MMC 6409
Seminar in Science/Health Communication

Fall 2018
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Office hours: Mon 2, 3; Tues 2 period; Wed 2, 3, 4 periods, and by appointment
(Note: these office hours may change if university or college committees or grant work
require my attendance; but you can always schedule some other time)

Students requesting classroom accommodation must first register with the Dean of
Students Office. The Dean of Students Office will provide documentation to the
student who must then provide this documentation to the instructor when
requesting accommodation.

Students are expected to provide feedback on the quality of instruction in this
course based on 10 criteria. These evaluations are conducted online at
https://evaluations.ufl.edu. Evaluations are typically open during the last 2-3 weeks
of the semester, but students will be given specific times when they are open.
Summary results of these assessments are available to students at:
https://evaluations.ufl.edu/results.

**Academic Honesty:** Academic honesty is important at the University of Florida. All
students are expected to practice the University of Florida Honor Code: “We the
members of the University of Florida community, pledge to hold ourselves and our peers
to the highest standards of honesty and integrity.” For all work submitted for credit,
including homework, in-class assignments and examinations, the following pledge is
implied, "On my honor, I have neither given nor received unauthorized aid in doing this
assignment."

Please see the plagiarism document in the Graduate Division, and be sure that you have
signed it and it is on file (required, if you are in this college).

Your well-being is important to the University of Florida. The U Matter, We
Care initiative is committed to creating a culture of care on our campus by
encouraging members of our community to look out for one another and to reach
out for help if a member of our community is in need. If you or a friend is in
distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Course Description and Outcomes: This course is designed as a broad overview of the fields of and theories used to investigate and understand science and health communication and communication’s effect on public understanding. The class will be useful for you if you plan to: do research or teaching in the science, technology or health communication fields; if you are interested in policy development, or the role of communication in promoting public health; prepare for a career working in science communication or consulting to businesses in the government, science, health or technology fields; work as a public information officer in a research, health or technology organization, nonprofit, or to become a better consumer of health and science information (meaning to assess the credibility, risks and benefits of that information), etc. For any of these purposes, it is vitally important that you understand: what’s happening in the field and how the gap between access to information and informed decision making is widening as information consumers are struggling to understand, evaluate and find credible information; and how it is exacerbating the disparities among some groups. So you must understand the barriers and opportunities.

*This class strives to include multiple and diverse perspectives from a variety of stakeholders and interest groups to inform your appreciation for differing viewpoints in a global society.

Over the next few weeks we’ll be reading the literature in this rather broad and unique field so that you will understand:

- How science and health are communicated through the gamut of traditional and emerging media, and how that communication impacts knowledge, attitudes and behavior
- The implications of messages conveyed through traditional, Internet and social media. In other words, how technology and social media have changed the face of science and health communication
- The challenges to communicating the uncertainty of science and health
- The “players” in the field: The nexus among scientists/health researchers, journalists, public information officers (in other words, science communicators) and audiences and the communication among them
- The “problem” of science and health literacy and how to engage various audiences
- The most common theories used to comprehend the issues in science and health communication
- Risk issues in communicating science and health
• The impact of science/health communication on policy; politics of science
• The issues that make science and health news today
• Controversies/ethical considerations in science/health
• Framing of science and health issues by communicators, scientists, policy makers; framing as a method of researching audience meaning of text and framing theory
• How to think strategically about the use of communication
• TV/film’s influence on health and science
• The future for science/health communication

Many of the issues we will be discussing and debating won’t have clear-cut answers or solutions, so class discussion is very important to raise the issues. It may be frustrating at times, but this is why you should know more about how difficult it is to communicate science and health information.

Because the list of possible important topics to cover in this class is endless, choices needed to be made to provide an overview of the field. Therefore, topics such as interpersonal communication in healthcare, the health care and insurance system, etc., that could be classes in themselves, will not be addressed in depth.
What this course is not: It isn’t a “how-to” write a science or health story. It’s a critical look at the field, the people involved and the impact of science communication efforts. For a how-to, there are countless books and websites to guide you. Additionally, when looking at health communication we will not be discussing at length the health care systems, how the US pays for health care, etc., as these areas alone could be the focus of one entire semester.
Format: This course is designed around a lecture/discussion format – meaning it’s a discussion-intensive class. Additionally, the course uses a number of learning formats in addition to discussions: student presentations, interactive group exercises, a debate, scholarly articles, film, videos, websites and guest speakers. And, since it’s a graduate seminar, it is expected that you will have done a careful, critical reading of all assigned articles (and any new science or health developments that occur during the semester) for each week and will be ready to participate in class discussion; in other words, class discussions are the core of the course. The design of the course is so that you will explore the issues. So, I’ll come prepared for class, so you should too.

For each week, the most relevant readings have been assigned, and many are pretty intellectually challenging. However, I encourage you to step outside of these readings and acquaint yourself with the rapidly growing body of literature on science and health communication. There are wonderful dedicated journals, such as *Public Understanding of Science* (acronym PUS, lovely, eh?), *Science Communication*, *Social Studies of Science, Technology and Human Values*. Also consult the *Journal of Communication, Journal of Health Communication: International Perspectives, Health Communication, Journalism & Mass Communication Quarterly* which are other sources for science and health communication studies. Another valuable resource is your classmates, and hopefully, you’ll be developing supportive relationships as we work through the issues in the field.

Note: If you see an article, TV show, blog, website, etc. that you think would be of interest to other students in class, I encourage you to share it with us!

Class Guidelines – good news: no tests!
1-Late assignments. I don’t take them. No make ups.
2-Participation. The goal for the weekly readings is to read the material, digest it, synthesize it, and then add your own independent thinking about the assigned topic. Participation is not only part of your grade, but also it is needed, so please participate regularly.
3-Participation etiquette. Please be considerate of the ideas of others, and treat everyone in class with kindness, tolerance and respect, regardless of how vehemently you disagree with their views.
4-Attendance. If you must miss, one excused absence is allowed if you let me know well before class begins. But since this is a graduate seminar that meets only once a week, you are expected to attend each week.
5-Because I have administrative duties, and am doing grant work with faculty in the College of Medicine, from time to time I may need to cancel class. But it hasn’t happened yet.
6-Cellphones and laptops. All cellphones and other electronic devices need to be turned off during class. Unfortunately that goes for laptops too. I want to remove the temptation to check email, post on Facebook or other fun activities not related to this class. Students who text, email, check Twitter, Facebook, LinkedIn, etc. during class will be asked to leave and be considered absent for that day.
Final Research Paper Due December 7 at noon (hard copy of final paper; must include all previously graded marked up sections)

The final paper will concern the science or health topic of your choice. You will learn the theory and method of framing and framing analysis to complete this study. Early in the semester you will be asked to choose a science or health topic that has received substantial media coverage (controversial and high profile are your best bets), that has **not** been used previously as the basis of a framing analysis study. You will need to select an appropriate sampling frame and obtain those articles, posts, etc for analysis. This is a wonderful opportunity to complete a sole- or co-authored study for submission to a conference and subsequent publication (previous semesters’ students have been very successful with this). We will talk about whether you want to use a qualitative or quantitative approach.

We will have various due dates for parts of the paper so that:
- I can give you feedback along the way
- The research paper won’t be so overwhelming
- It will ensure a better end product.

The paper can be completed either by yourself (i.e., if you want it to be used as a springboard for your thesis or dissertation) or with one or two others in class. This is your choice. But a team of three is the maximum number in a team.

The paper will consist of five sections:
1. introduction (or rationale for why this is an important topic to study)
2. literature review (all relevant literature that informs your topic)
3. method
4. results
5. discussion, weaknesses and needed future research

We’ll discuss each of these as we go along. If you are completely unfamiliar with conducting a research study, then you should probably pair up with someone else in class. But don’t forget, we’ll be discussing each of the sections at some length. So don’t worry!

Examples of framing paper topics conducted previously in this class:
- Shark “finning”
- Fracking gas drilling
- Synthetic meat
- Medical marijuana
- Fibromyalgia
- Japanese earthquake nuclear accident
- Florida springs water debate
- GMOs
- Talcum powder and cancer connection
- Zika crisis
You will be making a very short (5 minutes maximum), informal presentation on your final paper on the last day of class – more like a conversation with friends. This is designed to give class members a short background on your topic and what you found, so focus on the most important, interesting and unexpected findings. No formal Powerpoint slides, please.

**Weekly Readings/Discussion Questions/Discussion Leader**

Each week you must identify at least two important questions or discussion points synthesized across (not from just one assigned reading, and **not two from each** – only **two thoughtful questions per week**) the readings that will serve as class discussion items. These questions might be those you wouldn’t want your classmates to miss, those that interest you or those about which you would like to hear the thoughts of your classmates. A good discussion question, in other words, might ask if there are common themes across readings, are there differences, those that clarify or add to the discussion, or thoughtful critiques of the readings. Please don’t include questions that are not relevant to the readings for the week.

Each week one of you will be assigned as the discussion leader. While each of you will be submitting questions each week, only the assigned discussion leader will be charged with channeling the discussion and making sure that everyone participates. (NOTE: on the week you are the discussion leader, you do not need to submit questions)

Please email your questions to the discussion leader for that week and me by noon on the **Saturday before class** so that the discussion leader will have enough time to put the questions together and prepare for class.

The discussion leader should, by synthesizing or listing the questions submitted, facilitate open discussion/debate and further questions. It is up to you as to how you do that – through slides, handouts, exercises, quizzes, videos. etc. – in other words, be creative!! Your choice.

**Controversies in Science Debates**

“Public understanding and support of science and technology have never been more important, but also never more tenuous. Today they are embedded in an increasingly politicized environment where ethical, legal, and social implications are emerging at a rate that seems to be outpacing society’s capacity to make sense of the science. The science of science communication will be essential to help guide new and more effective efforts at engaging productively across the science/society interface.” (Science, 2012)

It is important to learn the relevant theories and assumptions of communicating science and health. But that’s not enough. To participate on an intellectual level and engage the public in debates about science/health, science/health communication, technology, policy, and the future, you must be able to understand the issues involved in science, health and technology. You know that science/health and technology are part of modern society, but
sometimes values, attitudes and beliefs collide on some issues. So in the November 12th class you’ll be debating a few controversial topics and issues within the broad topic area of science/health communication that you may encounter as a practitioner or researcher. These are important and complex areas about which many of you will be writing, researching and communicating. There are special challenges here for a science/health communicator.

1-First you will select a topic (suggestions listed on the next page), and teams will be assembled. Each side of the debate will have a minimum of two members for each topic. You will decide as a group which side members will take. Your team will also have a moderator who will serve as timekeeper and rule enforcer (probably me).
2-Your team will then obtain background information, pro or con (depending on your side). It’s important here that even if you disagree with the side you have been assigned, you must argue for that side. This is an important exercise for you to learn the opposing perspectives on some issues that have ideological, ethical and other factors intervening. So be sure to know all of the stakeholders here and their perspectives and concerns.
3-Each side will have a total of 5 minutes to present its opening pro and con arguments/evidence/background to the class and to the opposing side. DO NOT SHARE YOUR INFORMATION WITH THE OPPOSING SIDE AHEAD OF TIME!
4-Each side will then be given the opportunity to ask questions to the opposing side for 5 minutes. Please be sure that each member has at least 2 questions to ask the opposing side. DO NOT SHARE THESE QUESTIONS WITH THE OPPOSING SIDE AHEAD OF TIME!
5-The final 5 minutes will be devoted to questions from the class.

Suggested topics (you may pose others as well):
1. Should marijuana be legalized nationally for medicinal purposes?
2. Should e-cigarettes be permitted? Regulated more or less?
3. Should cervical cancer vaccine (HPV) for school children be compulsory for young children?
4. Is it safe to consume genetically engineered foods?
5. Should fracking be allowed to continue and grow?
6. Fossil fuels and oil use in farming – do they contribute to climate change?
7. Should geoeengineering be pursued?
8. Should the morning after pill be made available to girls at age 12?
9. Should physician assisted suicide (assisted dying) be allowed for end of life care?
10. End of life care – should care, medicines, treatment be rationed for those who are elderly?
11. Should antibiotics be used in livestock production?

**Grading Policies**
- Class Attendance/Participation/Presentation/Weekly Questions/Leader: 30%
- Special Debate presentations: 25%
- Final paper sections and meeting deadlines: 15%
- Final Paper: 30%
Although we are holding one of the individual meeting days on November 26\textsuperscript{th}, please complete your online course evaluations on or near that day. It is important that you complete these because course evaluations are taken seriously at the University of Florida, and your opinions matter to me to make the class as useful and relevant as it can be.

The evaluations are confidential. I will only see completed results and will be unable to trace ratings or comments to any student. In addition, I will not have access to the evaluations until after final grades have been recorded.

**SEMINAR SCHEDULE**
*(don’t let this reading list intimidate you, many of the readings are very short)*

**Week 1 - August 27:** Introduction, syllabus, assignments
Readings:
http://www.pnas.org/content/110/Supplement_3/14033.short (full text)

**Week 2 - September 3:** LABOR DAY HOLIDAY

**Week 3 – September 10:** Science Communication: Scientists and Communicators, Scientists involvement in policy
*(please send me your questions this week)*
Readings:
http://www.nature.com/nature/journal/v540/n7634/full/nj7634-611a.html

http://jou.sagepub.com/content/12/7/778.full.pdf+html

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4767388/


http://climateshiftproject.org/wp-content/uploads/2015/02/NisbetMarkowitz_ExpertiseAgePolarization_ANNALS.pdf

**Week 4 - Sept 17:** Health Communication and Theories; Research Paper Sections

**Discussion leader**

**Readings:**

National Cancer Institute. Making health communications programs work


**RESEARCH TOPIC IDEA BE READY TO DISCUSS IN CLASS TODAY**

**Week 5 - Sept 24:** What Makes Science/Health News

**Discussion leader**

**Readings:**


Journal embargo policies, considerations and debate on the embargo policy (all very short)
Science: http://www.sciencemag.org/site/feature/contribinfo/faq/#embargo_faq
Nature: https://www.nature.com/authors/policies/confidentiality.html
Controversy: http://dennismeredith.com/understand-embargoes-pro-and-con_367.html
Week 6 – Oct 1: Health and Science Literacy among “the public,” Public Engagement and Education through Technology and Alternate Venues

**Discussion leader**

Guest speakers: Matt Cretul – Telemedicine; Rachel Damiani – Citizen Scientists

**Readings:**


Farinella, M. (2018). The potential of comics in science communication, *Journal of Science Communication* 17(1). [http://go.galegroup.com/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm&currentPosition=7&docId=GALE%7CA535618941&docType=Article&sort=Relevance&contentSegment=&prodId=AONE&contentSet=GALE%7CA535618941&searchId=R1&userGroupName=gain40375&inPS=true](http://go.galegroup.com/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm&currentPosition=7&docId=GALE%7CA535618941&docType=Article&sort=Relevance&contentSegment=&prodId=AONE&contentSet=GALE%7CA535618941&searchId=R1&userGroupName=gain40375&inPS=true)

“Gattica” (will be watching 25 minutes of the movie for discussion)

In class: science and health literacy tests (just for fun)

Week 7 – Oct 8: Framing and Persuasion

**Discussion leader**

**Readings:** First three readings this week are from an Ebook in Library West


Tankard, J. (2001). “The empirical approach to the study of media framing,” in S. Reese,
Week 8 - Oct 15: Framing Examples (use these articles to see how the papers are set up, the research questions they ask, etc.)

Discussion leader

Readings:


In-class framing exercise
INTRO AND LITERATURE REVIEW SECTION DUE IN CLASS (includes resulting research questions at end of lit review)

Week 9 - Oct 22:  INDIVIDUAL MEETINGS (to discuss methods and coding sheet; have draft ready), no group class, meet in my office

Week 10 - Oct 29:  Risk Communication
Discussion leader
Guest speaker Dr. Yulia Strekalova
Readings:
Fink, S. (Aug. 27, 2009). The deadly choices at Memorial, Pro Publica
http://www.propublica.org/article/the-deadly-choices-at-memorial-826


http://www.nytimes.com/2014/12/30/health/how-ebola-roared-back.html?_r=0


METHODS SECTION AND CODING SHEET DUE BY NOON, FRIDAY, OCTOBER 19

Week 11 – Nov 5:  Climate Change
Please send question to me this week
Readings:
Sakellari, M. (2014). Cinematic climate change, a promising perspective on climate change communication. Public Understanding of Science,
http://pus.sagepub.com/content/early/2014/05/30/0963662514337028.full.pdf+

http://pus.sagepub.com/content/24/3/285.full.pdf+

http://scx.sagepub.com/content/early/2015/10/14/1075547015611131.full.pdf

Hiles, S., Hinnant, A. (2014). Climate change in the newsroom: Journalists’ evolving Standards of objectivity when covering global warming. Science Communication
http://scx.sagepub.com/content/early/2014/05/19/1075547014534077.full.pdf

Documentary: *Merchants of Doubt* (2010) – we will be watching parts of this in class

**Week 12 – Nov 12:**
Class presentations/Debates of Controversies in Science

ALL ARTICLES COLLECTED FOR ANALYSIS (note: articles are not given to me, they must be collected by this date so you can start your analysis

**Week 13 - Nov 19:** Ethics
Discussion leader

Readings: (all very short)


NFL’s concussion research: [http://www.nytimes.com/2016/03/25/sports/football/nfl-concussion-research-tobacco.html?_r=0](http://www.nytimes.com/2016/03/25/sports/football/nfl-concussion-research-tobacco.html?_r=0)

**Week 14 – Nov 26:** INDIVIDUAL MEETINGS; no group class

**Week 15 – Dec 3:** Presentations/Evaluations/Future of Science Comm/Wrap up none

RESULTS SECTION DUE IN CLASS
FINAL PAPERS DUE DECEMBER 7 AT NOON (hard copy in my office; must include all previous marked up drafts)