

HST 312 (Fall 2008)  
Line #85188  
TuTh 10:30-11:45  
Farmer Ed Bldg 220

## THE HISTORY OF WOMEN IN SCIENCE AND MEDICINE

Instructor: Dr. Monica Green  
Department of History  
4568 Lattie F. Coor Bldg.  
office phone: 480-965-4762 (direct line; main History phone is 480-965-5778)  
office hours: Tu and Th noon – 2pm (or by appt.)  
e-mail: monica.green@asu.edu

[President Lawrence] Summers [of Harvard] ... asked the wrong question. He saw the surface and missed what was behind it.

‘I think the question is ... are there women and have there been women who want to do science and could be doing great science, but they never really got the opportunity?’  
“A Woman’s Place in the Cosmos,” *Washington Post*, 16 March 2005

**COURSE DESCRIPTION:** In January 2005, President Lawrence Summers of Harvard University ignited a firestorm of controversy by questioning whether women were really capable of doing high-powered science. This course starts from the premise that to answer that question adequately, we need to understand the full complexity of how gender issues in Western science and medicine have developed historically. We will range in our analysis from Greco-Roman Antiquity through the beginning of the 21st century, addressing the topic from two perspectives: (1) The history of scientific and medical theories about women and sex differences: what these theories are, why they change, how they reflect or are influenced by wider cultural concerns. (2) The history of women as actual participants in science and medicine: who the prominent women scientists and healers of the past have been, what opportunities women have had to learn and practice science and medicine, what difference (if any) women’s participation makes to the content or practice of science and medicine.

After introductory discussions about the concept of “gender,” the course will be divided into two major sections: first, there will be three weeks of lecture giving a broad overview of the development of science and medicine in the Western tradition. Then, we will spend the rest of the semester doing “case studies” of several key issues/episodes in the history of women/gender and science/medicine. Students will be divided into research teams that will collectively work with the instructor to develop lectures and presentations for the rest of the class.

**NOTE:** This course focuses on the development of western science and medicine. Students are welcome, however, to bring in non-western perspectives for the purposes of contrast or criticism and, with the instructor’s approval, to pursue a research project on a non-western topic.

**REQUIREMENTS:** A major part of our weekly discussions will revolve around the assigned readings, many of which are primary sources. Conscientious preparation of the readings and active class participation will be considered an essential part of your grade. Needless to say, you cannot participate if you are not present; **any more than three (3) unexcused absences will result in an automatic lowering of your grade.** After the lecture part of the course and the first exam, written work and testing will focus on each of the five “case studies.” There will *either* be a quiz *or* a short (1-2 page) writing assignment due on the *last* day of each of the units. Additionally, for the case study where you are part of the research group, you will not only contribute to the collective work of the group

(presented over two days in class) but you will also develop an independent research project (10-12 pages). Further details will be announced in class and posted under the “Assignments” button on our Blackboard page. **Papers can be submitted in hardcopy or posted to the “Drop Box” on Blackboard; they will NOT be accepted via electronic mail.** The course grade will be assessed approximately as follows:

Class Participation:	10% (attendance and general discussion)
	10% (group project)
Case Study Quizzes/Short Essays:	5% (each) for a total of 20%
Research Paper:	25%
First Exam:	15%
Final Exam:	20%

**Extra Credit** can be earned in one of two ways: (1) using non-English sources for your research project; or (2) writing a “professional quality” book review of any of the books on the “Supplementary Readings” list that you did *not* use for your assigned report (see our Blackboard). Up to 10 points can be earned that will be applied to raise the grade on any **one** of your regular assignments, up to one full grade level.

### IMPORTANT DATES:

#### Papers/Quizzes:

- formats and content of the Case Study mini-assessments will be determined by the student leaders for the period; whether it is a quiz or a written assignment, it will always be due (or taken in class) on the *last* day of the unit (**October 2, October 16, October 30, November 13, and December 4**)
- **the due date for your own Research Paper is one week** after the last day of your Case Study session. For example, if you’re in Case Study #1, your paper will be due October 9. The one exception is for Case Study #5, where the paper will be five days later, on December 9.

#### Exams:

**First Exam (covering Weeks 1-4):** available on-line at our Blackboard site from Thursday, September 18 through Thursday, October 2

**Quizzes/Short Essays for Case Studies:** October 2, October 23, November 6, November 20, and December 4

**Final Exam:** Tuesday, Dec 16, 9:50 - 11:40 AM

**Academic Status Reports:** #1 – September 22–29, 2008; #2 – October 22–29, 2008

#### Religious Holidays recognized by ASU Registrar:

1st Day of Ramadan September \*2, 3  
 Yom Kippur October \*8, 9  
 Sukkot October \*13, 14, 15  
 Shemini Atzeret October \*20, 21  
 Simchat Torah October \*21, 22  
 Navaratra Dashara September 30 - Oct. 8  
 Birth of the B’ab October \*19, 20  
 Eid-al-Fitr October 2  
 Dusshera/Dasera October 9  
 Divali/Diwali October 28  
 All Saints Day November 1  
 Birth of Baha’u’llah November \*11, 12  
 Day of Covenant November \*25, 26  
 Ascension of Abdul’l-Baha November \*27, 28  
 Immaculate Conception of Virgin Mary December 8  
 Bodhi Day December 8

### POLICIES:

**Attendance** - As noted above, regular attendance is crucial to the success of the course. More than **three** absences will result in a lowering of your Class Participation grade. Missed assignments must be made

up by the next class period; thereafter, the grade will drop one full grade for each day late. You are welcome to turn in essays before the due date if that suits your schedule better. **In fairness to other members of the class, extensions cannot be granted.** (See our Blackboard for missed assignments due to Religious Holidays.) If you know that you will be absent in advance or if you are sick, please send an e-mail directly to me: [monica.green@asu.edu](mailto:monica.green@asu.edu).

**Classroom Etiquette** - Because we are gathered as a group to participate both in lectures and class discussion, it is vital that we maintain an atmosphere conducive to total participation. Therefore, the following rules will be observed in class:

- 1) **No eating during class.**
- 2) **Cell phones and text-messagers should be switched off. Students who use computers to take notes are asked to disable their wireless connections during lecture, unless specifically given permission by the instructor.**
- 3) Private conversation disturbs other students' ability to concentrate on the lectures; **disruptive talkers will be asked to leave the lecture room.**

**E-mail Etiquette** - Some people have taken to using e-mails to the instructor in lieu of asking questions in class. Any question that can be asked in class *should* be asked in class. I always spend a few minutes at the beginning of class taking care of “business” issues. Questions about assignments, etc., should be asked then. (If you're late to class, ask one of your fellow students what you missed.) This syllabus and the fuller information on our Blackboard have been designed precisely to give you as much information about the structure and expectations of the course as possible. So, before you zap off an e-mail to the instructor, ask yourself: (1) did I check the syllabus first? (2) did I check the Blackboard? (3) have I asked a fellow classmate? (4) can this wait to be asked in the next class meeting? By not overloading the instructor with excessive e-mails, you help insure that we'll have time to answer urgent or personal matters when we need to.

**ALWAYS INCLUDE “HST 312” IN THE SUBJECT HEADER IF YOU ARE NOT E-MAILING VIA BLACKBOARD!!** If you don't, your message might get deleted as junk mail.

**Written Work** - I still accept papers written in the “old technology”—typed or even written by hand. All papers, whatever the technology, should conform to basic guidelines of neatness, standardized formatting, etc. (If you need guidelines about proper formatting, check the “Academic Honesty” button on our Blackboard. I'm flexible about style, but in general prefer *Chicago Manual of Style*.) **I do not accept submission of papers via e-mail; all work should be submitted in hard copy or digitally via the “Drop Box” function on Blackboard.** If submitting via Blackboard, please send a note to the instructor to confirm submission. (See also the section “Case Studies” below.)

**Academic Honesty** - no ethic is more important to the historian's integrity than scrupulous use of, **and documentation of**, sources used. Improper use of others' work (whether obtained from printed, electronic, or oral sources) is a violation of academic standards and will result in an automatic **failing grade for the course**. We will spend time discussing the nature of **plagiarism** and proper methods of citation; additional information can be found on our Blackboard under the “Academic Honesty” button. In addition, students are encouraged to bring their questions about this matter to the instructor.

**TEXTS** (Available at the ASU Bookstore):

P.G. ABIR-AM & D. OUTRAM, eds., *Uneasy Careers and Intimate Lives: Women in Science, 1789-1979* (New Brunswick, NJ: Rutgers University Press, 1987)

Nelly OUDSHOORN, *Beyond the Natural Body: An Archaeology of Sex Hormones* (London: Routledge, 1994)

Joan CASSELL, *The Woman in the Surgeon's Body* (Cambridge, MA: Harvard University Press, 1998)

**OTHER ASSIGNED READINGS:** All other assigned readings beyond the purchased textbooks will be made available through our course Blackboard. (Once you've registered for the class, you will automatically be listed among the registered users of the course site. To access, go to [myasuourses.asu.edu](http://myasuourses.asu.edu) and sign in with your ASURITE ID, then click on the appropriate links.) Some readings will be in RTF files; some in PDF; and some are found through links to other websites, including subscriptions through ASU libraries.

My preference is that you print out all primary source readings and bring them to class on the days we're discussing them. For all other readings (or if you prefer not to print out everything), you must take sufficient notes to allow you to participate actively in class discussions. **No excuses!**

**CASE STUDIES:** Students from many different disciplines and with many different interests take this course. Therefore, we begin with a general historical survey in Weeks 1–4 to put everyone “on a level playing field”. The first exam assesses your grasp of the major themes we have covered. Then, we move to “Case Studies” where we focus more intently of specific issues of how women have practiced science/medicine or how the sciences and medical fields have conceptualized women and sex differences. These case studies have three components: **(1)** communal readings, general lectures by the instructor, films, etc.; **(2)** reports/lectures/presentations prepared by each Study Group and delivered to the rest of the class; and **(3)** formal research papers that each student in the Case Study Group prepares out of work they have done for the group report (this is due one week after the in-class presentation). Each student will be assigned to one of the five Case Study Groups. The Group's assignment is to do additional research about specific issues on the general topic (for example, one group member might do a biographical study on an individual scientist; another might research the history of breast cancer). **Together** the group will design additional presentations/reports/lectures to be presented to the rest of the class. The group will also design the form and content of the assessment for that period. **In other words, you will become the teachers of the course for your Case Study.** More details about these group projects will be given in class and posted on our Blackboard.

**SUPPLEMENTAL READINGS (see our Blackboard):** Aside from material you choose to use for your Case Study project, these readings are *not* required. Rather, they are listed to provide you with background to the weekly topics should you be interested in exploring certain questions further. Also, as noted above, you can choose to write a “professional quality” review of one of these books for extra credit; see details on our Blackboard.

## WEEKLY ASSIGNMENTS Part I: Introduction

WEEK 1 (8/26 & 8/28): Why Study Women's History in the Sciences and Medicine?

**READINGS:**

Jennifer Frey, “A Woman's Place in the Cosmos,” *Washington Post*, 16 March 2005

Linda Nochlin, “Why Have There Been No Great Women Artists?”

Aimee Sands, “Never Meant to Survive: A Black Woman's Journey” (an interview with Evelyn Hammonds)

**optional:** Sandra G. Harding, “Gender and Science”

## Part II: General Survey

WEEK 2 (9/2 & 9/4): Science and Medicine in the Premodern World

**READINGS:**

Aristotle, “Selections” (*Generation of Animals, History of Animals, On Dreams, and Politics*)

Phintys, “On the Moderation of Women” (includes Pythagorean women; Hyginus on Agnodice;

Soranus on midwives; Socrates Scholasticus on Hypatia; “Documents on Midwives in Late Antiquity”)

University of Paris, “The Case of a Woman Doctor in Paris” and “An Unlicensed Woman Surgeon”

Michael Shank, “A Female University Student in Late Medieval Kraków”

WEEK 3 (9/9 & 9/11): Women's Education and the Rise of the “Professional Amateur,” 1400-1850

**READINGS:**

Susan Broomhall, “Women's Experiences as Readers, Owners and Collectors of Books” (thru p. 26)

Christine de Pizan, *Book of the City of Ladies* (excerpt)

Catherine des Roches, “On Agnodice”  
Madame du Châtelet, preface to her translation of Mandeville’s *Fable of the Bees*

WEEK 4 (9/16 & 9/18): Science and Medicine in the Modern World, 1850-2008

**READINGS:**

ABIR-AM & OUTRAM, Chapters 7 & 10 (Maria Mitchell & Marie Curie)

Natalie Pigéard-Micault, “A History of Women’s Entrance Into Medicine,” [http://www.bium.univ-paris5.fr/histmed/medica/femmesmed\\_va.htm](http://www.bium.univ-paris5.fr/histmed/medica/femmesmed_va.htm)

“Changing the Face of Medicine,” an online exhibit sponsored by the National Library of Medicine, Bethesda, MD, <http://www.nlm.nih.gov/changingthefaceofmedicine/physicians/> — click on the button “Physicians,” go to the section marked “Medical Schools,” and look up the biographies of at least three physicians born before 1880 (aside from Elizabeth Blackwell) who studied at any of these institutions: Case Western Reserve, Central Medical College, Cornell University, Female Medical College of Pennsylvania, Hering Medical College, Johns Hopkins, Kansas City Medical College, Keokuk Medical College, New England Female Medical College, New York Women’s Medical School, University of Michigan, University of Oregon, Woman’s Medical College of Baltimore, Woman’s Medical College of Pennsylvania, Woman’s Medical College of the New York Infirmary

Henry Etzkowitz, *et al.*, “The Paradox of Critical Mass for Women in Science,” *Science* 266 (1994), 51-54

**The exam covering Weeks 1-4 will be available on-line at our Blackboard site from Thursday, September 18 through Thursday, October 2. During that period, you can take it as many times as you like until you are satisfied with your performance.**

### Part III: Case Studies

Case Study #1 (WEEKS 5 and 6, September 23–October 2): Female Midwives, Male Surgeons, and the Gendering of Women’s Medicine in Premodern Europe

**READINGS:**

M. H. Green, “Bruno’s Paradox: Women and Literate Medicine” (= chapter 3 of *Making Women’s Medicine Masculine: The Rise of Male Authority in Premodern Gynaecology*)

childbirth stories from M. Rogers and P. Tinagli, *Women in Italy: 1350-1650*

Sprenger & Kramer, *Malleus maleficarum* (excerpts)

“Early Modern Regulation of the Practice of Midwifery” (midwives’ licenses)

Louise Bourgeois, “Observations diverses” (excerpts)

Hugh Chamberlen on the Obstetrical Forceps

Elizabeth Cellier, “A Scheme for the Foundation of a Royal Hospital” (excerpts), and “Letter to Dr. . . . an Answer to his Queries, concerning the Colledg of Midwives”

**WEEK 7 : No class Week of October 7-9**

Case Study #2 (WEEKS 8 and 9, October 14-23): Science in the Salons: Women and the Enlightenment

**READINGS:**

Londa Schiebinger, “Maria Winkelmann at the Berlin Academy: A Turning Point for Women in Science,” *Isis* 78 (June 1987), 174-200

Paula Findlen, “The Scientist’s Body: The Nature of a Woman Philosopher in Enlightenment Italy,” in *The Faces of Nature in Enlightenment Europe*, ed. L. Daston and G. Pomata (Berlin, 2003), 211-236

Mary Terrall, “Émilie du Châtelet and the Gendering of Science,” *History of Science* 33 (1995), 283-310

ABIR-AM & OUTRAM, Chapter 2

Case Study #3 (WEEKS 10 and 11, October 28 to November 6): Sex & Education in the 19th and Early 20th Century: A Fair Chance for the Girls?

**READINGS:**

Elizabeth Fee, “Nineteenth-Century Craniology: The Study of the Female Skull”

Anonymous, “Biology and ‘Woman’s Rights’”

Margaret Rossiter, “‘Women’s Work’ in Science”

ABIR-AM & OUTRAM, *Uneasy Careers*, Chapter 3 plus *one* of the biographical studies from Part II

Darlene C. Hine, “Co-Laborers in the Work of the Lord: Nineteenth-Century Black Women Physicians”

Case Study #4 (WEEKS 12 and 13, November 11–20): The Hormonal Paradigm and 20th–Century Rethinkings of “Female Nature”

**READINGS:**

Joseph Breuer & Sigmund Freud, “The Psychic Mechanism of Hysterical Phenomena”

“The Quest for a Psychology of Womanhood” (excerpts from Freud & Karen Horney)

OUDSHOORN, *Beyond the Natural Body* (entire)

“A Thin Blue Line: The History of the Pregnancy Test Kit,” an online presentation of the National Library of Medicine, <http://history.nih.gov/exhibits/thinblueline/>

Case Study #5 (WEEKS 14 and 15, November 25, and December 2–4): Equality Achieved? Women Scientists and Medical Practitioners from 1930-2005

**Thursday, November 27: THANKSGIVING!!**

**READINGS:**

Margaret Rossiter, Chapter 1 from *Women Scientists in America: Before Affirmative Action, 1940-1972* (Baltimore: Johns Hopkins University Press, 1995)

W. Barkley Fritz, “The Women of ENIAC,” *IEEE Annals of the History of Computing* 18, no. 3 (September 1996), 13-28

Sherwin Nuland, “A Triumph of Twentieth-Century Medicine: Helen Taussig and the Blue-Baby Operation”

Joan Cassell, *The Woman in the Surgeon’s Body* (entire)

In class: film – *The Missing Link* (Lise Meitner)

## Part IV: Conclusions

WEEK 16 (December 9): Is Feminism Relevant Anymore?

**READINGS:**

Monica H. Green, “Defining Women’s Health: An Interdisciplinary Dialogue – Background,” posted 4/15/2002 on <<http://www.fas.harvard.edu/womenstudy/events/proposal.htm>>

“A Study on the Status of Women Faculty in Science at MIT” (March 1999), available at <http://web.mit.edu/fnl/women/women.html>

Lawrence Summers, address given on women & science in January 2005 and public apology for his remarks in February 2005, available on-line at

<http://www.president.harvard.edu/speeches/2005/nber.html>

<http://www.president.harvard.edu/speeches/2005/facletter.html>

**Final Exam: Tuesday, Dec 16, 9:50 - 11:40 AM**