**STSS-UY 3904-B [16096]: Gendering Engineering**

2:30 to 4:20 pm, Mondays and Wednesdays, Room RH 673

Department of Technology, Culture and Society

New York University Tandon School of Engineering

Fall 2016

**Instructor**

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**Office Hours**

I’ll be available from 1 to 2 pm on Mondays and 11 am to noon on Thursdays. If these times are not convenient, contact me to make an appointment.

**Prerequisite**

Students must have completed EXPOS-UA 1 and EXPOS-UA 2 (or equivalents) before taking this course.

**Course Description**

After some background theoretical material, this course considers three STS themes about the interaction between gender and engineering, primarily from historical, philosophical and sociological perspectives. First, we look at the history and present of so-called feminist design. This movement, which is more often seen in architecture than engineering, suggests that feminist critiques of patriarchy can be used to improve the process of innovation. We learn about its origin and ideals and see how it has been applied to engineering and development. Second, we study gender diversity and access to engineering and related fields like computer science. While many assume these fields start from a heterosexist past and gradually open to diversity, this is not the case (this is especially when one looks beyond the boundaries of the U.S.). We also consider some efforts to improve diversity, including parallel cases of other professions like medicine, which have diversified since the 1970s. With this information, we are equipped to critique why the lack of gender diversity in engineering is so often naturalized. Third, we think about putting gender into design. Many people think that design is gender-neutral, but STS scholars have pointed out that definitions of the user are present from the earliest moments of prototyping. This may be more often studied in medicine, but there are STS scholars who have applied it to other fields. Ignoring gender can have unintended consequences, where designers reinforce gender binaries, but it also can prove to be deadly.

**Objectives**

This semester you will learn about:

- Issues raised by technology and its interaction with the modern world
- The field of Science and Technology Studies, considered from interdisciplinary, multidisciplinary, and cross-disciplinary approaches.
- Key concepts from STS that can enhance our understanding of the digital humanities, as well as the work of foundational thinkers in the field
- How the field of gender studies can provide insights into engineering practice and policy

**Structure**

Most class time is devoted to lectures about course topics and discussion of the reading material. There will be small-group discussions.

**Readings**

Reading assignments will be found online and in NYU Classes (http://newclasses.nyu.edu). Let me know well in advance of class if you have any trouble locating a required reading.
Grading

Class components are weighted as follows:  

- Quizzes and exercises 20%  
- Response papers and fishbowl presentation (10% each) 40%  
- Exams (15% midterm, 25% final) 40%  

Letter grade equivalents are:

A: 90–100 (90–94 = A-)  
B: 80–89 (87–89 = B+, 80–82 = B-)  
C: 70–79 (77–79 = C+, 70–72 = C-)  
D: 60–69 (67–69 = D+); F: <60

Requirements

Accommodations: If you are student with a disability who is requesting accommodations, please contact New York University’s Moses Center for Students with Disabilities at (212) 998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at http://www.nyu.edu/csd/. The Moses Center is located at 726 Broadway on the 2nd floor.

Attendance: On-time attendance for the entire class period is mandatory; students who miss more than four classes automatically fail. Missing fewer than twenty minutes of class counts as one-third of an absence (arriving late, departing early, leaving the room). Missing more than twenty minutes counts as an absence. Doctor’s notes are not necessary. Please do not consider the maximum of four absences to mean that you have some sort of vacation days; if you can, you should attend every class.

Attentiveness: Please pay attention during class and avoid behaviors that distract others. Do not eat, drink, or sleep during class. You should not use electronic devices, such as cell phones or laptops, at all. Do not hold side conversations; if someone tries to talk to you during class, tell the person to speak to you after class. Do not bring visitors without advance permission.

Examinations: There are three exams during our regular class meetings. They consist of short answer and essay questions. Each is closed book.

Fishbowl: For each unit, a group of 5–6 students will provide a recap of our discussions. The participants will talk about: (1) which one or two key terms were most important? (2) which example was the most captivating? (3) how can the ideas from the previous week be applied to another area of the presenter’s personal interest? Class members will be invited to ask their own questions to the fishbowl. The grade is based on the degree of preparation evident in each student’s presentation. Students who are in the fishbowl do not write a paper for that unit; others may use the discussion to finalize their ideas for their papers.

Honesty: Please be advised that I take the University policy about academic dishonesty seriously and will punish cheating or plagiarism (passing off other people’s ideas as your own) by awarding a grade of “F” for the course and referring cases to Student Affairs for further action.

Participation: There is no grade for participation. I encourage you to participate so that the course discussions reflect your interests. If you are the kind of person who participates often, I encourage you to make a space for others who are shyer. If you tend not to participate, I encourage you to take some space.

Preparation: According to New York State guidelines, a student should spend at least two hours to prepare for each hour in class. Thus, for this four-credit course, you can expect to spend at least eight hours per week outside of class getting ready for class. Please plan accordingly so that you can read thoroughly, write carefully, and reflect thoughtfully.

Quizzes: There will be unannounced quizzes on the reading assignments and course lessons. You may consult your own handwritten notes, but not books or printouts, for these quizzes. If you miss a quiz due to lateness or absence, you shall receive a zero.

Response Papers: You will write and revise three papers for the class (each at least 1,000 words, or approximately 3 pages) for the units that you do not participate in the fishbowl. Each must be uploaded to NYU Classes and scanned by Turnitin on time; late papers will receive a grade of zero. You must document your sources in MLA or Chicago author-date style, both in the text of the paper and at the end in your works.
How to Do Well

productive learning environment, please feel free to bring it to my attention.

right to be treated with respect, and regarding ideas in discussions or papers.

Participants express your own opinions. All participants should feel confident to express themselves, try out new ideas, and change their minds without worrying that anyone will judge them instead of their ideas. Participants must act respectfully toward all people in the classroom and respect their privacy, especially regarding ideas in discussions or papers. What someone shares in the room should stay in the room, even while what we learn in the room goes outward. Participants should feel free to remind offenders of their right to be treated with respect, and if they find themselves being reminded they should accept the words as constructive criticism. If something comes up that interferes with your perception of this classroom as a productive learning environment, please feel free to bring it to my attention in person or by email.

How to Do Well

1. Be on time. At the start of class, you will notice that I provide a preview of what is coming up and also answer questions. If you regularly miss these first minutes, you will start to feel the uncomfortable sensation that you do not know what is going on. Keep in mind that trains, subways and busses usually take much longer than they “should,” so plan accordingly. Being late once is ok; it happens to everyone. If you are always late, then you are doing something wrong.

2. Ask questions. Please raise your hand at the beginning of class or during a presentation. It does little good to whisper to the person next to you; instead, feel free to ask me for clarification. Also, use office hours or write an e-mail message for additional information.

3. Take notes, even if I am not writing on the board. Taking notes helps you stay focused on the material we are studying. Note taking also serves another purpose: it helps you to get used to writing about the course materials in your own words. Because the evaluation in this course is written, taking notes is valuable practice (and good exercise for your writing muscles!). There is no need to write down everything I say, but make sure you take down interesting ideas and connections to the course themes. Go over your notes after class to fill in the gaps.

4. Read actively. Prepare by reading the assignment for the day carefully before class. Mark key phrases and passages that have to do with the ideas in the course. Take notes like you are preparing a laboratory notebook – write down what you think is important, with examples, and prepare questions you want to ask.

5. Work proactively. Start an assignment when it is assigned, not when the deadline is looming. It sometimes takes a little bit of time wondering about an assignment before you make progress, and there are often times that you need guidance. If you wait until the last moment to get started, you cannot negotiate these hurdles adequately.

6. Prepare for emergencies. Things often go wrong during the semester; there are always computer problems and unfortunately there are family emergencies as well. It is important to plan for the unexpected by making backup copies and to be ready to hand in a paper or assignment well in advance of the deadline in case there is an unexpected calamity that will prevent you from using the last days before a deadline.
Tentative Schedule

Wednesday, Sept. 7  Introduction, ground rules, terminology

Part 1: Theory and Background

Monday, Sept. 12  Butler, “Bodily Inscriptions, Performative Subversions”


Monday, Sept. 19  Irigaray, excerpt from This Sex Which Is Not One

Wednesday, Sept. 21  Landström, “Queering Feminist Technology Studies”

Fishbowl 1

Monday, Sept. 26  Garlick, “What Is a Man? Heterosexuality and the Technology of Masculinity”

Paper 1 due from students not in the fishbowl.

Wednesday, Sept. 28  Halberstam, “Automating Gender: Postmodern Feminism in the Age of the Intelligent Machine”

Part 2: Feminist Design

Monday, Oct. 3  Feldman, “Participatory Design at the Grass Roots,” in Design and Feminism: Re-visioning Spaces, Places, and Everyday Things

Wednesday, Oct. 5  Bardzell, “Feminist HCI: Taking Stock and Outlining an Agenda for Design”


Fishbowl 2

Monday, Oct. 17  Clemens, “The People’s Water”

Paper 2 due from students not in the fishbowl.

Wednesday, Oct. 19  Wilmsen, “Perils on the Road to Participatory Research,” in Urban and Community Forestry

Monday, Oct. 24  Midterm Exam
Part 3: Diversity, Inclusion, and Access

Wednesday, Oct. 26  
Holt, “Heading West” from Rise of the Rocket Girls: The Women Who Propelled Us, from Missiles to the Moon to Mars

Monday, Oct. 31  

Wednesday, Nov. 2  
Riley, “Feminisms in Engineering Education: Transformative Possibilities”

Monday, Nov. 7  
Riley and Pawley, “Complicating Difference: Exploring and Exploding Three Myths of Gender and Race in Engineering Education”

Wednesday, Nov. 9  
Schiebinger, “Getting More Women into Science and Engineering—Knowledge Issues”

Fishbowl 3

Monday, Nov. 14  
Mellström, “The Intersection of Gender, Race and Cultural Boundaries, or Why Is Computer Science in Malaysia Dominated by Women?”

Paper 3 due from students not in the fishbowl.

Part 4: Gendering Design

Wednesday, Nov. 16  

Monday, Nov. 21  
Weismann, “At Home in the Future,” in Discrimination by Design: A Feminist Critique of the Man-made Environment

Monday, Nov. 28  
Haraway, “The Cyborg Manifesto,” from Simians, Cyborgs and Women

Wednesday, Nov. 16  
Wajcman, “Metaphor and Materiality,” from Technofeminism

Fishbowl 4

Monday, Dec. 5  
Takeshita, “‘Keep Life Simple’ Body/Technology Relationships in Racialized Global Contexts,” in Women, Science and Technology

Paper 4 due from students not in the fishbowl.

Wednesday, Dec. 7  
Rommes, et al., “Gender in the Design of the Digital City of Amsterdam”

Monday, Dec. 12  
“Clinical Trials as a Cultural Niche in Which to Configure the Gender Identities of Users: The Case of Male Contraceptive Development,” in How Users Matter

Wednesday, Dec. 14  
Final Exam