HSCI 2223: Lives in Science
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Course Description:
Science is a human enterprise. Sometimes it is easy to lose sight of this fact amidst the universal scope of grand ideas or the epic scale of huge technologies, but science, technology, and medicine are made by and for people. This course looks at science, technology, and medicine from the human side, giving us a different perspective on its history.

Course Mechanics:
Each week there will be two class meetings. You are expected to attend all class meetings, barring illness or family emergencies. If you do have to miss a class, if you are having difficulty in the class, or if you anticipate problems completing a certain assignment on time, let me know as soon as possible. I am happy to work with students to help them achieve in this course; help me help you.

The Tuesday class will focus on a discussion of readings. You will divide into small groups of for these discussions, and you will keep the same group all semester. Your group will write up answers to a set of discussion questions and turn them in at the end of each class.

The Thursday class will be oriented around a lecture. The lecture will provide a background to help you interpret the next week’s readings. I will stop the lecture about 20 minutes before the end of class; you will then write up a short one-paragraph summary of the main point of the lecture, which you will turn in at the end of class.

In addition to these weekly assignments, there will be a midterm and a final exam, and you will write a short, 5-7 page, paper on a “life in science” (real or fictional), due near the end of the semester. I will post more detailed instructions for the paper on D2L.

The reading load for the first half of the semester is pretty heavy, but it eases up the second half of the semester. Also, the readings should be pretty fun—they include novels, plays, films and some extremely well-written, engaging nonfiction.

Grade Breakdown:
Quizzes: 15% Group Work: 15% Lecture Summaries: 15%
Essay: 15% Midterm: 15% Final Exam: 25%

Books to buy (all are available from a variety of online retailers; none are very expensive):
Dava Sobel, Galileo’s Daughter (Walker and Co., 2011; also available as Kindle e-book)
Joyce Chaplin, The First Scientific American (Basic Books, 2007; also available as Kindle e-book)
Alexander von Humboldt, Personal Narrative (Penguin Classics 1996; also available as Kindle e-book)
Sinclair Lewis, Arrowsmith (Signet Classics 2008; also available as Kindle e-book)
Russell McCormach, Night Thoughts of a Classical Physicist (Harvard University Press, 1991)
Michael Frayn, Copenhagen (Methuen Drama, 2010; also available as Kindle e-book)
Rebecca Skloot, The Immortal Life of Henrietta Lacks (Broadway, 2011; also available as Kindle e-book)

You also will need to watch the films Young Frankenstein and Dr. Strangelove outside of class. We will show Copenhagen in class, but you will need to read the play as well.
COURSE SCHEDULE

Week 1: Course Introduction
August 25. Lecture: The Heavens and the Earth

Week 2: Ancients and Moderns
August 30. Lecture: The Scientific Revolution and the New Philosophy

Week 3: Ancients and Moderns
September 6. Lecture: Knowledge is Power

Week 4: Enlightened Men?
September 13. Lecture: Enlightened Science

Week 5: Enlightened Men?
September 20. Lecture: New Lands, New Men

Week 6: Explorers and Discoverers
September 27. Lecture: Genesis, Geology, and Geography

Week 7: Explorers and Discoverers
October 2. MIDTERM EXAM
October 4. Lecture: The Laboratory Revolution

Week 8: Masters of the Lab
October 11. Lecture: The Laboratory and the World

Week 9: Masters of the Lab
October 18. Lecture: Mad, Bad, and Dangerous?

Week 10: Masters of the Lab
October 23. Discussion: *Young Frankenstein* (the movie).
October 25. Lecture: The Structure of All Things/The New Alchemy

Week 11: Science and Uncertainty
November 1. Watch *Copenhagen* in class.

Week 12: Science and Uncertainty
November 8. Lecture: Science and the Cold War

Week 13: Science and Uncertainty
November 13. Discussion: *Dr. Strangelove*.
November 15. Lecture: The Code of Codes