IS 331: Science and Culture (Fall 2014)
Syllabus & Schedule

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Course Description
The course focuses on cultural studies of science from historical, philosophical, sociological, and literary perspectives. We will investigate practices through which scientific knowledge is articulated and maintained in specific cultural contexts and translated and extended into new contexts. Through examining the intersection of science with gender, race, and environment, we will explore how science has become central to our cultural imaginations and what that means for our futures.

IS 331 is a completely online Writing Intensive course. You must adequately complete all writing assignments to pass the course with D grade or better. Students who do not complete all writing assignments will get a D minus or an F and will not earn W Focus credit.

Student Learning Outcomes
- To acquire knowledge and understanding of how the production of scientific knowledge is embedded in the social, political and cultural matrix
- To develop skills of comparing, contrasting, and synthesizing a variety of scientific and humanist perspectives in order to understand how science shapes culture
- To develop an ability to follow scientists and scientific applications across disciplinary boundaries
- To develop critical thinking skills by learning to compare, contrast, and synthesize a variety of perspectives
- To communicate clearly in writing

Required Texts
A Science and Culture Reader with various articles.
Shelley, Mary, Frankenstein. Bantam

Course Requirements
1. Weekly Response (at least two paragraphs or 300 words). Each student will be required to post a response to the reading assignments with two questions posted to the discussion board by the assigned deadline on a weekly basis. At the end of the week I will post a common response to provide you feedback on your responses. In my common response, I will occasionally identify good pieces of student
writing. In the fifth week of the semester, I will provide all of you detailed individual feedback on responses and tell you how to improve your weekly responses.

2. **Mid-term Essay** (5 pages or 1500 words)—I will give you detailed feedback on how to improve your essay and encourage you to revise it and thus learn how to write a good essay.

3. **Final Essay** (10 to 12 pages or 3000 words): You will submit an outline of the final paper before you write the final paper. I will provide you critical feedback regarding the organization of your material and the coherence of the arguments that you are trying to make in the essay. You need to keep this feedback in mind as you write your final essay.

4. **Online Discussion**: At least two Postings per week responding to the questions posed by your classmates (Optional length—usually 200 or more words). In the fifth week of the semester, I will provide you detailed individual feedback on your discussion postings.

**Grading Policies**
- **Weekly Response**: 20%
- **Mid-term Essay**: (1500 words) 25%
- **Final Essay**: (3000 words) 40%
- **Online Discussion**: 15%
Weekly Schedule

Defining Cultural Studies of Science

Week I: Aug 25-Sept 2

**Online Articles (Resources/Culture)**
James Glanz and Broad William, "Does Science Matter"

**Due Dates:**
**Response:** Tuesday, Sept 2; **Discussion Postings:** Beginning, Middle and The End of the Week

Week II: Sept 3-9

**Required Reading**
*From Sandra Harding's 'Racial' Economy of Science:*
Joseph Needham, "Poverties and Triumphs of the Chinese Scientific Tradition" (Harding Reading pp. 30-46).
Jack Weatherford, “Early Andean Experimental Agriculture” (pp. 65-77).

**Optional Reading**
Online Article: Check Resources/Culture File
Joseph Rouse, “What are Cultural Studies of Scientific Knowledge”

**Due Dates:**
**Response:** Sept 9; **Discussion Postings:** Beginning, Middle and The End of the Week

A Scientist's Autobiographical Narrative

Week III: Sept 10 - 16

**Due Dates:**
**Response:** Sept 16; **Discussion Postings:** Beginning, Middle and The End of the Week

Week IV: Sept 17-23


Online Articles (content module)
Sam Dillon and Sara Rimer. "No Break in the Storm Over Harvard President's Words"

**Due Dates:**
**Response:** Sept 23; **Discussion Postings:** Beginning, Middle and The End of the Week

A Literary Narrative about a Scientist

Week V: Sept 24-30
Mary Shelley, *Frankenstein*. Chapter 1-12

**Due Dates:**
**Response:** Oct 1; **Discussion Postings:** Beginning, Middle and The End of the Week
Week VI: Oct 1-7
Mary Shelley, *Frankenstein*. Chapters 12-24

**Due Dates:**
**Response:** Oct 7
**Discussion Postings:** Beginning, Middle and The End of the Week
Scientists, Scientific Methodology and Sexist/Racist Assumptions

Week VII: Oct 8-14
**Required Reading**
*From Sandra Harding's 'Racial' Economy of Science:*
Lewontin, Rose, Kamin "IQ: The Rank Ordering of the World" 143-159

**Recommended Reading:**

**Due Dates:**
**Response:** Oct 14; **Discussion Postings:** Beginning, Middle and The End of the Week

Week VIII: Oct 15-21
**Required Reading**
*From Sandra Harding's 'Racial' Economy of Science:*
"Methods and values in Science," pp. 341-343
Nancy Leys Stepan "Race and Gender: The Role of Analogy in Science" pp. 359.

**Recommended Reading:**
Karl Grossman, "Environmental Racism"

**Due Dates:**
**Response:** Oct 21; **Discussion Postings:** Beginning, Middle and The End of the Week

Week IX: Oct 22-28

**Required Reading:**
*Drugs for Life*, “Introduction”, & **Chap Two**, “Pharmaceutical Witnessing and Direct to Consumer advertising”

**Due Dates:**
**Response:** Oct 28; **Discussion Postings:** Beginning, Middle and The End of the Week

Week X: Oct 29-Nov 4

**Required Reading**
*Drugs for Life*, Chap **Four** “Mass Health: Illness is a Line You Cross”
Chap **V**, “Moving the Lines: Deciding on Thresholds,”
Chap **III**, “Having to Grow Medicine”

**Due Dates:**
Response: Nov 4; Discussion Postings: Beginning, Middle and The End of the Week

Week XI: Nov 5-11

Required Reading
Drugs for Life,
Chap I, “Responding to Facts”
Chap VI, “Knowing Your Numbers: Pharmaceutical Lifestyles” & "Conclusion" (Frequently Asked Questions)

Due Dates:
Response: Nov 12 Discussion Postings: Beginning, Middle and The End of the Week

Biotechnology Revolution

Week XII: Nov 12-18
Required Reading:
From the xeroxed Science & Culture Reader,
Peter Singer, “Shopping at the Genetic Supermarket,” especially the section on “Shopping for Beauty and Brains”.
Ronald Green, “Challenges and Risks” in Babies by Design: The Ethics of Genetic Choice
Background Reading
Rudolf Jaenisch, “Nuclear Cloning, Embryonic Stem Cells and gene Transfer”
Rasco and Jolly, “The Science of inheritable Genetic Modification”

Due Dates:
Response: Nov 18; Discussion Postings: Beginning, Middle and The End of the Week

Week XIII: Nov 19-25
Required Reading:
From the Science & Culture Reader:
Bernard Rolling, "Cloning, Xenotransplantation, and Stem Cells"
“Altering” the Human Species? Misplaced Essentialism in Science Policy
Recommended Reading
Dorothy Roberts. “Pharmacoethnicity”

Due Dates:
Response: Nov 25; Discussion Postings: Beginning, Middle and The End of the Week

Thanksgiving Break: Nov 27-30

Week XIV: Nov 26-Dec 3
Required Reading:
From the Science & Culture Reader:
Michael Sendel, "The Old Eugenics and the New"
Vandana Shiva, Biodiversity & Biopiracy

Due Dates:
Response: Wednesday, Dec 3; Discussion Postings: Beginning, Middle and the end of the week
Week XV: Dec 4-9
Required Reading:
*From Sandra Harding's 'Racial' Economy of Science:*
David Dickson, "Towards a Democratic Strategy for Science: The New Politics of Science" (pp. 472-483)

"Modern Science in Crisis: A Third World Response." (pp.484-518). As you read this article, pick any two recommendations and then respond to them.

Due Dates:
Response: Dec 9; Discussion Postings: Beginning, Middle and The End of the Week

Final Paper Due: Sunday, Dec 14