health/wellbeing and the environment (e.g., One Health).

For instance, we engage in a discussion of the anti-reflexivity thesis with in-class lectures and an assigned reading of Professor Aaron McCright's research on differences in scientific trust among Republicans and Democrats. In this study, McCright reports that Democrats (who are more aligned with the reflexivity movement) tend to trust Impact Science – science that investigates the impact of industrial modernization on human and environmental health; whereas Republicans (who typically are more aligned with the anti-reflexivity movement) show greater trust toward Production Scientists – scientists involved in the economic production of goods and services. This study serves as a nice springboard for discussion on political-polarization of sustainability issues (e.g., climate change and nuclear power).

We also spend time discussing One Health topics that deal with how human health and well-being depends on interactions between social and natural systems. For example, we discuss and analyze the challenges of communicating environmental risk for stigmatized animal species that are under threat from human and natural forces. For instance, bats – which provide significant benefits to agricultural industries due to pollination and pest management – are threatened by infectious disease (e.g., White Nose Syndrome) and human activity (e.g., habitat encroachment, pollution, climate change), making it important for the public to be aware of conservation efforts. Yet bats are a rabies vector species, and this fact often dominates the public consciousness due to outreach from public health agencies whose aim is to prevent rabies cases. Students then are challenged to consider how to communicate the complexity of risks associated with bat species, such that bat stigmatization is reduced, their benefits are recognized, and human/natural risks posed to them are understood.

This specific ELO is covered in weeks six, seven, and eight. One of our in-class activities asks students to work in groups to create public health messages about bats' rabies risks without eliciting species stigmatization.

1.2 Describe, analyze and critique the roles and impacts of human activity and technology on both human society and the natural world, in the past, currently, and in the future. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

This course has students analyze and critique the roles and impacts of human activity on the natural world, with specific focus on issues like climate change, genetically modified organisms, as well as well as emerging technology In weeks three, four, and five, we focus on public understanding of science, science in the news, and science denialism, which heavily involves environmental sustainability topics such as climate change. Specifically, we explore the framing of climate change in news media, and how types of frames have impacted public opinion. Weeks six, seven, and eight involve how people form environmental values and how these values impact their perception of humans' role in the natural environment. We also examine the impact of environmental campaigns that aim to persuade individuals to reduce their environmental footprint. In week eleven, one of our in-class activities involves discussing public perception of risks and benefits of autonomous vehicles – an emerging technological feature in personal transport that could provide important benefits to sustainability. We use autonomous vehicles as an example of how public perception of risks typically do not correspond with actual risk estimates, and explain why that is the case by linking the content to specific theories in risk perception and communication.

An example test item that illustrates the expectations for student would be: (1) comparative feedback draws on which psychological theory in motivating environmental behavior change?

1.3 Devise informed and meaningful responses to problems and arguments in the area of

sustainability based on the interpretation of appropriate evidence and an explicit statement of values. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. *(50-700 words)*

Students devise informed and meaningful responses to problems and arguments in the area of sustainability by engaging with material related to environment, health, risk, and science communication. In their movie review assignment students are asked to assess how the film might impact public opinion and behaviors related to sustainable practices. For instance, students reviewing the film, The Day After Tomorrow (2004), must consider how its depictions could encourage greater public awareness on climate change, and whether viewers' developed stronger pro-environmental attitudes/behaviors. Furthermore, many students draw on persuasion theory and discuss how their chosen film could have presented environmental themes more accurately for better public understanding of science.

Communication
Curriculum map, indicating how program goals are accomplished via specific courses.

Program learning goals

Goal 1. Students demonstrate knowledgeable of communication concepts, theories, and principles within a social science framework to understand the role of communication in society.
Goal 2. Students are competent in practicing communication for a range of purposes, audiences, contexts and modalities.
Goal 3. Students are sufficiently trained and prepared to obtain employment in the field of communication or related to the field of communication.

	Goal 1: Comm Principles	Goal 2: Comm Practice	Goal 3: Career Preparation
Premajor			
1100	Basic		
1101	Basic		
Research Methods (4 cr. req.)			
3160(H)	Intermediate	Intermediate	
3163	Intermediate		
3165	Intermediate		
Core Requirements			
Comm Analysis & Engagement			
2110	Basic	Intermediate	
2367(H)	Basic	Intermediate	
3440	Intermediate	Intermediate	
3620	Intermediate	Intermediate	
Comm Tech			
2367(H)	Basic	Intermediate	Intermediate
2511	Basic	Intermediate	Intermediate
2540	Basic	Basic	Basic
3554	Intermediate	Intermediate	Intermediate
Strategic Comm			
2321	Basic	Intermediate	Intermediate
2331	Basic	Intermediate	Intermediate
3333 *or*	Basic	Intermediate	Intermediate
3444	Intermediate	Intermediate	Basic
3334	Basic	Advanced	Intermediate
4337	Basic	Advanced	Intermediate
Experiential Learning (3 cr. req.)			
3188	Intermediate	Intermediate	Advanced
3800	Intermediate	Advanced	Advanced
4191			Advanced
4998	Advanced	Advanced	
4999(H)	Advanced	Advanced	
Focus Area Electives			
Comm Analysis & Engagement (15 credit hours required)			
2131	Basic	Intermediate	
2596	Basic	Basic	
3325	Intermediate	Intermediate	Intermediate

	Goal 1: Comm Principles	**Goal 2: Comm Practice**	**Goal 3: Career Preparation**
3330	Basic	Intermediate	Basic
3331	Intermediate	Intermediate	
3332	Intermediate	Intemediate	Basic
3340	Intermediate	Intermediate	
3402	Intermediate	Basic	
3403	Intermediate		
3404	Intermediate		
3413	Intermediate		
3415	Basic	Intermediate	
3442	Intermediate		
3450	Intermediate	Basic	
3466	Intermediate		
3597.01	Intermediate		
3597.02	Intermediate		
3624	Intermediate	Intermediate	Intermediate
3628	Advanced	Intermediate	Intermediate
3629	Intermediate	Intermediate	Intermediate
3662	Intermediate	Intermediate	
3667	Intermediate	Intermediate	Basic
3668	Intermediate	Intermediate	Basic
4240		Intermediate	
4401	Intermediate		
4445	Intermediate	Intermediate	
4600		Intermediate	
4635		Intermediate	Intermediate
4736	Intermediate	Intermediate	
4737	Intermediate	Intermediate	Basic
4738	Intermediate	Intermediate	
4814	Intermediate	Intermediate	
4820	Intermediate	Intermediate	

Comm Tech (6 credit hours required)

	Goal 1: Comm Principles	**Goal 2: Comm Practice**	**Goal 3: Career Preparation**
3513	Intermediate	Intermediate	Basic
3558	Intermediate	Intermediate	
4557	Advanced	Advanced	Intermediate
4558	Advanced	Advanced	Intermediate
4665	Advanced	Advanced	Intermediate
4738	Advanced	Advanced	Intermediate

Strategic Comm (9 credit hours required)

	Goal 1: Comm Principles	**Goal 2: Comm Practice**	**Goal 3: Career Preparation**
2367(H)	Basic	Intermediate	Intermediate
2511	Basic	Intermediate	Intermediate
3325	Intermediate	Intermediate	Intermediate
3330	Basic	Intermediate	Intermediate
3332	Intermediate	Intermediate	Intermediate
3333	Basic	Intermediate	Intermediate
3340	Intermediate	Intermediate	Intermediate
3345	Basic	Intermediate	Intermediate
3444	Intermediate	Intermediate	Intermediate
3558	Intermediate	Intermediate	
3628	Advanced	Intermediate	Basic
3668	Intermediate	Intermediate	Basic

	Goal 1: Comm Principles	Goal 2: Comm Practice	Goal 3: Career Preparation
4445	Intermediate	Intermediate	Intermediate
4558	Basic	Advanced	Intermediate

Special Topic Elective

Comm Tech (9 credit hours required)

3330	Basic	Intermediate	Intermediate
3331	Intermediate	Intermediate	Intermediate
3513	Intermediate	Intermediate	Basic
3545	Intermediate	Intermediate	Intermediate
4511	Intermediate	Advanced	Intermediate
4555	Advanced	Advanced	Intermediate
4556	Advanced	Advanced	Intermediate
4557	Advanced	Advanced	Intermediate
4665	Advanced	Advanced	Intermediate
CS&E 2123			

Strat Comm (3 credit hours required)

2110	Basic	Intermediate	Basic
2131	Basic	Intermediate	Intermediate
2367 (H)	Basic	Intermediate	Intermediate