The course examines how gender has affected the construction of theories and concepts within scientific fields of inquiry and how those constructs have impacted the intellectual lives and careers of the women scientists, the questions they considered, the fields they worked in, and the career paths they chose.

The course emphasizes the reciprocal relationship between culture and science where deeply embedded concepts of gender have been absorbed by science and where, in turn, scientific theories have both reified and confounded gender distinctions. This relationship is shown through the study of the historical development of: 1. The institutionalization of science; 2. Historical and contemporary concepts of the physiology of body and brain and century genetics; 3. New technologies and techniques in the laboratory and in fieldwork.

The class takes place twice a week, with the second meeting devoted to discussion. WebCamus is integral to this course.

Reading/viewing

Reading can be found on Web Campus. Reading for each week is specified on the schedule below. A complete list of the readings will full citations is attached at the end of this syllabus.

Silver Core

This course satisfied Core Objectives 9 and 10

CO 9: Science, Technology, and Society: Students will be able to connect science and technology to real-world problems by explaining how science relates to problems of societal concern; be able to distinguish between sound and unsound interpretations of scientific information; employ cogent reasoning methods in their own examinations of problems and issues; and understand the applications of science and technology in societal context.

CO 10: Diversity and Equity: Students will demonstrate an understanding of diversity through courses that focus on topics such as race, ethnicity, gender, sexuality, religion, physical ability, language, and/or social class with an emphasis on the analysis of equity. Students will apply and evaluate approaches or modes of inquiry used to analyze diversity and equity and the social barriers to these goals.

This course also develops these Core Objectives:

CO 1: Effective Composition and Communication: assessed in the journal entries and exams
CO 2: Critical Analysis: assessed in the journal entries and research project

Student Learning Outcomes

<table>
<thead>
<tr>
<th>COs:</th>
<th>Student Learning Outcome:</th>
<th>Course Guiding Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 10</td>
<td>Student will be able to:</td>
<td>How have private values and cultural norms impacted the development of major theories within biology, anthropology and medicine?</td>
</tr>
<tr>
<td>9 2</td>
<td>Describe how the institutionalization of science in the early modern period, as well as contemporary institutions, impact women scientists in their career trajectories.</td>
<td>Did the creation of formal scientific institutions and societies expand or limit the opportunities for women to contribute to science? Are these bodies gender neutral today?</td>
</tr>
<tr>
<td>9 3</td>
<td>Describe how theories about the female body and the female mind have impacted the opportunities for women to function within</td>
<td>How did the development of theories of physiology from Claude Bernard forward reflect a profoundly gendered view of the</td>
</tr>
</tbody>
</table>
research communities. body? How did women scientists refute theories of feminine weakness and intellectual incapacity?

4. Analyze how primatology and anthropology have has impacted by gender both in theory and in practice.

Why has primatology and anthropology been a notable place for achievement by women scientists? Is femaleness reflected in their objects of study and theory?

5. Describe how the development of laboratory science and fieldwork standards have impacted the roles of men and women within science.

Have gendered idea about skills and abilities created role distinctions in some areas of scientific research?

6. Identify the ways in which gender neutrality efforts have been carried out in recent times.

In the last four decades, what efforts have made toward gender neutrality in access to scientific research and careers? What conflicts have resulted?

7. Analyze the representations of women scientists in the media.

How are the tensions between scientific work and reproduction portrayed in the media?

SLO Assessment: 1,3,5,6: Student research project; 2,4: four journal entries; 7: one journal entry.

Schedule

Week 1. Introduction to the course

- From royal courts to formal institutions: inclusions and exclusions
- The Royal Society of Science and the French Academy of Science
- Margaret Cavendish, Katherine Jones, Lady Ranelagh

Reading/listening
- Except from L. Hunter (1997)
- Excerpt from C. Merchant (1980).
- J. Lienhard (n.d.) [recording]

Week 3. The death of nature
- Gender distinctions within a new vision of science as an object of intervention
- Eighteenth century physics
- Émilie the Marquise du Châtelet, Laura Bassi.

Reading

Week 4. Women and telescopes
- Technology & astronomy outside the academies in nineteenth century American and Britain
- Maria Mitchell, Caroline Herschel

Reading/viewing
- Women and astronomy: Website: the Astronomical Society of the Pacific
- Royal Society 2010: Website: Most influential British women in the history of science

Week 5. Medicine as woman’s work
- Nineteenth century theories of women’s physiology: rationalization of inequality in American biology and role ascertainment in medicine.
- Elizabeth Blackwell, Maria Zakrzewska, Mary Putman Jacobi

Reading
- Excerpt from R. Sanchez (1985).
- M. Zakrzewska and C. Dall (1860).
Week 6. Biology as destiny: Women in medical education and laboratory research in turn of the twentieth century France: fact and popular culture images
- Broca and the new brain science
- Clemence Royer and research
Reading
- Excerpt from Harvey (1997)
- Excerpt from Russett (1989)
- Hildreth (2013)

Week 7. The physics laboratory and the role of women
- Marie Curie
Reading/Viewing
- Pycior (1987)
- Marie Curie in Biography millennium [videorecording]
- Excerpts from Madame Curie [film] 1943

Week 8. Mathematics: brain theory vs. socialization. Explanations of gender difference
- Ideology of brain difference and mathematical ability
- Cultural variability in the role of gender in choosing mathematics
- Sofia Kovalevskaya, A university career in nineteenth century Russian mathematics.
Reading
- L. Bride (2001)
- C. Henrion (1997)

Week 9. Field work and gendered roles: Bird watchers and ornithologists in North American Ornithology
- Masculine and feminine roles in the professionalization of ornithology
- Margaret M. Nice, Florence Merriam Bailey
Reading
- M. Ainley (1987)
- excerpts from M. Nice (1987)

Week 10. The objects of anthropology. Field work and women revolutionaries
- American women transform anthropology in the twentieth century
- Gender distinctions in archeology and ethnography
- Zora Neale Thurston, Ruth Benedict, Margaret Mead
Reading
- Excerpts from Hurston and Walker (1979)
- Excerpts from Mead (1972)

Week 11. Women, primatology, and activism in twentieth century
- Gender and cultural distinctions in the approaches to the science
- Jane Goodall; Diane Fossey.
Reading
- Excerpts from Haraway (1989)
- Film: Gorilla’s in the Mist
- Excerpts from Miss Goodall and the Wild Chimpanzees (1966) [video recording]
- Excerpts from Jane Goodall (1990) [film]

Week 12. Gender and the science of ecology
- Ecological consciousness
- Rachel Carson
Reading
- Excerpt from R. Carson (1962)
- Excerpt from L. Lear (1997)
- Rachel Carson in Biography millennium [video recording]
Week 13. Genetics: a new discourse of the body
• From heredity and eugenics to DNA
• Alice Lee, Ethel Elderton, Barbara McClintock
Reading
• G. Kass-Simon (1990)
• R. Love (1979)

Week 14. Has feminism changed science?
• Round table and student discussion
Reading
• Excerpt from Schiebinger (2001)
• Kelan (2009)
• Kolat (2011)

Week 15: student presentations and posters
History 305 REQUIREMENTS:

(30%) 1. Participation in weekly discussion and Completion of required reading as assigned. All students are expected to participate every week. Come prepared to address these questions and to generally talk about all the assigned reading.

(30%) 2. Writing assignments: Six journal entries
   - Entered on WebCampus.
   - For each entry:
     o Summarize and discuss the reading for one of the discrete, weekly topics, in 400 words.
     o Write in complete sentences and paragraphs.
     o Standard usage and grammar is expected.
     o Further standards, and grading rubric, can be found on web campus.

(20%) 3. Two midterms (the second midterm is held during the scheduled final period).
   - Short answer format

(20%) 4. Research project
   - Topics will be determined in consultation with the instructor by the end of week 3.
   - Further research on an important women scientist of a specific field, applying some ideas from the Course Guiding Questions listed above.
     o The project will examine the scientist’s life and work taking into account the impact of the following on of the person in question:
       o 1. Contributions
       o 2. Gender in the theoretical constructs and practices of the field.
       o 3. Technology and techniques of the field.
       o 4. What is the status of gender neutrality efforts in the field
   - Presentation alternatives: power points, written essay or poster.
   - Rubric posted on WebCampus
   - All presentations will include bibliography
   - Bibliography due at the end of week 7.
   - Presented to the class during week 15.

UNR and Course Policies

- Make up work: No make up work without evidence of illness or other emergency.
- Conduct and Decorum: UNR policies on student conduct are rigorously adhered in this course. See http://www.unr.edu/student-conduct. In particular, prescribed behavior during discussion is mandatory. This means listening quietly and respectfully to the views of other students and expressing one’s one views without using language that is derogatory or insulting. Student should be careful about making humorous comments, as they may be offensive and entail a violation of official academic standards. Students are expected not to interrupt class by arriving late or leaving early, or taking a “break.” We will have a break time during each class. Students who do not follow these guidelines will not receive credit for class participation. If an emergency arises that requires you to arrive late or to exit the class during class time, email the instructor afterwards to explain.

- Questions about the instructor’s evaluations: Students should not discuss their individual grades during class time or before or after class, but rather should email the instructor and make an appointment.

- Plagiarism or cheating of any kind or any extent will result in an "F" for the course and referral and reporting. Plagiarism is defined as submitting another’s work as one’s own. This can be constituted by the theft of a single sentence or phrase. The Student Conduct Code, with discussion of academic honesty and a description of plagiarism and cheating can be found in the Student Handbook at: http://www.unr.edu/stsv/slservices/documents/handbook08.pdf. See the policies on Student Conduct at http://www.unr.edu/student-conduct.

- Help for writing can be found at the History Department Writing Center, or from the instructor. See the WebCampus page for contact information.

- EEOP Statement: The History Department is committed to equal opportunity in education for all students, including those with documented physical disabilities or documented learning disabilities.

UNR policies on absences: See: http://catalog.unr.edu/content.php?catoid=6&navoid=1394; Religious
Holy Days: If your attendance is impacted by religious observances (Holy Days) please let me know.

Bibliography of Assigned reading


Jane Goodall [Motion picture]. (1990). National Geographic Video ;.


Madame Curie [Motion picture]. (1943). USA.


Biography millennium: Marie Curie [Motion picture]. (1999). A & E Television Networks :
Miss Goodall and the wild chimpanzees [Motion picture]. (1966). Encyclopaedia Britannica Films :