

IDSEM 1891: Tinkering in Feminist Technoscience

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Gallatin 514

Office hours: Tu 2-4:30, Th 12-2:30

Optional Lab Hours: F 2-4pm, Gallatin 432

Spring 2017

M, W 11-12:15

Co-Op, Room 111

Course Description:

This course uses the concept of tinkering to explore the innate links between "maker" culture and feminist studies of science. Something more than novice, but less than expert, a tinkerer is one who tests boundaries and innovates through fresh perspective, often working outside of a professional context. Students in this class will learn the theoretical tools of feminist technoscience studies, noting how the topics of scientific research are guided by, and tacitly reinforce, sexist stereotypes and assumptions, and question whether it is possible to change the methods and the ideas that justify scientific knowledge itself. Along the way, students will become tinkerers in a literal sense by completing a robotic, wearable technology, or coding project of their own. Together, we will consider the radical potential of building from scratch in the digital age, the ethical imperative to re-write the world around us, and the philosophical experience of tinkering with knowledge itself. For in feminist critical theory, it is not enough to take things apart: we must also put them back together. No prior experience in building, coding, electronics or feminist theory required.

Course Objectives:

Students in this class can expect to:

- Develop skills in active reading, critical analysis, and scholarly writing
- Learn the main ideas in the field of feminist science and technology studies, namely: the role of sex/gender in technoscience, the role of technoscience in sex/gender, and the relationship between knowledge and materiality.
- Develop an ability to think both in and through frustration and confusion, and, perhaps, to see them as productive.
- Try and build a new thing.

Course Policies:

Attendance is mandatory: You are allowed TWO absences from class. Every absence in excess of those two will result in a reduction of your final grade (B+ to B, B to B-, etc). Our class time is 11:00-12:15, and you should expect to be present in the classroom and actively participating for that entire time. If you are not present in discussion for a significant portion—either by exiting the room or by putting attention on electronic devices rather than your classmates—you will be considered absent for that day and marked accordingly. Egregious tardiness (more than 15

minutes late) or frequent unexplained tardiness will also be treated as an absence. If you foresee difficulty with this policy for any reason and would like to request accommodations, please speak with me by the end of class on January 30th.

Late work will be penalized. Assignments are due in hard copy in class on the day marked on the syllabus. If you experience an emergency or otherwise foresee difficulty meeting any of the stated deadlines, please contact me as soon as possible so we can agree on new due dates.

Plagiarism is not permitted. As a Gallatin student you belong to an interdisciplinary community of artists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Examples of behaviors that compromise the academic integrity of the Gallatin School include plagiarism, illicit collaboration, doubling or recycling coursework, and cheating. Please consult the Gallatin Bulletin or Gallatin website for more information.

Accommodations. New York University complies with the regulations of the Americans with Disabilities Act of 1990 and offers accommodations to students with disabilities. If you need a classroom accommodation please make an appointment with me to discuss this as soon as possible. Likewise, if you foresee difficulty meeting any of the stated deadlines, please contact me as soon as possible so we can agree on new due dates. All information will be held in the strictest confidence.

Laptops, eReaders, Phones and other electronic devices are not permitted in discussions. All assigned readings are in hard copy format, and you will be given a laboratory notebook in which to record responses and take notes. Thus, there is no need for electronic devices during discussion periods. You may, in fact some of you may find that you must, bring such devices to the laboratory periods - but it is not a requirement.

Grading:

Course grades will be determined by the following scale:

100-93	A	86-83	B	73-76	C	66-60	D
92-90	A-	82-80	B-	72-70	C-	59-0	F
89-87	B+	79-77	C+	69-67	D+		

This syllabus is subject to change. I reserve the right to revise the syllabus throughout the semester, according to the needs of the class as a whole.

Class Structure:

This is an experimental class - in more ways than one, in fact. All students in this course will undertake a semester-long technology-inspired project in introductory robotics and/or computer programming - projects inspired by so-called 'maker' culture (details below in the Assignments section.) We will set aside time both during our regular class meetings and during office hours to participate in a 'maker' lab, or group think space. You will be provided with the necessary materials for experimentation and prototyping, but may choose to purchase materials (especially if you want to keep your project at the end of the semester.)

Most of the class meetings take the shape of a traditional seminar discussion course a group of interested individuals gathering together to discuss a series of assigned texts. These class meetings are designated **DISCUSSION** in the syllabus. On these days should come to class with the assigned texts, your notes in your lab notebooks, and your curious minds, prepared to delve into the readings.

However, as we are all tinkering, not just in a theoretical sense but a material one, every fourth class we will devote to working on our technological projects in class. These class meetings are designated **LABORATORY** on the syllabus. Readings are still assigned for these days, but, as the more astute of you may have noted already, they are of a slightly different flavor. On these days you should come to class with your lab notebooks and your sense of adventure.

Additionally, we have optional Lab Hours on Fridays from 2-4pm in Gallatin 432. These are **not required**, but I hope that some of you will be able to take advantage of this collaborative time and space.

Assignments:

Reading and Participation (25%): You are expected to come to class each session having *actively* read the article(s) assigned for that date on the syllabus. Class Participation consists of asking questions when material is unclear during lectures and engaging in productive, relevant, critical conversation during discussions. Feminist studies in science and technology is, as the syllabus may make clear, a highly interdisciplinary field. I encourage you to think about how to study the subject matter we cover through the lenses of other disciplines and to bring those insights to class discussions and to your final paper projects.

The rule of thumb for interdisciplinary discussion is simple: no form of knowledge is inherently better than any other. You should be courteous and generous to your classmates when they offer evidence from other areas of knowledge, and, in turn, make sure you use your own interdisciplinary knowledge to enhance our experience rather than to close it down.

Lab Journal Assignments (25%): You will chronicle your adventures in technoscience, feminism, and tinkering in the laboratory journal distributed the first week of class (how delightfully analog, yes?) You are expected to record responses to each set of readings as well as chronicle your own work on your project according to the five central themes and questions of the course (see Central Course Themes, below). I will collect these journals five times over the course of the semester to read and evaluate them for completeness (did you record your reactions to each reading/each attempt at your project?) and complexity (do your reactions demonstrate you read the assignments fully/ do your records of your project display the necessary levels of detail/ do you address the themes of the class?).

Final Project and Paper (50%):

Your final assignment in this course takes two parts: a technological project that you must work on throughout the semester, and an accompanying 15-25 page paper in which you use your own experience as a feminist tinkerer to explore the themes of the class. Details of what is expected in the final paper and project will be covered in class, but you can rest assured of one thing: you will not fail the course if your project does not work as intended.

You have the following four options for your final project:

- 1) Design a wearable LED project using a Gemma or Flora
- 2) Program an interactive object using an Arduino
- 3) Code a game in INFORM
- 4) An advanced project of your own design, subject to instructor approval.

You have four full weeks (including two in-class lab sections and one optional lab) to experiment with the available materials and decide on a project. Your project choices or proposals are due **February 15th**, a midterm reflection on your progress is due **March 20th**, and the proposal for your final paper is due **April 3rd**. Students who do not hand in a project proposal, midterm reflection, or paper proposal by the deadlines will have their final project grade penalized by one grade level (B+ to B, B to B-) for each day that the assignment is late.

Required Texts:

Women, Science, and Technology: A Reader in Feminist Science (3rd edition) edited by Mary Wyer et al. (available at the NYU Bookstore) - **Readings from this textbook are indicated by an asterisk (*) in the syllabus.**

Feminist Philosophy And Science Fiction: Utopias And Dystopias edited by Judith A. Little (available at Bluestockings) - **Readings from this book are indicated by a caret (^) in the syllabus.**

Central Course Themes:

Use the following themes and questions to guide your work in this class. We will take up and expound on these in our class discussions, where you are encouraged to ask these questions, and related ones, of yourselves and your instructor.

Laboratory notebook entries should center on these themes. You may, for example, chose to answer one or two of the questions with reference to a particular assignment, or write a response around one of these themes (such as frustration or critique). Note that not all themes will be applicable in all situations, but you should feel free to experiment at will!

Curiosity (What is this all about?): marked by open-mindedness, generosity, expectation, interest, bravery, and foolhardiness.

Engagement (How do I work with and within this?), marked by conversation, deployment, citation and sampling.

Frustration (Why doesn't this work?), marked by confusion, disorientation, disappointment and disillusionment.

Critique (How can, or should, this be different?), marked by situating, contextualizing, reframing, diffracting, intersection, and contrasting.

Experimentation (What new things come from this?), marked by building, making, creating, documentation, abandon, failure, and (maybe) success.

Class meeting schedule

UNIT 1: Women in STEM, or Systems of Exclusion

Mon Jan 23 - Welcome, explanation of syllabus.

Rock, Michael (2016). The Accidental Power of Design. *New York Times*, Sept 15.

McCaffrey, Anne (1961). "The Ship Who Sang."

Wed Jan 25 - DISCUSSION

* pp 3-20 :

Moss-Racusin et al. (2012). "Science faculty's subtle gender biases favor male students."

Subramaniam, Banu (2001). "Snow Brown and the Seven Detergents"

Mon Jan 30 - DISCUSSION - Bluestockings visit

* pp 51- 80:

Wayne, Marta (2000). "Walking a tightrope: The feminist life of a *drosophila* biologist."

Light, Jennifer (2009). "When computers were women."

Wed Feb 1 - LAB

^ pp 95-104, 215-236

Merril, Judith (1951). "Survival Ship."

Elgin, Suzette H. (1969). "For the Sake of Grace"

Mon Feb 6 - DISCUSSION

* pp 100-110

Schiebinger, Londa (2011). "Interdisciplinary approaches to achieving gendered innovations in science, medicine, and engineering."

Rosser, Sue (2012). "The gender gap in patents."

Wed Feb 8 - DISCUSSION

* pp 81-99, 385-399

Mellström, Ulf (2009). "The intersection of gender, race and cultural boundaries, or why is computer science in Malaysia dominated by women?"

Landström, Catharina (2007). "Queering feminist technology studies."

UNIT 2: Feminist Science, or Exercises at the Bounds of Contradiction

Mon Feb 13 - DISCUSSION

* pp 171-192, 242-264

Aengst, Jennifer & Layne, Linda L. (2010). "The need to bleed?"

Takehita, Chikako (2011). "Keep life simple"

Wed Feb 15 - LAB (DEADLINE TO CHOOSE PROJECT)

^ pp 237-246, * pp 157-170

Van Loggem, Manuel (1974). "Pairpuppets."

Maines, Rachel (1989). "Socially camouflaged technologies"

Mon Feb 20 - NO CLASS, President's Day

Wed Feb 22 - DISCUSSION

* pp 223-241

Roy, Deboleena (2008). "Asking different questions"

Mon Feb 27- DISCUSSION

* pp 193-222

Jordan-Young, Rebecca M. & Rumiati, Raffaella I. (2012). "Hardwired for sexism?"

Milam, Erika L. (2012). "Making males aggressive and females coy"

Wed Mar 1 - LAB

^ pp 113-122, * pp 133-156

Gom, Leona (1990). *The Y Chromosome* (selections).

Cohn, Carol (1987). "Sex and death in the rational world of defense intellectuals."

UNIT 3: Technologies of Sex/Gender, or Building Men and Women

Mon Mar 6 - DISCUSSION

* pp 272-296

Fausto-Sterling, Anne (2005). "The bare bones of sex: Part 1—Sex and gender."

Wed Mar 8 - DISCUSSION

* pp 334-352

Richardson, Sarah S. (2012). "Sexing the X: How the X became the 'female chromosome.'"

Mon Mar 13 - NO CLASS, Spring break

Wed Mar 15 - NO CLASS, Spring break

Mon Mar 20 - DISCUSSION (MIDTERM PROJECT REPORT DUE)

* pp 318-333

Roberts, Dorothy E. (2009). "Race, gender, and genetic technologies: A new reproductive dystopia?"

Wed Mar 22 - LAB

^ pp 133-152, 177-184, 267-276,

Butler, Octavia E. (1984). "Bloodchild."

Murphy, Pat (1986). "His Vegetable Wife."

Tuttle, Lisa (1979). "Wives."

UNIT 4: Theory, or What the %^\$#?

Mon Mar 27 - DISCUSSION

* pp 353-369

Daniels, Jesse (2009). "Rethinking cyberfeminism(s): Race, gender, and embodiment"

Wed Mar 29 - DISCUSSION

* pp 416-430

Waldby, Catherine & Cooper, Melinda. (2010). "From reproductive work to regenerative labor."

Mon Apr 3 - DISCUSSION (FINAL PAPER PROPOSAL DUE)

* pp 431-454

Harding, Sandra (2011). "Beyond postcolonial theory."

Wed Apr 5 - LAB

^ pp 185-202, 247-266

Butler, Octavia E. (1983). "Speech Sounds."

Sheldon, Racoona (1976). “Your Faces, O My Sisters! Your Faces Filled of Light!”

Mon Apr 10 - DISCUSSION

* pp 455-472

Haraway, Donna (1991). “Situated knowledges.”

Wed Apr 12 - DISCUSSION

* pp 473-494

Barad, Karen (2003). “Posthumanist performativity”

Mon Apr 17 - DISCUSSION

* pp 495-506

Birke, Lynda, Bryld, Mette, & Lykke, Nina (2004). “Animal performances”

Wed Apr 19 - LAB

TBA (Possibly James Tiptree Jr, “The Girl Who Was Plugged In”)

Mon Apr 24 - DISCUSSION

* pp 507-529

Fujimura, Joan (2006). “Sex genes: A critical sociomaterial approach[...].”

Wed Apr 26 - DISCUSSION

* pp 530-542

Ahmed, Sara (2008). “Imaginary prohibitions.”

Mon May 1 - DISCUSSION

* pp 543-556

Weber, Jutta (2006). “From science and technology to feminist technoscience.”

Wed May 3 - LAB (presentations)

Mon May 8 - LAB (presentations)

Friday, May 12 - Final Paper and Project Due.