ENR 7400 Communicating Environmental Risk

Spring 2020
Kottman Hall 333C or https://osu.zoom.us/j/107174583
Tuesday/Thursday 12:45-2:05

Course Instructor: Dr. Robyn Wilson, 316D Kottman Hall
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Office hours by appointment only or right after class

Course Description: Introduction to the design and implementation of public-focused risk communication as it relates to environmental, agricultural and public health contexts.

Prerequisites: Graduate standing or permission of instructor

Course Objectives:
This course is designed to help students...

1. Understand the psychological and socio-cultural factors that influence the success of risk communication messaging.
2. Know how to design, implement, and evaluate a successful, public-focused risk communication effort.

Course Format: Class time will largely be based on discussion and small group activities. An interactive approach such as this makes your attendance and participation a crucial component of achieving success in this course.

Assignments and Exams:

1. Risk Assessment Paper – 5-8 pages, double-spaced, where you assess the calculated risk associated with a specific hazard. You should pick a risk that is of interest to you – health hazards for health communication, environmental hazards for environmental communication. Use any available outside research/resources about your hazard (including personal interviews). Be sure to include at least 5 sources from outside of class. Specifically, your paper should examine the following aspects:
   a. **Hazard**: What is the hazard? How does it come to be in the world around us? What is the mechanism by which the hazard does its supposed harm?
   b. **Exposure**: How are humans exposed to the risk? Where? When? What are the key risk factors? Specifically, how do exposures vary over time, by location, or by subpopulations? How much exposure does it take to experience a negative consequence?
   c. **Consequences**: What negative consequences occur as a result of exposure to the hazard? How does the hazard pose harm? To what people? To how many people? Who is most at risk/vulnerable? Is the harm short-term or long-term, fatal or not, etc.? Are the
consequences health-based? Economic? Environmental?

d. **Probability**: What is the probability of harm? What is the likelihood of the negative consequences identified above to the general population? To specific sub-groups or populations?

e. **Risk mitigation and management**: What can people do to reduce their risk?

2. **Risk Perception Paper** – 5-8 pages, double-spaced, where you assess the perceived risk associated with the hazard you focused on for the assessment paper (i.e., identify the “mental model” for the particular audience you will target in your risk communication paper). Use any available outside research/resources about public perception and your target audience (related to this hazard and otherwise, and including personal interviews). Be sure to incorporate at least 5 sources from outside of class. Specifically, your paper should examine the following aspects:

   a. **Risk perceptions**: What is the perception of risk/level of outrage toward this hazard? How do people perceive the risk in terms of its critical characteristics (e.g., voluntary nature, level of control, catastrophic nature of consequences)? How does this perception vary by different sub-groups or populations at risk? Why do the different groups perceive the risk this way? Does the public perception of risk differ from the expert assessment of the risk? If so, how? Is the risk deemed “acceptable”? Why or why not? Whose perceptions and behavior are most critical to managing the risk or minimizing the harm posed by the hazard?

   b. **Target audience**: What audience do you plan to target with your communication effort? What is critical to know about this audience? What is their level of knowledge about the hazard/risk? What are their relevant beliefs and misperceptions? What are the critical barriers preventing appropriate action?

   c. **Recommendations for risk communication content**: How might one increase the alignment between expert assessments and the perceptions of this particular audience? What key beliefs/perceptions need to change to promote appropriate action? Are there any communication or behavioral theories that lend some insight into what is necessary? What other factors might you need to take into consideration in designing your risk communication effort? Identify at least 3 key lessons learned about this audience and the risk that you will use to build your risk communication effort.

3. **Risk Communication Paper** – 5-8 pages, double-spaced, where you take your analysis of the risk and your target audience, and develop a risk communication campaign. Be sure to address not just what you would say and do, but how you would present information and engage your audience. Address how your approach addresses relevant socio-psychological processes and incorporates the specific knowledge you gained about your audience. Specifically, make sure to explain why you chose this approach or strategy based on the best available science. While the project is theoretical, your proposal for the campaign should be realistic and implementable. In other words, if you want to run television advertisements about your hazard, you should be able to supply me with a storyboard for the advertising campaign. If you want to use brochures, you will need to turn in sample brochure ideas. You will need to use at least 5 references from the course, additional outside references and resources are encouraged. Specifically, your paper should examine the following aspects:

   1. **Background**: Briefly recap the first two papers - how does expert versus public perception differ? Who is the target audience of the effort? What are the critical
beliefs and other audience characteristics that you will address?

2. **Goals:** What are the objectives and goals of your risk communication effort? To inform? To change behavior? Etc.

3. **Approach:** What is your approach or method? Will you use a social media campaign? Create brochures? Develop a public service announcement? One-on-one interactions? How will you carry it out? Why is this approach appropriate based on knowledge gained from the class?

4. **Ethics and Constraints:** Are there ethical issues or other potential constraints that need to be addressed? If so, how are you addressing them?

5. **Messaging:** What is your message? Provide an example to be used in the campaign. How are you framing the information? Why? How are you presenting any relevant data about the hazard/risk? Why? How does this message account for relevant psychological processes and motivations? What are they?

6. **Evaluation:** Why do you expect your approach and specific messaging to be successful? How will you evaluate your effort?

4. **Paper Presentations** – During our “chosen” final exam slot, you will present a brief overview of your final paper. Your presentation should highlight the hazard context, the similarity or differences between the calculated risk and the perceived risk of your target audience, and your strategy for improved risk communication in this context. Specifically, answer the five key questions – what is the risk? Who is your target audience? Do they perceive the risk “accurately”? Why or why not? How would you engage them in future risk communication? Why do you expect this to increase the accuracy of their risk perception? You can be building this presentation throughout the semester as you complete your papers, this will make it easier to meet end of term deadlines.

This will be a “modified” Pecha Kucha presentation (typical ones are 6 minutes, 20 slides @ 20 seconds each). You may choose to have 15 slides/20 seconds each, or 20 slides/15 seconds each. Either way, this is 5 minutes total, but you pick if you want less slides and more time on each, or more slides with less time on each. Your slides **must** be timed to advance automatically, so this will need to be well thought-out and concise. You are welcome to use a script if you prefer to keep on time. Use simple visuals appropriately to support your key points, this is meant to be a learning opportunity for your classmates, and a chance for you to share your hard work from throughout the semester (while not boring us all to death). You will be graded on the organization of your presentation, your understanding of the material, and your presentation style, in addition to the content (understanding of concepts from class, connections drawn between theory and application, etc.). A full rubric is posted on Carmen. Powerpoints **must** be loaded to Carmen by midnight the day before the final exam to ensure that we can manage smooth and efficient transitions between speakers in class.

5. **Attendance and Participation** – Your attendance and participation grade will be 50% based on attendance, and 50% based on your assigned discussion posts and in-class leadership.

- I will take attendance every day and you will receive a grade based on the proportion of classes attended (out of 28). Planned absences that you tell me about the first week of class will be excused (e.g., class field trips, work commitments, traveling for a wedding, etc). Beyond that, there will be no excused absences, you can miss class up to 2 times
and still get an A- for the attendance portion of this grade. Given the reality of online teaching and the coronavirus, I will still be taking attendance each day, but if you are unable to attend in person due to other personal commitments please let me know. I will record each session and make it available online for your review after the fact.

- Your discussion post grade will be based on your contributions during to two pre-assigned class meetings. In advance, you must post a brief summary of takeaways points from the readings, and at least 3 discussion questions for class that day. You will then be tasked with raising your discussion questions in class and helping facilitate discussion that day. Your grade will be assessed out of 100 points (50 for each assigned day – 15 points each for posting reading takeaways and discussion questions, a maximum 10 points for the quality and thoughtfulness of your post, and a maximum of 10 points for your in-class leadership and engagement). Your discussion post must be submitted to the discussion boards set up on Carmen by midnight the day before each class.

6. **Teach-In Assignment** - In recognition of the 50th anniversary of Earth Day 2020, [The Center for Environmental Policy](https://www.bard.edu/cee/) at Bard College is organizing a national event, [Solve Climate By 2030](https://www.solvectimateby2030.org/), that seeks to engage more than 100,000 students across the country in dialogue about state and local climate solutions. You will be expected to participate in a webinar on **TUESDAY, APRIL 7 from 5-7 PM EST**. The first hour will be presentations and Q&A with Bryan Mark (overview of climate change in Ohio), Mark Shanahan (utilities and business in a climate thoughtful world), and Alicia Smith (environmental justice). The second hour will involve virtual break-out sessions where as a discussion group you will be tasked with identifying three actionable items for Ohio (e.g., your state utilities should accelerate solar and storage siting by doing x; or your state legislature should pass a bill that does y). The groups will report back and identify the biggest priorities for Ohio moving forward.

*For class, you will be required to post your takeaways on the discussion board by Thursday morning (the 26th). Identify what you see as the role for risk communication in these proposals. For example, which of these solutions would be easiest to message around? Which would be hardest? Why? How would you engage the public in support of one or more of these initiatives and overcome obstacles identified above?*

**Topic:** Solve Climate by 2030  
**Time:** Apr 7, 2020 05:00 PM Eastern Time (US and Canada)  
Join Zoom Meeting: [https://osu.zoom.us/j/577858417](https://osu.zoom.us/j/577858417)  
Dial by your location: **+1 646 876 9923 US (Ohio)**  
**Meeting ID:** 577 858 417

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Email: [carmenzoom@osu.edu](mailto:carmenzoom@osu.edu) | Phone: 614-688-HELP (4357)

If you have a disability and experience difficulty accessing this content, contact the Accessibility Help Line at 614-292-5000 or Text Telephone for the Deaf at 614-688-8743.
Grading:

- Risk Assessment Paper 20%
- Risk Perception Paper 20%
- Risk Communication Paper 20%
- Paper Presentations 15%
- Attendance and Participation 20%
- Special Teach-in Assignment 5%

TOTAL 100%

The course syllabus, schedule, and assigned readings are subject to change. The syllabus can be made available in alternative formats upon request; students with disabilities are responsible for making their needs known to the instructor and for seeking available assistance in a timely manner.

Class Readings: All required readings will be available through CARMEN.

We will draw heavily on three particular sources:

Make-up and Late Assignments: In-class assignments or points cannot be made up. Late papers will be accepted, but will be docked 5 points for each day that they are late.

Academic Misconduct: It is expected that all students have read and understand the University’s *Code of Student Conduct,* and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s *Code of Student Conduct and this syllabus* may constitute “Academic Misconduct.” The Ohio State University’s *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s *Code of Student Conduct* is never considered an “excuse” for academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University’s *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages: http://oaa.osu.edu/coam.html
- Ten Suggestions for Preserving Academic Integrity: http://oaa.osu.edu/coamtensuggestions.html
- Eight Cardinal Rules of Academic Integrity:
  - http://www.northwestern.edu/provost/students/integrity/rules.html
SECTION I: Understanding Risk Perception

- Session 1 (1/7) - Introduction to Course Concepts
  - Lundgren and McMakin – Ch. 1 (Intro) pp. 1-7 & Ch. 5 (Ethics), pp. 57-70

- Session 2 (1/9) – Calculated Risk
  - Ropeik and Gray – Ch. 1 (Intro) pp. 1-20 (and skim Ch.19/20 (Air Pollution) pp. 151-180 for a detailed example of risk assessment)

- Session 3 (1/14) – Perceived Risk
  - Cox – Ch. 6 (Environmental Dangers and the Public), pp. 189-222

- Session 4 (1/16) – Affect and Emotion
  - FDA Guide – Ch. 10 (Affect and Emotion)

- Session 5 (1/21) – Psychological Distance and Construal Level Theory

- Session 6 (1/23) – Social Amplification of Risk

RISK ASSESSMENT PAPER DUE – Midnight, Sunday January 26th

- Session 7 (1/28) – Public Health Case Study: Measles and e-Cigarettes (Dr. Janet Yang SUNY Buffalo)
  - Yang et al. (2020). The role of temporal distance perception in narrative vs. non-narrative persuasion related to e-cigarettes. In press.
SECTION II: Understanding Information Processing and Determinants of Mitigation Behavior

- Session 8 (1/30) – Information Processing and Persuasion (Theories: HSM, ELM)

- Session 9 (2/4) – Risk, Efficacy and Promoting Protective Behavior (Theories: PMT, EPPM)

- Session 10 (2/6) – Risk, Decision Cues, and Environmental Hazards (Theories: PADM)

- Session 11 (2/11) – Risk Information Seeking and Processing Behaviors (Theories: RISP)

- Session 12 (2/13) – Cultural Cognition and Motivated Reasoning

- Session 13 (2/18) – Climate Change Case Study: Mitigation and Adaptation (Dr. Teresa Myers George Mason University)
- Session 14 (2/20) – Social Trust and Confidence

- Session 15 (2/25) – Public Participation and Perceived Fairness

- Session 16 (2/27) – Wildlife Case Study: Carnivores and Conservation (Ann Froschauer USFWS)
  - No readings

**RISK PERCEPTION PAPER DUE – Midnight, Sunday March 1st**

**SECTION III: Planning Your Risk Communication Effort**

- Session 17 (3/3) – Setting Goals and a Making a Plan
  - FDA Guide Ch 2-4 (Goals and Evaluation), Lundgren and McMakin Ch. 7 (Purpose)

- Session 18 (3/5) - Principles of Risk Communication
  - Lundgren and McMakin Ch. 6 (Principles of Risk Comm)

**SPRING BREAK – 3/9-3/13**

- 3/17 – Cancelled (Bonus spring break)
- 3/19 – Cancelled (Bonus spring break)

- Session 19 (3/24) – Know your Audience
  - Lundgren and McMakin Ch. 8 (Analyze your Audience); FDA Ch. 12 (Across the Life Span)
Session 20 (3/26) – Choosing your Channel
  o Lundgren and McMakin - Ch. 9 (Develop your Message), Ch 10 (Determine the Appropriate Methods), Ch 13 (Information Materials)
  o Optional: Lundgren and McMakin, Ch. 15 (Face to Face Communication), Ch. 16 (News Media), Ch. 17 (Stakeholder Participation), Ch. 18 (Technology Assisted Communication), Ch. 19 (Social Media)

Session 21 (3/31) - Extreme Weather Case Study: Hurricanes (Dr. Gina Eosco NOAA)
  o TBD

Session 22 (4/2) – Communicating Qualitative Information & Framing
  o FDA Guide Ch. 8 (Qualitative Information)

Session 23 (4/7) – No regular class - 5 to 7 PM, Climate-Teach In!

Session 24 (4/9) – Climate Teach-in Discussion
  o No additional reading - simply post your takeaways and risk comm applications to the discussion board by Thursday AM

Session 25 (4/14) – Communicating Quantitative Information & Numeracy
  o FDA Guide Ch. 7 (Quantitative Information)

Session 26 (4/16) – Visual Representations of Risk
  o Lundgren and McMakin Ch. 14 (Visual Representations of Risk)
  o FDA Guide Ch. 6 (Definitions)
- Session 27 (4/21) – Communicating Uncertainty

- Session 28 (4/23) – Avoiding Unintended Consequences in Risk Messages

RISK COMMUNICATION PAPER DUE – Midnight, Sunday, April 26th

Final Exam Slot – April 28th 2 to 3:45 – Paper Presentations

*Graduating grades (still) due 4/28 (or maybe May 1 on last day of new exam schedule?)
  Grades (still) due 5/4 for everyone else?