In this graduate reading seminar, we explore how technical knowledge systems have historically intersected with identity and social order.

The materials emphasize gender, but our discussions and readings will also engage at times with disability, race, class and other social categories that have shaped participation in technical endeavors and been the focus of technical study. Our goal is to understand how embodiment and expertise intersect. We will explore why certain kinds of people have been understood to be unreliable knowers, pathologically embodied, untrustworthy, or dangerously linked to emotion, incompetence or confusion, while other kinds of people have been socially marked as embodying reliability, trustworthiness, or epistemological neutrality. The underlying issues bear on the historical development of technical knowledge as a social system for the establishment of consensus about the nature of reliable truth. They are also relevant at many different levels to embodied social experiences of scientific information, personal health, reproduction and everyday technology. This course will give students the tools and insights needed to draw on feminist/gender/queer theory when it is useful to their research. That is the purpose of all of our readings.

We begin with an exploration of some key ideas in feminist scholarship of the last few decades. Then we turn to three broad, interconnected queries, relating to the social organization of science, technology and medicine (who has been excluded, who favored? What kinds of work have been understood to belong to different kinds of people?); to the intellectual content of expertise (how have experts made technical sense of social and bodily difference? How have technologies expressed and performed gender?); and to the philosophical debate about the nature of technical knowledge, particularly science, as a fundamentally gendered (masculine) endeavor which privileges hierarchical explanations in ways that mimic the social order.

Reading assignments as listed here are generally substantial, but we will break up the work and some of it will be deferred or shared. In some cases books are simply listed as a future resource. We will make choices together about what to emphasize. I do not recommend that anyone purchase all of the books listed in this syllabus. With this in mind, arranging to borrow them from the Penn library system, borrow direct, and other sources, and planning to share them might be a good idea.

Each student will be expected to:
- Participate actively in each class discussion. All students are encouraged to bring to our attention perspectives from book reviews of materials we have read, or papers that respond to them, or other relevant materials. Googling is OK. Reading critiques that were not assigned is OK. Tracking down footnote sources is OK. This syllabus is an opening rather than a canon.
• Lead one week’s class discussion. This involves briefly summarizing the key points in the assigned readings (15 minutes maximum) and then raising several questions for general discussion.
• Turn in a two-page single-spaced summary with questions/observations for each week’s consensus readings, at the beginning of every class, every week when we have shared readings. Your summaries can and should be incorporated into your final paper. Remember your goal is to think about these texts and how they work; notice their sources and how they are used; consider how other scholars responded, etc. In your short summaries, try to present the key ideas of the assigned readings, and to bring up questions about the materials that permit comparison, analysis, etc.
• For presentation in class and to hand in, produce a short (5-7 page, double spaced) profile of an individual whose experiences as a technical expert illuminate some of the ways that social place has mattered in science, engineering or medicine. You will present this biography in class on March 23 and turn in your paper on that day. This profile can also, if you choose, become a part of your final paper.
• Produce a final paper, 7,000 to 9,000 words, about 18-22 pp., double spaced 12 point type, that engages with the literature we are reading. This can be a synthetic historiographical assessment of all or most of the materials we read, that explores the key themes and draws on the weekly summaries that you will be writing (as noted, you can use parts of your weekly essays in your final paper). Or, it can be an extension of your biographical study that embeds the story you have explored more completely in the broader literature. Or it can be a more focused comparison of different approaches to understanding expertise that you find particularly compelling. Finally, also possible is an essay explicating how the literature we have considered might shape your own evolving research. I will meet with each student to discuss this final paper in late March (with sign-up times for March 24 or 25).

This is a reading class so we will be covering quite a bit of ground and looking at a lot of books and articles. We will sometimes break up the reading, sometimes change our minds, sometimes add things.

**WEEK 1 January 20**
*Sex/gender/history/science*

Some classics: Read all carefully, track impact. Consider why these papers have been influential or enduring.

**Further reading:**
* Harding, *Feminist Standpoint Theory Reader*.

**WEEK 2 January 27**
**Guest Lecturer Morris Low, 4-5 p.m.**
**Ladies and Gentlemen**

**Further reading:**

**4-5 pm, Visiting Professor Morris Low**
School of Historical and Philosophical Inquiry
University of Queensland
"Science, Gender and US-Japan Relations"
Readings:
Finally, the case of Haruko OBOKATA as can be seen in *The Guardian* newspaper article: http://www.theguardian.com/science/2015/feb/18/haruko-obokata-stap-cells-controversy-scientists-lie

**WEEK 3 February 3**
*The death of nature, the masculine birth of science*
Merchant, C. 1980 *The death of nature: Women, ecology and the scientific revolution* San Francisco. Try to absorb as much as this rather dense and wide-ranging text as you can. Find at least one review of this book on JSTOR and bring to class. Be prepared to discuss its impact (immediate and long-term).

Also read:

**Further reading:**
* Floyd-Wilson, Mary. 2013 *Occult Knowledge, Science and Gender on the Shakespearian Stage.* Cambridge University Press.

**WEEK 4 February 10**

**Women Scientists in America**

Read the 1982 volume carefully; read 1995 and 2012 more rapidly, scanning quickly for themes, content, focus, sources, methods.
* Margaret Rossiter 1982 *Women Scientists in America: Struggles and Strategies to 1940* Baltimore: Johns Hopkins University Press.

**Also:**

**Further reading:**
* Tuchman, Arlene 2004 "Situating Gender: Marie E. Zakrzewska and the Place of Science in Women’s Medical Education" *Isis* 95:34-57.

**WEEK 5 February 17**

**Honorary men?**

*Focus on McClintock, Mead and Meitner*

* Lapsley, Hillary *Margaret Mead and Ruth Benedict: The kinship of women*
* Shankman, *The Trashing of Margaret Mead: Anatomy of an Anthropological Controversy* (Studies in American Thought and Culture)
* Young, Virginia Heyer, 2005. *Ruth Benedict: Beyond Relativity, Beyond Pattern*

**Further reading:**

* Quinn, Susan 1995 *Marie Curie: A life.* New York: Simon and Schuster
* Sayre, A. 2000 *Rosalind Franklin and DNA* New York: WW Norton
WEEK 6 February 24

Learning to be....
* “Male Tales” in Traweek, Sharon Beamtimes and Lifetimes pp. 74-105. Learning to be a physicist.
* Pringle, Rosemary Sex and Medicine: Gender, power and authority in the medical profession pp. 69-96. Learning to be a surgeon.

WEEK 7 March 2

Turn in by email a one-page description of the person whose life you will be talking about in your presentation March 23, with a list of at least six sources.

Hearts and minds
* Showalter, Elaine The Female Malady: Women, Madness and English Culture, 1830-1980
* Gilman, Sander L. Hystera Beyond Freud
* Chambliss, Daniel F. 1996 *Beyond Caring: Hospitals, nurses and the social organization of ethics.* University of Chicago Press.

Optional readings:

WEEK 8 March 9 NO CLASS PENN SPRING BREAK

WEEK 9 March 16 NO CLASS due to conflict with my travel schedule. This class will be made up on Wednesday May 4 (after classes officially end) or on another date/time if that does not work.

WEEK 10 March 23 Life Stories:
Presentations by the class.

WEEK 11 March 30 Gender and Technology
* Bray, Francesca 1997 *Technology and Gender: Fabrics of power in late imperial China.* 237-272

**Further reading:**

**WEEK 12 April 6**
* Sex itself*
Read:

**Further reading:**

**WEEK 13 April 13**
* The Five Sexes: Sex/Medicine/Sexuality*
Description/proposal for final paper due in class, 3-5 pp. Plus bibliography.

**WEEK 14 April 20**

**Reproduction**
Everyone get Rapp, and read 62-115 of Cooper and Waldby. Then each of you should try to read one other book.


**WEEK 15 April 27**

**Cyborg Visions**


Examine at least one of her other books, though I am less interested in the “when species meet” stuff (her two most recent books) so try:
*Modest Witness@Second Millenium. FemaleMan Meets OncoMouse: Feminism and Technoscience
Or, the interviews with her, How Like a Leaf.
Also:

WEEK 16 May 4
Conclusions

Further Reading:
Final historiographical papers due Wednesday May 11. Please send them by email and also leave a printed out copy in my mailbox in Suite 303 by 5 p.m.