

**Science & The Public**  
**LB321 Spring 2019**  
**Section 001: 8-9:50 MW Holmes C101**  
**Section 002: 3-4:50 MW Holmes W9**

Professor: Greg Lusk, Ph.D.

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Office: Holmes Hall, Room E188

Office Hours: MW 2-3 PM

or by appointment

→ Email is generally the best way to reach me. I will endeavor to answer emails within 48 business hours.

### Course Overview

Over the semester, we will explore the role of values within the interpretation, methodology, and use of scientific findings, the ways various stakeholders that shape public understandings of science, and the feedback loop between the scientific community and broad publics. We will become immersed in a range of topics and texts that have emerged from various disciplines exploring how stakeholders lay claim to, interpret, and present “science”, and how audiences respond to and shape scientific findings.

Major course assignments include: 1) Participation; 2) Discussion questions, 3) 2 reflective essays; 4) Mini Quizzes; and 5) A group-produced podcast on a topic of your choosing related a scientific issue/puzzle.

### Course Objectives

It is my hope that through reading, intentional discussion, reflection, and written work we will: (1) Construct a working knowledge to assess and understand this topic from both the humanities and social sciences; (2) Develop critical thinking, oral communication, and writing skills which strengthen our ability to understand, integrate, analyze, and communicate complex ideas; (3) Learn how to take on multiple stakeholder perspectives related to scientific issues; and (4) Become more reflective on our roles and responsibilities in communicating and producing scientific knowledge.

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### Course Policies

#### **1) Attendance**

As a seminar-style course, your attendance and participation are crucial to you and your classmates. Furthermore, attendance and participation go hand in hand. Arriving more than 5 minutes late, leaving 5 or more minutes early, or being unprepared to participate (i.e. half-asleep, without requested materials, etc.) qualifies as an absence. Repeated tardy arrivals/leaving class is disruptive; three “lates” will be counted as an absence. If you expect to miss one or more class meetings because of participation in a University-sponsored activity please notify me in advance of any absence. You are expected to complete all work missed by making up the work in advance of your absence, and obtain class notes from a peer.

Even with the best of intentions, you may come down sick or find yourself in a no-win scheduling conflict. It will be your responsibility to catch up, including getting notes and class materials from a classmate. You **will be granted a maximum of three absences (or absence equivalents, as described above) for the course – regardless of the reason** (except for University-approved reasons). Each further absence (regardless of the reason) will result in the lowering of your final course grade by one increment (e.g. an A becomes A-, A- becomes B+, etc.). If you need to miss class due to a religious observance or for

athletic reasons, please email me before that class so we can work together to figure out ways to help you stay on track of assignments and discussions.

## 2) Late Work Policy

Incomplete work or not submitting an assignment will count as a zero. Unless I have approved a deadline extension in advance of a deadline, late submissions will lower your grade for the assignment. Assignments turned in up to 12 hours after they are due will be lowered by a third of a grade. After the 12-hour timeframe, grades will be lowered by a full letter grade per 24-hour period.

*For example, if an assignment is due at 9pm on Tuesday, submitting the assignment at 9:00am on Wednesday would have a maximum grade potential of an "A-". If the assignment is turned in at 9:01am, the maximum grade for an assignment will be a "B." If the assignment is turned in at 9:01am on Thursday the maximum grade would be a "C."*

## 3) Readings

In the humanities and social sciences, texts are used: 1) To introduce empirically-gathered data; 2) to make arguments; and 3) to build theoretical frameworks.

You will **need to purchase/rent/checkout four texts** for this course:

- a) Elliott, Kevin. 2017. *A Tapestry of Values: An Introduction to Values in Science*. Oxford University Press. ISBN-13: 9780190260811
- b) Naomi Oreskes and Eric Conway. 2011. *Merchants of Doubt*. New York, NY: Bloomsbury Press. ISBN-13: 9781608193943
- c) Suryanarayanan, Sainath and Daniel Lee Kleinman. 2016. *Vanishing Bees: Science, Politics, and Honeybee Health*. New Brunswick, NJ: Rutgers University Press. ISBN-13: 978-0813574585
- d) Tallbear, Kim. 2013. *Native American DNA: Tribal Belonging and the False Promise of Genetic Science*. Minneapolis, MN: University of Minnesota Press. ISBN-13: 978-0816665860

Note: These texts are available through the MSU Library (hard copy and e-copy); bookstores around town, or online text purchasing places.

All of the **additional texts** for this class are available on our D2L course website. You should always bring readings to class with you. As this is an interactive class, sometimes we may need to shift gears. I reserve the right to change the readings on this syllabus. However, I will give you as much notice as possible if we need to change the readings.

## 4) Formatting and Document Design

It is your responsibility as a scholar to present your work in a clear and careful manner. I will ask you to resubmit any piece of writing that seems hurried or carelessly prepared and it will thereafter be subject to late penalties. Aspects of professional-quality academic writing include:

- \* Proofread
- \* Edited
- \* Titled
- \* In-accordance with any standard citation format (ASA, APA, MLA, Chicago, etc.) in-text citations, reference list, page numbers, headings.

## 5) How to Submit Assignments

All graded assignments should be submitted on D2L under the “Assessments” tab → Assignments. Full prompts for the assignments are included in the same area of our course site.

## **6) Academic Integrity**

Critical thinking and analysis is seldom self-contained. Quoting and citing sources strengthens your writing and thinking by explicitly situating your claims and ideas within an ongoing conversation and body of evidence.

I take plagiarism seriously. Copying the work/ideas of a classmate, from a printed text, or an electronic text without using proper citation, weakens your integrity as a student and writer, preventing you from engaging properly with other scholars through writing. Using an assignment that was completed for a different class and turning it in for another class is also a violation of academic integrity. Please ask me if you have any questions about what constitutes plagiarism or if you are unsure. There is also an abundance of information contained on the MSU website for “Student Rights and Responsibilities.”

## **7) Statement on Class Content & Sensitive Topics**

Throughout this course, we will be discussing many sensitive and contentious topics. I encourage everyone to participate in discussions, raise questions, and offer interpretations in accordance with the guidelines for participation laid out below. However, course content, including lectures, readings, videos, and discussions may include graphic descriptions of inequality, oppression, and violence. In some cases, we will be discussing language that can be uncomfortable or offensive to allow for a discussion concerning the cultural construction of these terms. For students who are apprehensive and/or uncomfortable with the content, please speak to me about your uncertainties or drop the course early on. You need to immediately read through the syllabus to make sure you are able to complete the required readings and assignments.

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## **Support & Resources**

### **Library Services**

We will have a fantastic person lead a workshop on how to make a podcast. Stay tuned for details and contact information!

### **The Writing Center @ MSU**

I encourage you to visit the Writing Center where you will find a place beyond our classroom to work collaboratively with an attentive, non-evaluative reader. You can visit at any stage in your writing process, including brainstorming ideas or organizing your draft. Visit <https://msuwriting.mywconline.com> to schedule a face-to-face appointment and to learn more about these resources.

### **Accommodations for Students with Disabilities**

Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at [rcpd.msu.edu](http://rcpd.msu.edu). Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored.

## **Counseling and Psychological Services**

You might face some level of challenge during your time at MSU – whether an ‘everyday’ challenge or a profound major life event. MSU Counseling & Psychiatric Service (CAPS) staff includes those experienced in working with college-age adults. Information about their services and workshops is available at: <https://caps.msu.edu>

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## **Course Components**

Throughout the course you will be asked to produce different kinds of writing, and engage with the topic in different ways.

## **Course Assignments Overview**

Please find the full prompts for each course assignment on D2L as an attachment to each assignment (Under Assessments tab, and then “assignments”)

### **1) Participation**

The quality of your learning and of each class session is highly dependent on completing the reading, staying on top of deadlines, and coming to class prepared to engage the material. Attendance and participation go hand in hand. If you are not present in class, it also means you are not contributing to the community conversation. Students will be evaluated based on the quality of their presence in the classroom. “Quality” is defined as informed and respectful participation in class. This also means being a prepared and active participant. This includes the assigned material. This also means thinking critically, asking questions, coming to class having formulated your own ideas and responses to the course material, and engaging in dialogue with others.

Discussions will often involve personal experiences and beliefs, alongside our critical analysis of assigned texts. The college classroom at its best is a space for exploring ideas, from that we know to what we may not understand. This is not the same as a space free from dissent or beliefs that you find distasteful or offensive. Please be respectful of the opinions and experiences of your classmates. I do not appreciate students trying to silence or shame other students for their thoughts on various subjects. These ideas may not be well-developed or well-stated, but may serve as someone's attempt to start thinking critically. You are free to offer a counter-argument through class discussion. Although students will not be asked specifically to relate personal information, it is expected that we keep confidential any information garnered from those who do. Thus, no audio recordings are allowed in the course.

### **2) Reflections**

Over the semester I will ask for you to compose 2 reflections to help you set your own learning goals, and evaluate your growth as a thinker, writer, and producer of scientific knowledge.

### **3) Weekly Discussion Questions & Responses on D2L**

Each week you will be asked to upload a discussion question generated from the reading assigned for that day. The discussion question should be specific to, and grounded in, the reading and demonstrates you have carefully read the text, and posed a thoughtful question. Please upload your question no later 5pm the day before the class meets.

You will also be asked to respond to a class mate’s discussion question once during the week. Your responses should be in the spirit of a constructive conversation with your peers. The guidelines on participation should be followed for these responses. Please make sure to respond before the next class meeting.

e.g. If you post a question on Monday, you will respond on Wednesday.

#### **4) Mini Quizzes**

As a discussion/hands-on learning structured course, we will constantly be applying what we learn from class texts and discussions to “real life” issues. Over the semester, you will be quizzed on both content and application of the assigned readings. Please be sure to stay on top of reading for class and using the reading guides to help parse through the content. These are oriented to help you put into practice the critical thinking skills and application of social scientific and humanistic understandings of issues cultivated in our class.

#### **5) Podcast**

This assignment invites you to harness your creative energies, broaden your narrative skills, conduct independent research, and experiment with speaking back to a public audience as you create a podcast with 1-2 members of our class and another Science & The Public class (more on this later in the semester) that considers a scientific issue/puzzle from multiple stakeholder perspectives. First you will complete a project proposal with your group mate(s), and then work together to identify appropriate sources for your project and compose an annotated bibliography, then draft out a full script for peer review before you complete your project. No previous experience with the technology is required, although you will need to do some outside reading in the scholarship related to your topic and describe that in a reflective essay that will be turned in with your final project.

### **Grading Information**

Grades: Grades map approximately onto the following scale, which I will use in calculating your grades for the course:

A (92.5–100), 4.0; A-/B+ (87.5 – 92.4), 3.5  
B (82.5–87.4), 3.0; B-/C+ (77.5-82.4), 2.5  
C (72.5-77.4), 2.0; C-/D+ (67.5-72.4), 1.5  
D (62.5 – 6.4), 1.0; F (less than 62.5), 0

#### **Course Grade Components**

Participation:	15
Discussion Questions	5
Mini Quizzes	20
Reflections	10 (5 points/each)
Podcast Proposal	10
Annotated Bibliography	5
Peer Review	5
Final Project (and essay)	30
<b>Total points:</b>	<b>100/100</b>

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Date	Topic	Work to complete PRIOR to meeting	Assignments
Mon, Jan 7, 2019	Introduction To Course		
Wed Jan 9	Philosophical Perspective: Values in Science	Elliott, Kevin. (2017) <i>A Tapestry of Values: An Introduction to Values in Science</i> . Chapter 1: Introduction pp. 1-17	
Mon Jan 14		Chapter 2: What Should we study? pp.19-39	REFLECTION #1 DUE 1/14 @ 5 PM
Wed Jan 16		Chapter 3: How should we study it? pp.41-60	
Mon Jan 21	NO CLASS	MLK DAY	
Wed Jan 23		Chapter 4: What are we trying to accomplish? pp. 61-81 and Chapter 5: What if we are uncertain? pp. 83-109	
Mon Jan 28		Chapter 6: How we should talk about it? pp. 111-135	
Wed Jan 30		Chapter 7: How can we engage with these values? pp. 137-161	
Mon Feb 4		Chapter 8: Conclusion pp.163-178	
Wed Feb 6	Historical Perspectives: Values and the Climate Change Controversy	Oreskes, Naomi. and Conway, E. (2010) <i>Merchants of Doubt. Introduction</i>	
Mon Feb 11		Chapter 1: Doubt is Our Product	
Wed Feb 13		Chapter 2: Strategic Defense: Phony Facts and the Creation of the George C. Marshall Institute	
Mon Feb 18		Chapter 3: Sowing the Seeds of Doubt: Acid Rain	
Wed Feb 20		Chapter 4: Constructing a Counternarrative: The Fight Over the Ozone Hole	
Mon Feb 25		Chapter 5: What's Bad Science? Who Decides? The Fight Over Second-hand Smoke	
Wed Feb 27		Chapter 6: The Denial of Global Warming and Conclusion (pp. 246-255 only)	
Mon Mar 4	SPRING BREAK	WAHOOO!	
Wed Mar 6	SPRING BREAK	WAHOOO!	
Mon Mar 11	Podcast Workshop in Class	No Reading	
Wed Mar 13	Expertise and Knowledge Production	Suryanarayanan, Sainath and Daniel Lee Kleinman. 2016. <i>Vanishing Bees: Science, Politics, and Honeybee Health. Introduction and Chapter 1</i>	
Mon Mar 18		<i>Vanishing Bees</i> Chapter 2	Podcast Proposal Due 3/18 @ 5 PM
Wed Mar 20		<i>Vanishing Bees</i> Chapter 3 and (tentative) listen to "It's OK if you only hit 8,500 steps today..." [ <a href="https://bit.ly/2RtZu02">https://bit.ly/2RtZu02</a> ]	
Mon Mar 25		<i>Vanishing Bees</i> Chapter 4 & 5	
Wed Mar 27		<i>Vanishing Bees</i> Coda	Annotated Bibliography Due 3/27 @ 5 PM
Mon Apr 1		Tallbear, Kim. 2013. <i>Native American DNA: Tribal Belonging and the False Promise of Genetic Science. Introduction</i>	
Wed Apr 3		<i>Native American DNA</i> Chapter 1	Podcast Script draft due by 4/2 @ 5 PM - PEER REVIEW comments due 4/6 @ 5 PM
Mon Apr 8		<i>Native American DNA</i> Chapter 2	
Wed Apr 10	Work Day in Class	Tentative: New York Times Magazine "Sigrid Johnson Was Black. A DNA Test Said She Wasn't."	
Mon Apr 15		<i>Native American DNA</i> Chapter 3	
Wed Apr 17		<i>Native American DNA</i> Chapter 4	
Mon Apr 22		<i>Native American DNA</i> Conclusion	
Wed Apr 24	Debrief	No Reading	Podcast and Reflective Essays Due 4/24 @ 5 PM
Mon Apr 29		Listening Party in Holmes c101! 8 AM to 9:45 AM	Reflective Essay #2 due 4/29 @ 9:45 AM