

Deboleena Roy, PhD
Department of Women's Studies and
Neuroscience and Behavioral Biology
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Course Name: Introduction to Feminist Science Studies

As a newcomer to Emory, I have been amazed by the rich sense of community and commitment to ethical engagement shared by so many faculty and staff at the university. It is no surprise that an initiative such as the Piedmont Project exists here at Emory. Participating in the two-day faculty workshop earlier this summer rejuvenated me, and inspired me to extend the scope of my own interdisciplinary practices. Learning more about environmental issues and sustainability through the Piedmont Project inspired me to rethink my pedagogical approaches to teaching current topics in the area of science and technology studies.

For ten years I have taught, in some form or another, an introductory course in feminist science studies. The theoretical core of this course draws heavily from feminist theory, philosophy of science and science and technology studies. I have always made an effort however to flesh out this theoretical core and make the theories more accessible to the students by discussing them through the context of recent advances in biotechnology. These current issues, or what I call "pop topics" have ranged from the design of recombinant DNA technologies, reproductive technologies, cloning and genetically modified foods and organisms, to the advent of synthetic biology, neuroimaging technologies and genetic art. Thanks to the Piedmont Project, I now see how I can change this course in two significant ways by covering similar materials yet shifting the focus to questions of sustainability.

The first approach is to create a course module that links older scholarship in ecofeminism with newer topics in feminist materialism. Ecofeminism has already dealt with issues of women, development and sustainability but mostly from sociological and anthropological perspectives. Feminist materialism on the other hand has been influenced by poststructuralism and work by feminist scientists and aims to make a return to the organic and inorganic matters of the natural and physical world – whether human, animal, plant, atom or particle. Through the topic of sustainability, these distinct approaches to feminist theory can be placed into conversation with one another. The second transformation of this course will involve incorporating a community-based participatory research component into the students' final projects. Students will be required to conduct research on one of the many organizations listed under "Student Engagement" on Emory's Sustainability Initiatives website. I would like the students to learn more about the different initiatives that are underway right here at Emory and have them link these to issues of gender, development and sustainability in local and/or global community contexts. By requiring them to look at the key sustainability initiatives here at Emory (including green buildings/green space, sustainable food, water conservation

and more), students will be encouraged to get involved on campus and will benefit from being able to put their feminist theory into practice.

WS 375

Feminist Science Studies

Prof. Deboleena Roy

Emory University

Department of Women's Studies

Course Description

This course introduces the student to the emerging field of feminist science studies by examining the role of women in science, analyzing gendered paradigms in science, and exploring the possibilities of developing feminist theory in science. This course also focuses on the relationships between gender and technology, dealing with topics such as cyborgs, patented life forms, reproductive technologies and genetic engineering. Lastly, we will follow the impacts of these relations between gender, science and technology on the environment and on issues of sustainability.

Student Learning Outcomes

1. Locate the contributions that women have made and continue to make in science and technology.
2. Describe crucial topics in the area of feminist science studies.
3. Analyze feminist critiques of science and technology.
4. Critique science and technology from perspectives that take into account issues of gender, race and class.
5. Identify the need for feminism to influence the creation of scientific knowledge.
6. Examine the relationships between gender, technology and the environment.

Instructor Policies

Office hours, appointments, and messages: Please visit or call my office during my scheduled office hours. You can also contact me by e-mail to make an appointment if you are unable to make the office hours.

Assignments: Assignments are always due at the beginning of class. Late assignments WILL NOT BE ACCEPTED. There is no exception to this rule without a valid explanation to me provided with the appropriate documentation. All assignments have to be typed, edited, and stapled.

Required Texts

Alaimo, Stacy. 2010. *Bodily Natures: Science, Environment and the Material Self*.
Bloomington: Indiana University Press.

Charkiewicz, E., Hausler, S., Wieringa, S. and Braidotti, R. 1994. *Women, the
Environment and Sustainable Development: Towards a Theoretical Synthesis*.
London: Zed Books.

Haraway, Donna. 1997. *Modest_Witness*,. New York: Routledge.

Harding, Sandra. 2006. *Science and Social Inequality: Feminist and Postcolonial Issues*.
Chicago: University of Illinois Press.

Philip, Kavita. 2004. *Civilizing Natures: Race, Resources, and Modernity in Colonial
South India*. New Jersey: Rutgers University Press.

Marchessault, Janine and Kim Sawchuk (eds). 2000. *WildScience: Reading Feminism,
Medicine, and the Media*. New York: Routledge.

Shiva, Vandana. 2005. *Earth Democracy: Justice, Sustainability, and Peace*.
Cambridge: South End Press.

You are also responsible for a number of required readings that are available through Blackboard, the library and ECR.

Grade Distribution

	<u>Undergrad</u>	<u>Graduate</u>
Attendance and Active Participation 10%	10%	
Critical Reading Response Papers 10%	(2X10)20%	(1x10)
Class Facilitation	10%	10%
Prospectus	20%	20%
Oral Presentation	10%	10%
Final Project	30%	40%

Attendance and Active Participation:

You are expected to read all the material assigned in class. The bulk of the work in this class will focus on the assigned readings. Each class, we will discuss the readings and your participation will be expected. If you miss more than three classes you will receive a grade of 0/10 for this portion of the class grade.

Critical Reading Responses:

You will be asked to prepare reading response assignments throughout the term, reflecting critically on the readings. There will be two reading responses in total. Your reading responses should be 2-3 pages, typed and double-spaced.

Prospectus and Oral Presentation:

You are required to write a final paper for this course. To help you along in this process, you will be asked to submit a 2-3 page essay proposal with an annotated bibliography and internet website search at least one month before your essay is due. For the prospectus, you should clearly state your essay topic and how you plan to approach your research topic. Your essay proposal is worth 10%, the annotated bibliography is worth 5%, and the internet search is worth 5% of your final grade.

You will be asked to make an oral presentation based on your final essay. Please feel free to be as creative as you wish to be for this presentation. You should prepare to present your topic for 10 minutes and follow up with a 2-5 minute class discussion period. Please let me know ahead of time if you will require any special equipment for your presentation. Your presentation is worth 15% of your final mark.

Final Project:

Your final project will be due during exam week. This project will require you to conduct community-based participatory research on the Sustainability Initiative at Emory University. Your project will include a formal essay (8-10 pages) and a reflection piece (3-5 pages). The topic of your essay is up to you, but must be based on one of the topics covered in class.

Grade Distribution:

A = 94-100 %	C+ = 77-79 %	D- = 60-63%
A- = 90-93 %	C = 74-76 %	F = Below 60%
B+ = 87-89 %	C- = 70-73 %	
B = 84-86 %	D+ = 67-69%	
B- = 80-83 %	D = 64-66 %	

Schedule

Part I – Gender and Race in Science and Technology

Week 1. Introduction and Review of Course Syllabus

Movie: DNA Detective: Molecular Biologist Lydia Villa-Komaroff

Week 2. Historical Perspectives: Where are the Women?

Sally Gregory Kohlstedt. “Sustaining Gains: Reflections on Women in Science and Technology in 20th Century United States”. *NWSA Journal* 16 (1):1-26. (BB)

Amy Sue Bix. "From Engineeresses' to 'Girl Engineers' to Good 'Engineers': A History of Women's U.S. Engineering Education". *NWSA Journal* 16(1): 27-49. (BB)

Josephine Beoku-Betts. "African Women Pursuing Graduate Studies in the Sciences: Racism, Gender Bias, and Third World Marginality". *NWSA Journal* 16(1): 116-135. (BB)

Week 3. The Making of Gendered Science

Movie: Bill Moyer's World of Ideas: Science and Gender – Evelyn Fox Keller

Nancy Tuana. 1989. "The Weaker Seed: The Sexist Bias of Reproductive Theory". *Feminism and Science*, ed. Nancy Tuana. Bloomington: Indiana University Press. 147-171. (ECR)

Emily Martin. 1996. "The Egg and the Sperm: How Science has Constructed a Romance Based on Stereotypical Male-Female Roles" (1991). *Gender and Scientific Authority*, ed. Barbara Laslett et al. Chicago: University of Chicago Press. 323-339. (ECR)

Evelyn Fox Keller. "Secrets of God, Nature, and Life". 98-110. (ECR)

Week 4. Gender and the Rise of Scientific Racism

Critical Reading Response #1 due.

Sander L. Gilman. 1986. Black Bodies, White Bodies: Toward an Iconography of Female Sexuality in Late Nineteenth-Century Art, Medicine, and Literature. "Race," *Writing and Difference*, ed. Henry Louis Gates, Jr. Chicago: University of Chicago Press. 223-261. (ECR)

Londa Schiebinger. 2004. "Theories of Gender and Race." In *Nature's Body: Gender in the Making of Modern Science*. New Jersey: Rutgers University Press. 143-183. (ECR)

Movie: The Life and Times of Sara Baartman: The Hottentot Venus

Week 5. Gender, Eugenics and Reproduction

Movie: Playing God

Dorothy Roberts. 1998. "The Dark Side of Birth Control." *Killing the Black Body: Race, Reproduction and the Meaning of Liberty*. New York: Vintage. 56-103 (ECR)

Alexander Sanger. 2007. "Eugenics, Race and Margaret Sanger Revisited." *Hypatia* 22(2): 210-217. (BB)

Part II – Feminist Transformations of Science

Week 6. Feminist Scientists Speak Out!

Ruth Hubbard. "Science and Scientific Criticism". 49-51. (ECR)

Evelyn Fox Keller. "From working scientist to feminist critic". 59-62. (ECR)

Banu Subramaniam. "Snow Brown and the Seven Detergents". *Women, Science, and Technology*, Wyer, Barbercheck, Giesman, Ozturk, and Wayne (eds). New York: Routledge, 2001. 36-41. (ECR)

Movie: Asking Different Questions (51 minutes)

Week 7. Feminist Practices in Science

Critical Reading Response #2 due Mar. 4th.

Deboleena Roy. "Feminist Theory in Science: Working Toward a Practical Transformation". *Hypatia* 19(1): 255-279. (BB)

Deboleena Roy. "Somatic Matters: Becoming Molecular in Molecular Biology. Special Issue: Feminisms' Others. *Rhizomes: Cultural Studies in Emerging Knowledge* 14 (Summer). <http://www.rhizomes.net/issue14/roy/roy.html>. (BB)

Week 8. Feminist and Postcolonial Theory in Science Studies

Sandra Harding. 2006. *Science and Social Inequality: Feminist and Postcolonial Issues*. Chicago: University of Illinois Press. 1-49, 98-109.

Kavita Philip. 2004. "A local story: English Mud" and "A Global Story: Imperial Science Rescues a Tree." In *Civilizing Natures: Race, Resources, and Modernity in Colonial South India*. New Jersey: Rutgers University Press. 29-53 and 171-202.

Part III – Technofeminism and Contested Matters

Week 9. Genetic Engineering and Patenting

Donna Haraway. "Semantics" in *Modest_Witness*,. New York: Routledge, 1997. 1-45.

Janine Marchessault. 2000. "David Suzuki's *The Secret of Life*: Informatics and the popular discourse of the life code." *Wildscience: Reading feminism, medicine and the media* (eds) Janine Marchessault and Kim Sawchuk. New York: Routledge. 55-65.

Movie: The Secret of Life: The mouse that laid the golden egg (60 minutes)

Week 10. Blood, Brains and Bones

Lisa Weasel. 2004. "Feminist Intersections in Science: Race, Gender and Sexuality through the Microscope". *Hypatia* 19(1): 183-193. (BB)

Anne Fausto-Sterling. 2005. "The Bare Bones of Sex: Part 1 – Sex and Gender." *Signs* 30(2): 1491-1527. (BB)

Anne Beaulieu. 2000. "The brain at the end of the rainbow: The promises of brain scans in the research field and in the media. *Wildscience: Reading feminism, medicine and the media* (eds) Janine Marchessault and Kim Sawchuk. New York: Routledge. 39-52.

Week 11. Spring Break

Part IV – Gender, Technology, and Sustainability

Week 12. Ecofeminism

Prospectus Due

Shiva, Vandana. 1988. *Staying Alive: Women, Ecology and Development*. London: Zed Books. (pp. 1-37)

Mies, Maria and Shiva, Vandana. 1993. *Ecofeminism*. London: Zed Books. (pp. 55-91; 218-246)

Week 13. Women, Animals, Science and Social Justice

Adams, Carol. 1990. *The Sexual Politics of Meat*. New York: Continuum Press. (pp. 47-63).

Birke, Linda. 1994. *Feminism, Animals and Science: The Naming of the Shrew*. Bristol: Open University Press. (pp. 3-58).

Week 14. Feminist Materiality

Alaimo, Stacy. 2010. *Bodily Natures: Science, Environment and the Material Self*.
Bloomington: Indiana University Press. (pp. 1-84)

Week 15. Gender, Environment and Sustainable Development

Charkiewicz, E., Hausler, S., Wieringa, S. and Braidotti, R. 1994. *Women, the Environment and Sustainable Development: Towards a Theoretical Synthesis*.
London: Zed Books.

Shiva, Vandana. 2005. *Earth Democracy: Justice, Sustainability, and Peace*.
Cambridge: South End Press. (pp. 1-72)

Week 16. Oral Presentations

Final Projects due during exam week.