

# Risky Business: Understanding Risk in a Risky World

## First Year Seminar, Spring 2015

Days, Time, Credit Hours  
Room: TBD

**Instructors:** Sarah George (English), Maya Nadimpalli (Environmental Sciences and Engineering), and Kashika Sahay (Maternal and Child Health)

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**Office Hours:** We will have individual conferencing days throughout the semester. If you would like to meet with one or more of us, please send us an email and we can set up a time of mutual convenience.

**Prerequisites:** None.

### COURSE OVERVIEW

We, as individuals, live in a society constantly bombarded by images, statistics, and warnings about dangers to our health, safety, and well-being. We navigate these information streams to come to a decision about what is or is not a risk. However, individuals, communities, corporations, and governments each may have conflicting perceptions of personal and collective risk. Our policies, our value systems, and our information streams are shaped, and sometimes overshadowed, by these conflicts.

**HEALTH** Study: Newer Birth Control Pills May Double Blood Clot Risk

Sugar as addictive as cocaine, heroin, studies suggest

**DIABETES WARNING ON WHITE RICE**  
Millions who regularly eat it are at risk

Atmospheric Carbon Dioxide Measured at Mauna Loa, Hawaii

White House: Terrorist attacks in U.S. a possibility

Running May Be Harmful to Your Heart

WHITE OBESITY RATES

### QUESTIONS WE WILL EXPLORE

What is “risk”? What’s at stake in defining risk in a certain way? How do we decide what is a risk, and what isn’t? What influences this process? How do our perceptions of, assumptions about, and measurements of risk and danger drive the questions we ask in all of the roles we play in our everyday lives (as students, as members of families, as consumers, as communicators)? These questions are best explored from an interdisciplinary perspective. Course assignments and discussion will support students in bridging ideas and concepts across the three modules.

## Learning Objectives

By the end of this course, you should be able to:

- Exhibit numerical literacy, specifically in modes and methods of calculating risk.
- Critically evaluate and interpret presentations of risk in the popular media.
- Conduct meaningful and effective research in various disciplines and mediums.
- Write clearly and concisely in a variety of disciplines and for multiple audiences (e.g. academic, professional, lay)
- Conduct interdisciplinary scholarship that synthesizes research methods and information in new and generative ways.

## Course Format

This course will be split into three modules that will take us from *scientific definitions* of risk, to *societal perceptions* of risk, to *contemporary cultural and artistic translations* of those perceptions:

1) In the first module, we will explore different definitions of risk, how we measure risk from a health perspective and how numbers are manipulated to make risk-related assessments. This module will be led by Kashika Sahay.

2) In the second module, we will explore how science-based evidence and personal beliefs can interplay to influence our perceptions of risk. This module will be led by Maya Nadimpalli.

3) In the final module of the course, we will analyze examples of risk as it enters into cultural production through literature, television, and film. This module will be led by Sarah George.

## Classroom Expectations

Participation and Professionalism. You are expected to participate in class discussion, demonstrate a positive attitude and enthusiasm for learning, and respect the views of classmates and others. Disagreements are fine and encouraged, but when doing so, please treat others with civility and respect.

Electronic devices. Use of a laptop, tablets, and other similar devices may be used in the classroom to take notes and access course content. However, use of laptops and other devices for activities unrelated to the ongoing class session discussion (including email, web browsing, and texting) is unacceptable. Please turn all cell phones off.

Absences. *Excused absences* will not affect your participation grade. Examples of excused absences include serious illness (a doctor's note will be required) or death in the immediate family. You will be allowed to make up assignments for excused absences. Absences for any other reason, or arrival to class later than 20 minutes after start time, are considered *unexcused absences*. Every 2 unexcused absences will result in one letter drop in your final grade (e.g. A- to B+). If you know you are going to be absent (excused or unexcused), email one of the instructors the day before class.

Missed assignments. You will be allowed to miss two journal entries of your choosing throughout the semester, without penalty to your grades. Missing further assignments, or missing any other assignment, will result in the docking of your grade (unless you have an excused absence).

## Course Components

- Attendance and Participation: 10%

- Weekly Journal Entries (including news article critique): 35%
- Final Paper: 40%
- Classroom Debate (March 18):15%

### **Description of each Course Component**

Attendance and Participation: See Classroom Expectations.

Weekly Journal Entries: Students are responsible for writing a 1-page response to weekly readings and classroom discussion. Details about the structure of the journal entries will be discussed in the first week of class. At least one entry should focus on a contemporary news article as it relates to class themes. Students are excused from completing two journal entries at any time throughout the semester without penalty to their grades. Journal entries for the upcoming week should be posted on [blog/Sakai] on Sunday by 4PM.

Classroom Debate. Students will form teams of 3-4 and argue one side of a highly politicized topic on risk (e.g. climate change, GMO food regulations, antibiotic use regulations, etc....). Teams will rank their preferences for a debate topic. Debates will occur mid-semester (tentative date: March 18). Students will be judged on the: validity of their arguments, the clarity and effectiveness of their communication, and the audience's final perceptions of the risks debated. Teams will be assigned. Further details will be provided later in the semester.

Final Project: Students will write a researched, argumentative 10-12 page final paper engaging with the scientific, social, and cultural interpretations and engagements with a topic on risk of their choice. Feeders throughout the semester will guide the students in thinking about topic selection, research, thesis-generation, and organization. The final project will take the form of an introduction to a proposed book written for academics and interested lay-persons, and must successfully draw links between the scientific, political, and cultural aspects of a particular risk or danger and to outline the argument for a larger book.

### **Evaluation Criteria:**

A = 90-100%  
 B = 80-89%  
 C = 70-79%  
 D = 60-69%  
 F = <60%

### **Numerical cutpoints:**

A 93-100%	A - 90-93%	
B+ 87-89%	B 84-86%	B- 80-83%
C+ 77-79%	C 74-76%	C- 70-73%
D+ 67-69%	D 60-66%	
F <60%		

### **Honor Code**

**All written work that you submit must represent your own work.** You will find it useful to discuss ideas for assignments with your classmates or others. These discussions will help you understand the material and are encouraged. However, you must **always** give credit for any ideas that are not your own, whether they come from written sources or from others with whom you have spoken. Quoting sentences or paragraphs from books,

articles, or the internet without citing your source is plagiarism, which is an honor code violation and warrants severe penalties. To learn more, please see:  
<http://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf>

**Students with Disabilities:**

The University of North Carolina at Chapel Hill (UNC Chapel Hill) ensures that no qualified person shall by reason of a disability be denied access to, participation in, or the benefits of, any program or activity operated by the University. Each qualified person shall receive reasonable accommodations to ensure equal access to educational opportunities, programs, and activities in the most integrated setting appropriate. If you have special accessibility requirements and are affiliated with UNC’s Department of Accessibility Resources and Service, academic requirements may be modified, as necessary, to ensure that they do not discriminate against qualified applicants or currently enrolled students with disabilities. These modifications, coordinated through Accessibility Resources & Service, shall neither affect the substance of the educational program nor compromise educational standards.

**Course Schedule (changes will be posted on Sakai and wordpress?):**

<b>Date</b>	<b>Day</b>	<b>Topic</b>	<b>Readings</b>
Jan 7	W	Introduction and welcome to the course	
<i>Module 1: How do we measure risk? Led by Kashika Sahay</i>			
Jan 9	F	Why are numbers important to understanding risk?	How Numeracy Influences Risk Comprehension and Medical Decision Making Gigerenzer papers-- From innumeracy to insight, Misleading communication of risk
Jan 12	M	How can we relate two quantities? Mathematical concepts of risk, odds, and rates	
Jan 14	W	How do we describe large amounts of data? Mean, median and range	
Jan 16	F	How sure are we of our conclusions? Confidence intervals	
Jan 19	M	NO CLASS MLK DAY	

Jan 21	W	How can we find out our risk at the population level? Study Design	
Jan 23	F	How do we present information from health studies?	What are natural frequencies? Helping doctors and patients make better sense of health statistics.
Jan 26	M	Final Project Introduction	
Jan 28	W	If I have a positive test result, what is the likelihood that I actually have the disease?	
Jan 30	F	What's missing from the numerical approach? Socioecological model	Glanz book chapter: Health education and health behavior.
Feb 2	M	TOPIC WORKSHOP	DUE: Three possible final project topics and a paragraph describing each
Feb 4	W	Betsy Sleath: How do government agencies like the FDA communicate medical/health risk?	
Feb 6	F	How could this relate to your project-group workshop on health section	
<i>Module 2: How does science influence our perceptions of risk? Led by Maya Nadimpalli</i>			
Feb 9	M	Lost in Translation: Influence of scientific language on risk perception	
Feb 11	W	Library Day	None
Feb 13	F	How to read a source	None
Feb 16	M	The role of science in the environmental justice movement	Wing, 2008 Vrijheid, 2000
Feb 18	W	Influence of funding source on how science reports risk	Huss, 2006 Rehman, 2012
Feb 20	F	What about "us" influences how we perceive risk?	Ropeik, 2014

Feb 23	M	Climate Change: Case study on personal traits and risk perception	McCright, 2011
Feb 25	W	Risk communication to diverse audiences	Pogue (YouTube)
Feb 27	F	Vaccines and autism: Case study on unclear science and its influence on risk perception	
Mar 2	M	How can we combat the influence of unclear science on risk perception?	Ropeik, 2012 (NYT)
Mar 4	W	In-class workshop	DUE: Introduction and outline for final paper
Mar 6	F	Why do some science topics become so politicized?	TBD
		Spring Break - NO CLASS	
Mar 16	M	Fracking, Risk, and Rhetoric	TBD
Mar 18	W	In-class debates	
Mar 20	F	Communicating risks to polarized audiences	This American Life podcast (Red State, Blue State)
<i>Module 3: Risk in our Media(?) Led by Sarah George</i>			
Mar 20	M	Preliminary Discussion of Novels	
Mar 23	W	How do we talk about risk in the humanities?	Mary Douglas "Risk and Blame" "Risk and Justice"
Mar 25	F	How do we talk about risk in the humanities? Blindness	James Berger "Post-Apocalyptic Rhetorics: How to Speak after the End of Language, Teresa Heffernan "Post-Apocalyptic Culture" or "Viral Endings"
Mar 30	M	Risk and the Apocalypse	Nick Bostrom "Existential Risks: Analyzing Human Extinction Scenarios and

			Related Hazards”
April 1	W	Risk and the Apocalypse: Saturday	
April 3	F	NO CLASS	DUE: First draft of final paper
April 6	M	In-class workshop Peer review of final paper drafts	
April 8	W	In-class workshop Conferences with Instructors	
April 10	F	How 9/11 changed everything--or did it?	Kari Milner Strom “Terrorism, Democracy, and the Apocalyptic Narrative” 7-15, Marianna Torgovnick “The Lure of Urban Destruction”
April 13	M	How 9/11 changed everything--or did it?	Charles Strozier “The World Trade Center Disaster and the Apocalyptic”, David Holloway “The 9/11 Novel” Xenophobia/borders/risk perception
April 15	W	How 9/11 changed everything--or did it?	Ian McEwan “Beyond Belief,” Randall Martin “Eyewitnesses, Conspiracies, and Baudrillard” and “Beyond Belief’: McEwan, DeLillo and 110 Stories”
April 17	F	Post-humanism--Life Beyond Us	Cary Wolfe “What is Posthumanism?” xi-47
April 20	M	Post-humanism--Life Beyond Us	<b>Battlestar Galactica</b> Judith Halberstam and Ira Livingston “Posthuman bodies”
April 22	W	Post-humanism--Life Beyond Us	Donna Haraway “The Cyborg Manifesto”

April 24	F	Wrap-Up/Class Discussion	DUE: FINAL PAPERS
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### **Additional resources**

UNC Writing Center: <https://writingcenter.unc.edu/handouts/>

- Helpful handouts on how to structure, develop, write, and edit college-level papers.

Resources for Student Success: <http://studentsuccess.unc.edu/>

- Multiple resources, including a free consultation service, to help you manage your time and reach your personal and academic goals during your time at Carolina.

Math Help Center: <http://math.unc.edu/for-undergrads/help-center/>

- Free tutoring 1-6 PM on Mondays through Thursdays and 1-3 PM on Fridays in 365 Phillips Hall. No appointments required.

FOR OUR KNOWLEDGE

### **Course Competencies:**

**Requirements for First Year Seminar (due October 1, 2014) for Spring:**

<http://fys.unc.edu/for-faculty/first-year-seminar-prospectus-form/>

**See:** [http://www.unc.edu/depts/uc/Faculty/GenEd\\_criteria.pdf](http://www.unc.edu/depts/uc/Faculty/GenEd_criteria.pdf) (p.7-14 have approaches and connections description)

### **Approach A.: Non-Historical) Social and Behavioral Sciences (SS):**

1. Courses fulfilling the (non-historical) Social and Behavioral Sciences requirement focus on the scientific study of individual or collective behavior. They consider the individual, family, society, culture, politics, or economy.