

ST197 - BIOLOGY AND SOCIETY: PANDEMIC LEGACY

JAN PLAN 2017

MISSION LEADERS

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MISSION BRIEFING

From environmental crises to medical advancements and global food shortages, biology and the life sciences are implicated in some of the most pressing social issues of our times. Using the board game Pandemic Legacy as a jumping off point to examine these issues, this course scrutinizes how developments in biology have shaped and are shaped by society. In the first unit, we investigate the institutions and technologies that influence the modern life sciences, including the role of universities, governments, and public-private partnerships in the development of biology, as well as the selection of certain species or groups of people as “model organisms.” In the second unit, we explore areas of biology that have raised controversies about regulation and access, such as the GMO and vaccine controversies, and the role of race and social position in relation to access to medicine and media coverage of disaster. In the final unit, we examine how biological facts are used to answer the question of what it means to be human. The course aims to help students in the sciences, social sciences, and humanities develop the analytical skills needed to confront complex social issues involving the life sciences.

OBJECTIVES

By the end of the course, students will:

- develop an appreciation of the dynamic interactions between the institutions, practices, and ways of thinking associated with contemporary biology
- be able to identify contemporary debates in biology and society and explain their significance
- understand various ways for describing the interactions between biology and society, and be able to apply these frameworks to new empirical cases
- be able to identify the strength of the arguments and evidence used in academic writing and popular media
- be able to extrapolate complex arguments to new contexts and assess how new information would change the argument

SCORING AND SUCCESS MEASURES

Participation	25%	Assessed at end of course
Reading Summary Assignment	20%	Due Jan 5 th or 9 th , as assigned
Critical Thinking assignment	25%	Due Jan 16 th
Final Paper	30%	Due January 26 th

Participation: You are expected to arrive to class having read the assigned reading for the day, and to participate actively in discussions and other in-class activities; mere attendance is not enough for a good participation grade. See attached grading rubric outlining expectations.

Reading Summary Assignment: This assignment focuses on your ability to understand a complex academic argument and how it is constructed. You can choose which reading you would like to work with for this assignment (a list of eligible readings and a schedule will be distributed on the first day of class), and the assignment will be due on the day that the reading you selected is discussed in class. A detailed description of the assignment and a grading rubric will be distributed in class.

Critical Thinking Assignment: This assignment focuses on your ability to extend an academic argument to a new context, and assess how new factors or information would impact that argument. Starting with one of the course readings on biology and the public, you will demonstrate your understanding of the author's argument and do research to find new evidence that would challenge or change the argument. A detailed description of the assignment and a grading rubric will be distributed in class.

Final Paper: This assignment will ask you to analyze one of the topics discussed in class in greater depth. Starting with a writing prompt, you will present various points of view on your chosen topic. A detailed description of the assignment and a grading rubric will be distributed.

ACADEMIC INTEGRITY

Honesty, integrity, and personal responsibility are cornerstones of a Colby education and provide the foundation for scholarly inquiry, intellectual discourse, and an open and welcoming campus community. These values are central to this course. You are expected to demonstrate academic honesty in all aspects of this course.

Academic dishonesty includes, but is not limited to: violating clearly stated rules for completing homework; plagiarism (including material from sources without a citation and quotation marks around any borrowed words); claiming another's work or a modification of another's work as one's own; buying or attempting to buy papers or projects for a course; fabricating information or citations; knowingly assisting others in acts of academic dishonesty; misrepresentations to faculty within the context of a course; and submitting the same work, including an essay that you wrote, in more than one course without the permission of the instructors.

Academic dishonesty is a serious offense against the college. Sanctions for academic dishonesty are assigned by an academic review board and may include failure on the assignment, failure in the course, or suspension or expulsion from the College.

For more on recognizing and avoiding plagiarism, see the library guide: libguides.colby.edu/avoidingplagiarism

MISSION SCHEDULE

All course readings are available in Moodle.

January 3rd: Mission briefing

January 5th: Institutions

Daniel S. Greenberg. 2008. "Introduction," In *Science for Sale: The Perils, Rewards, and Delusions of Campus Capitalism*. Chicago: University of Chicago Press, 1-8.

Clyde Haberman. Dec 11, 2016. "Lives and Profits in the Balance: The High Stakes of Medical Patents," *The New York Times*.

January 9th: Model organisms

Daniel Engber. 2011. "The Trouble with Black-6." *Slate*
http://www.slate.com/articles/health_and_science/the_mouse_trap/2011/11/black_6_lab_mice_and_the_history_of_biomedical_research.html

Susan E. Lederer. 1992. "Political Animals: The Shaping of Biomedical Research Literature in Twentieth-Century America." *Isis* 83 (1): 61–79

January 10th: Regulation

Maya Goldenberg. 2016. "Public Misunderstanding of Science? Reframing the Problem of Vaccine Hesitancy" *Perspectives on Science* 24 (5): 552-581.

January 12th: Risk and Participation

Harry M. Collins and Trevor J. Pinch. 1998. "The science of the lambs: Chernobyl and the Cumbrian sheepfarmers." In *The golem at large: what you should know about technology*. Cambridge: Cambridge University Press, 113-125.

January 13th: Medical Research and Consent

Allan M. Brandt. 1978. "Racism and Research: The Case of the Tuskegee Syphilis Study," *The Hastings Center Report* 8 (6): 21-29.

"Henrietta's Tumor" 2009. *RadioLab*, Season 7, Episode 4: Famous Tumors.
<http://www.radiolab.org/story/91716-henriettas-tumor/>

January 16th: Environment

Gregg Mitman. 2007. *Breathing space: how allergies shape our lives and landscapes*. New Haven, CT: Yale University Press, 130–166.

January 17th: Biodiversity

Christopher Gynell and Julian Savulescu. 2016. "Promoting Biodiversity." *Philosophy and Technology* (iFirst online).

Brian Switek. March 11 2013. "How to Resurrect Lost Species." *National Geographic News*.

Stewart Brand. March 11, 2013. "The Case for Reviving Extinct Species" *National Geographic News*.

January 20th: Biologizing the Human

Jonathan M. Metzl. 2010. "Why against Health?" In *Against Health: How Health Became the New Morality*, Jonathan M. Metzl and Anna Kirkland (eds.). New York: NYU Press, 1-11.

Robert M. Sapolsky. 1998. "The trouble with testosterone." In *The Trouble with Testosterone: And Other Essays on the Biology of the Human Predicament*. New York: Simon and Schuster, 147–159.

January 23rd: Reproduction

Charis Thompson. 2001. "Strategic naturalizing: kinship in an infertility clinic." In *Relative values: reconfiguring kinship studies*, edited by Sarah Franklin and Susan McKinnon, 175–202. Durham, NC: Duke University Press

January 24th: Biologizing the Mind

Nigel Barber. Dec 22 2016. "Why Women Spend So Much Effort on Their Appearance" *Psychology Today*: 'The Human Beast'.

David J. Buller. 2005. "Chapter 2: Mind" in *Adapting Minds: Evolutionary Psychology and the Persistent Quest for Human Nature*. Cambridge, MA: MIT Press, 49-82.

January 26th: Conclusion