

PA 5715 Syllabus Survey of Current Topics in Science, Technology and Environmental Policy Spring 2019

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OFFICE HOURS By appointment calendar

Class Meeting Time: Weds, 4:00-5:15 pm Humphrey School 35

The objective of this course is to explore current topics at the interface of public policy with science, technology, and the environment. You will gain an understanding of current “hot” topics in science, technology and environmental policy; further develop your critical thinking skills; develop discussion facilitation skills; and understand some of the social and historical contexts that have led to the current topics. The class will be taught in a seminar style, with the expectation that you will take significant responsibility, including leading at least one discussion session.

Course Structure

The course is structured in six modules of two class sessions, with an introductory session and two synthesis sessions in addition to the modules. Each module is centered on a single book which you will be asked to read in its entirety by the first session of the module. You will be assigned to groups and asked to lead the discussion in the first session of each module. You will also write brief reflections on each book for the first session of each module.

Required Texts We will begin with the following book: *The Righteous Mind: Why Good People Are Divided by Politics and Religion* by Jonathan Haidt

I involve students in selecting topics and books for the course. If you have ideas, let me know. The currently proposed subjects and books appear in each module of the syllabus.

Goals and Learning Objectives

- Gain an understanding of current topics in science, technology and environmental policy;
- Develop critical thinking skills;
- Develop and practice discussion facilitation skills;
- Understand the social and historical contexts; and
- Become a discerning participant/observer in science, technology and environmental policy.

Diversity is a welcome and healthy component to our class. This includes diversity of race, diversity of gender, diversity of abilities, diversity of opinions, diversity of perspectives, and diversity of backgrounds. Don't just be tolerant of diversity – bring out your diversities and help make the class even more interesting.

GRADING

Overall Participation: 30% You are expected to actively participate by preparing for class ahead of time, completing the readings, and by asking questions and participating in discussions in class.

Class Group Facilitation: 10% You will have an opportunity to lead a class discussion in one of the modules in a small group. All group members are expected to contribute equally to the activity. Members of the class will complete an evaluation for the facilitating team.

Essays: 60% There will be one short essay and one responsive post on each book posted to the Canvas online forum and 2 longer essays that will enable students to synthesize ideas across more than one of the books read during the semester. They will be graded for content, critical thought, and clarity of communication. The short essays will all be due for posting on the Canvas site in the Q & A forum by midnight of the Monday before we are first scheduled to discuss each book. The comments on other students' essays should be posted by 12 noon on the following Wednesday so that all of us have time to review them before class Wednesday afternoon. The short essay and forum comment for each book will be 6% of the grade; the two longer essays will account for 12% each.

Generally, the final course grade will conform to the following guidelines:

- A 4.00 outstanding achievement relative to course expectations
- A- 3.67
- B+ 3.33
- B 3.00 achievement above course expectations
- B- 2.67
- C+ 2.33
- C 2.00 achievement meeting course expectations
- C- 1.67
- D+ 1.33
- D 1.00 achievement below course expectations
- F 0.00 failure to meet the course expectations

However, please note that since this is a graduate class, I will not necessarily assign final grades to a curve – it is my goal (and yours too, I hope!) to have each of you receive an A.

You, the student, are responsible for knowing the UM Board of Regents Student Conduct Code.

Academic dishonesty in any portion of the academic work for a course shall be grounds for awarding a grade of F or N for the entire course. Academic dishonesty is a violation of the student conduct code and is broadly defined as *“any act that violates the rights of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, but is not limited to: “Submission of false records of academic achievement; cheating on assignments or examinations; plagiarizing; altering, forging, or misusing a University academic record; taking, acquiring, or using test materials without faculty permission; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement.”* Plagiarism is an important element of this policy. It is defined as the presentation of another’s writing or ideas as your own. Serious, intentional plagiarism will result in a grade of “F” or “N” for the entire course. For more information on this policy, help with proper citation in writing, and a helpful discussion of preventing plagiarism, please consult the University Libraries tutorial and the Center for Writing website. Students are urged to be careful that they properly attribute and cite others’ work in their own writing.

In addition, original work is expected in this course. It is unacceptable to hand in assignments

for this course for which you receive credit in another course unless by prior agreement with the instructor. Building on a line of work begun in another course or leading to a thesis, dissertation, or final project is acceptable, providing you have discussed it with one of us in advance. If you have questions about what constitutes academic dishonesty or plagiarism, please talk to us!

Incomplete: A grade of Incomplete will given only if you and one of us have agreed to the conditions under which you will complete the course prior to the end of the semester, and your reasons for requesting the incomplete are compelling. An incomplete will only be granted under extraordinary circumstances. The agreement must be in writing, and the incomplete must be completed within one year (the grade will then revert to an F).

Course Withdrawal – Students may withdraw from the course through the second week of the term without permission. After the second week, students will be required to obtain permission from their advisor and course instructor and a “W” will remain on their transcript. Withdrawals are not possible after the eighth week of the term.

COURSE SCHEDULE

Module 0

Wednesday, Jan 22 Introductions, course objectives, methodology We will practice the World Café methodology we will use for the course.

Required Readings (see Canvas site)

- The Art of Powerful Questions by E. Vogt et al
- Café To Go: Summaries of World Café
- Powerful Questions by W. Berger
- *A More Beautiful Question*, Ch.1

Module 1

Themes: Social psychology and neuroscience, sources of moral decision-making, influence of psychology and brain science on policy and politics

Wednesday, Jan 29 Group 1 to lead discussion Required Readings:

The Righteous Mind: Why Good People Are Divided by Politics and Religion by Jonathan Haidt

Assignment: Submit through Canvas Q & A forum a brief essay that: 1) identifies the most important assertion Haidt makes and briefly explains why you think so; and 2) evaluates the author's main argument; 500 words maximum. In addition, comment on the substance of at least one other student's essay.

Wednesday, Feb 5 Continued discussion of *Righteous Mind*

Optional Readings:

Available on Canvas

Other Books on the Topic: *The Coddling of the American Mind: How Good Intentions and Bad Ideas Are Setting Up a Generation for Failure* by Jonathan Haidt, Greg Lukianoff.

Module 2

Themes: Genetics, genetic modification, genes and health care

Wednesday, Feb 12 Group 2 to lead discussion Required Readings: *The Gene* by Siddhartha Mukherjee

Assignment: Write an essay of no more than 500 words answering these questions: (1) what issue raised in the book was most important to you, (2) were you persuaded by Mukherjee's argument on that issue and (3) what reasons might exist to be skeptical about Mukherjee's argument? Submit the essay to the Canvas Q & A site and, in addition, comment on at least one other student's essay.

Wednesday, Feb 19 Continued discussion of *The Gene*

Optional Readings or Alternative books: *A Crack in Creation. Gene Editing and the Unthinkable Power to Control Evolution.* By Jennifer Doudna and Samuel Sternberg.

Module 3

Themes: Water availability, water quality, interaction with food and energy issues

Wednesday, Feb 26 Group 3 to lead discussion

Required Readings: *The Death and Life of the Great Lakes by Dan Egan*

Assignment: Write an essay of no more than 500 words evaluating the one of the issues brought up about the Great Lakes by the author. Do you think this issue (or one like it) remains a big concern to the future of the lakes? What could be done if so? Submit to Canvas Q & A forum. In addition, submit a substantive comment on at least one other student's essay.

Wednesday March 4 Continued Discussion of *The Death and Life of the Great Lakes*

Other Books to Read on the Topic: *Cadillac Desert*, about the battles to bring water to Southern California. It's an older book but still very timely, and well written.

Wednesday, March 11 Spring Break

Mid-Term Synthesis

Wednesday, March 18

Required Readings: To be posted

****Synthesizing the first half— Assignment:** Write an opinion essay of no more than 800

words expressing your view on a topic that spans more than one of the first three books and making a case for some action by a responsible party.

Due: Beginning of class: March 18

Module 4

Themes: Climate change and public policy, economics of climate change and solutions, Energy policy

Wednesday, March 25 Group 4 to lead discussion

Required Readings: *Superpower. One Man's Quest to Transform American Energy* by Russell Gold.

Assignment: Write an essay of no more than 500 words evaluating the challenges the power line faced and policies that could alleviate some of these challenges. Submit the essay to the Canvas Q & A forum and, in addition, comment on at least one other student's essay.

Wednesday, April 1 Continued discussion of *Superpower*.

Optional Readings:
Available on Canvas.

Other Books to Read on the Topic: *The Grid* by Gretchen Bakke. *This Changes Everything* by Naomi Klein.

Module 5

Themes: automation, artificial intelligence, technology choices

Wednesday, Apr 4 Group 5 to lead discussion

Required Reading: *Machines of Loving Grace* by John Markoff

Assignment: Address one of the technologies discussed by the author and its impact on society, both good and bad.; submit to Canvas Q & A forum, 500 words maximum. In addition, comment on the essay of a student who read a different book.

Wednesday, Apr 8 Continued discussion of *Machines of Loving Grace*

Optional Readings:
Available on Canvas

Module 6

Themes: food, food justice, environmental impacts of agriculture

Wednesday, Apr 15 Group 6 to lead discussion

Required Readings: *The End of Plenty: The Race to Feed a Crowded World* by Joel K. Bourne, Jr.

Assignment: The Green Revolution had both positive and negative benefits. Choose of the new ideas covered by the author and describe possible pros and cons. Submit to Canvas Q & A forum, 500 words maximum. In addition, comment on the essay of another student.

Wednesday, Apr 22 Continued discussion of *The End of Plenty*

Optional Readings:
Posted to Canvas

Wednesday, April 29 Last class

Synthesizing the course

Assignment: Final paper (opinion essay or mini-brief). Nore more than 1500 words. Due May 8, 2019 at 11:55 pm.