

GSWS 0400
Gender and Science
Dr. Bridget Keown
142 Cathedral of Learning
Wednesday 6:00pm – 8:30pm

Contact Information:

Office: 402-D Cathedral of Learning

Email: keown.b@pitt.edu

Cell Phone: (978) 505-7273

Office hours:

Tuesdays 2:00pm – 4:00pm

Thursdays 3:30 – 5:30pm

And by appointment

www.calendly.com/bekeown

Course Description

This course focuses on the interaction and influence of gender and sexuality with science and technology. The goal of this course is to assist students in developing an understanding of the ways in which science has constructed social understanding gender and sexuality, how feminists and activists have spoken and reframed these constructions, and the lived experiences of people within the scientific community. To accomplish this goal, we will apply feminist theory, including feminist critiques of medicine, technology, and teaching to a study of scientific theories and concepts of progress. We will also investigate the evolution of scientific knowledge regarding identity, including gender, sexuality, race, and disability. This course will focus on a broad range of scientific fields, discourses, and narrative, but students are always encouraged to investigate topics that interest them further through class assignments. While the readings focus largely on American and Western examples and experiences, class discussions and presentations will expand the scope of this class considerably, allowing students to understand the global relationship of gender and science.

Learning Objectives

By the end of the semester, students in this class will be able to:

1. Identify how various scientific fields have constructed gender, sexuality, and race through discourse and practice, and how individuals experience gendered scientific fields
2. Perform research using digital and print sources based on issues raised in class as well as student's individual interests
3. Develop familiarity with feminist theory as well as scientific practices and ethics
4. Deconstruct contemporary debates regarding science, gender, and sexuality.
5. Analyze scientific studies to better understand the gendered implications of their findings.
6. Present and defend original research that demonstrates a coherent understanding of course topics.

Required Texts:

There are no required texts for this course. All readings will be available in the class Canvas site.

Teaching Philosophy:

I believe that learning is both a collaborative process and liberating experience, to which every individual brings something unique and important. I am also a storyteller, and as such, I believe that everyone is made of stories—these stories have different narrative styles, different frameworks, different meanings, and methods, but every single one of them matters. Practically speaking, I do my best to create a classroom experience that helps students to learn in several ways, including listening, talking, reading, writing, working creatively, and learning through doing. I ask that all of us bring our unique insights and prior knowledge and work together to ensure that everyone in the class has a meaningful experience. This means that everyone is met with honesty, respect, and a mind that is open to the stories and experiences of others.

Disability Resources and Services:

Please make requests for accommodations as often as necessary, and as early as possible. It is never too late to request accommodations – our bodies and circumstances are continuously changing, and I am committed to making this class one that is accessible and engaging for everyone. You will be asked to make use of formal accessibility services on campus; however, you will not be asked to disclose personal medical information. If there are ways in which the overall structure of the course and general classroom interactions can be adapted to facilitate full participation, please do not hesitate to raise your ideas, either in class, during office hours, or in writing. Your comments, insights, and suggestions about the format of readings, lectures, and class discussions are welcome.

The Formal Statement

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course. For more information, visit <https://www.studentaffairs.pitt.edu/drs/>.

Academic Integrity and Plagiarism Statement:

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz, exam or paper will be imposed. For the full Academic Integrity policy, go to: <https://www.as.pitt.edu/faculty/policies-and-procedures/academic-integrity-code>. Violation of the Academic Integrity Code requires the instructor to submit an Academic Integrity Violation Report to the Dean's Office.

“Turnitin”

Students agree that by taking this course all required assignments may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted assignments will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of Turnitin.com page service is subject to the Usage Policy and Privacy Pledge posted on the Turnitin.com site.

Generative AI / ChatGPT / Use Policy

Effective learning, teaching and research all depend upon the ability of members of the academic community to trust one another and to trust the integrity of work that is submitted for academic credit or conducted in the wider arena of scholarly research. Such an atmosphere of mutual trust fosters the free exchange of ideas and enables all members of the community to achieve their highest potential. In all academic work, the ideas and contributions of others must be appropriately acknowledged and work that is presented as original must be, in fact, original. During our class, we may use AI Writing tools such as ChatGPT. You will be informed as to when, where, and how these tools are permitted to be used, along with guidance for attribution. Any use outside of this permission constitutes plagiarism, and such use will be subjected to the above-stated policy. If you are unsure about whether something may be plagiarism or academic dishonesty, please reach out to Bridget *at any time* to discuss the issue.

Non-Discrimination Policy:

As an educational institution and as an employer, Pitt values equality of opportunity, human dignity, and racial/ethnic and cultural diversity. Accordingly, the University prohibits and will not engage in discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. For more information, visit <http://cfo.pitt.edu/policies/documents/policy07-01-03web.pdf>

Gender-Inclusive Language Guidelines:

Aspiring to create a learning environment in which people of all identities are encouraged to contribute their perspectives to academic discourse, the University of Pittsburgh Gender, Sexuality, and Women's Studies Program provides guidelines and resources regarding gender-inclusive/non-sexist language (gsws.pitt.edu/node/1432). Following these guidelines fosters an inclusive and welcoming environment, strengthens academic writing, enriches discussion, and reflects best professional practices.

Language is gender-inclusive and non-sexist when we use words that affirm and respect how people describe, express, and experience their gender. Gender-inclusive/non-sexist language acknowledges people of any gender (e.g. first-year student versus freshman, chair versus chairman, humankind versus mankind). It also affirms non-binary gender identifications, and recognizes the difference between biological sex and gender expression. Students may share their preferred pronouns and names, and these gender identities and gender expressions should be honored.

These guidelines fulfill the best intentions of the University of Pittsburgh's Non-Discrimination Policy: <https://www.cfo.pitt.edu/policies/policy/07/07-01-03.html>.

Content Warning and Class Climate:

Our course readings and classroom discussions will often focus on mature, difficult, and potentially challenging topics. As with any course in the Gender, Sexuality, and Women's Studies Program, course topics are often political and personal. Readings and discussions might trigger strong feelings—anger, discomfort, anxiety, confusion, excitement, humor, and even boredom. Some of us will have emotional responses to the readings; some of us will have emotional responses to our peers' understanding of the readings; all of us should feel responsible for creating a space that is both intellectually rigorous and respectful. Above all, be respectful (even when you strongly disagree) and be mindful of the ways that our identities position us in the classroom.

I expect everyone to come to class prepared to discuss the readings in a mature and respectful way. If you are struggling with the course materials, here are some tips: read the syllabus so that you are prepared in advance. You can approach your instructor ahead of time if you'd like more information about a topic or reading. If you think a particular reading or topic might be especially challenging or unsettling, you can

arrive to class early and take a seat by the door so that you can easily exit the classroom as needed. If you need to leave or miss class, you are still responsible for the work you miss. If you are struggling to keep up with the work because of the course content, you should speak with me and/or seek help from the counseling center.

Sexual Misconduct, Required Reporting, and Title IX:

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University's Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:

- A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: <http://www.titleix.pitt.edu/report/confidentiality>
- Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University's Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:

- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center:
 - 412-648-7930 (8:30 A.M. TO 5 P.M. M-F)
 - 412-648-7856 (**After Business Hours**)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121. Other reporting information is available here: <http://www.titleix.pitt.edu/report-0>

Assignments and Grading

Final Grades will be calculated as follows:

<u>Assignment Name</u>	<u>Points Available</u>
○ Class Participation (See below for full description)	35
● News Assignment In-Class Workshop	10
○ News Assignment Analysis	20
● Game of Life of Scientists Analysis	15
● Scientific Study Evaluation	30
● Instagramming the Archives	20
○ Instagramming the Archives Response	10
● Generative AI Assignment	15
● Reflection on RESI Event	20
● Twilight Zone Analysis	20
● Final Project	30

In-Class Policies:

Attendance: Attendance is your choice, but please be aware that frequent absences affect your ability to perform in class. If something will affect your ability to come to class frequently, please come talk to me.

Participation: This is a course that requires both preparation and participation. Your engagement with the material, through reading, writing, and discussion, will help us all use our time productively, and will also help me to understand which topics interest you, and how best to allocate class time. While I hope this course will be individually enriching, learning is also a group effort, so I encourage you to help your classmates learn by coming to class having completed the readings to the best of your ability and ready to engage in discussion. At the same time, please know that your “class participation grade” involves much more than just talking in class. I understand that talking can sometimes be stressful, especially if you are feeling new to a topic or a situation. While I hope this semester will give you opportunities to overcome this feeling, I also acknowledge that there are many ways to engage with this class in a positive way. For that reason, this part of your grade will include (but is not limited to):

- Coming to class and being engaged
- Contributing to the class Google Doc
- Supporting your classmates in group work and discussions
- Emailing Bridget or coming to office hours
- Handing in assignments on time (or in accordance with an agreed-upon timeline)
- Posting to discussion boards or other online discussion spaces where available

Engagement with material: All readings listed should be completed by the time you come to class on the day the readings are listed. That way you can fully engage in class and understand the discussions going on around you.

Email: I do my very best to respond to your emails within 24 hours during the week. If you do not receive a response from me within a day or so, please feel free to email me again. This is not annoying to me at all, in fact, it is very much appreciated, as I have ADHD. You are also welcome to text me at any time. If you do text, please state your name, as I don’t save numbers or contact information. Thank you!

Turning in Work: I am terrible with deadlines, and I will never ask you to do something that I cannot do. Therefore, please know that all deadlines in our class are negotiable. For this reason, assignments on Canvas will remain open at least a week after a posted due date. In the case that a longer extension is needed, I am happy to accept assignments and other work until the final day of classes.

As part of this policy, I ask that you let me know if you need extra time to complete something, so that I am aware of your circumstances, and am in the best position to review your work when it arrives.

Office Hours:

- I use Calendly to organize my office hours meetings. This is to help us both reserve the time to chat, and to ensure that people aren't waiting too long outside the door or in a Zoom waiting room. While it would be very helpful to reserve a time to meet on Calendly, you are very welcome to drop into my posted office hours without an appointment.
- While I will be in my office for office hours, I am very happy to meet with you via Zoom if you prefer. Please let me know when making the appointment on Calendly if you would like me to send you a Zoom link.
- A note about Calendly: When you schedule an office hours meeting, you will see only a "15-minute meeting" option. This is not an indication of how long or short a meeting must be—that is just the limit of the free version of Calendly. If you think you will need more time, please feel free to schedule multiple back-to-back meetings. There are times noted in Calendly as "available" outside of my office hours. You are welcome to request a meeting then, too. If none of these times work for you, please reach out so we can work to find a time to meet that will work for both of us.

Food in Class: Food and drink are welcome, so long as they do not interfere with another student's ability to participate in class. This involves the risk of allergens (please check with Bridget) or foods with strong smells / loud sounds / detailed consumption. Additionally, during periods of mandatory masking or higher COVID-19 transmissions, please consider bringing food/drink that is easy to consume with masks (like drinking with a straw, etc.). We will review this policy in class, and we can revisit as necessary.

Questions about grades: I am happy to review assignments and grades with you in person. I ask that you wait until 1 day after the assignment has been handed back to come and speak with me.

Calendar:

Please come to class having read the materials listed for that day.

This calendar may be subject to change, although any changes will be discussed in advance.

Week 1:

January 10: Introductions:

Syllabus Overview, Assignment Discussion, Class Policies
(No readings)

To Do This Week:

- Familiarize yourself with Canvas and the class Google Doc, and email Bridget with questions.
-

Week 2:

January 17: Feminist Science & Feminist Science Fiction

Questions to consider: What is "science fiction"? What role does science fiction have in a "Gender and Science" class? What makes a field or study "scientific"? What makes someone an "expert" on a subject? Why? What are the implications for how we understand the world? How can an interdisciplinary approach to science change and improve scientific research?

Readings:

- Cordelia Fine, "Feminist Science: Who Needs It?" *The Lancet*, October 2018
 - Octavia Butler, "The Lost Races of Science Fiction"
 - Banu Subramanian, "Singing the Morning Glory Blues," from *Ghost Stories for Darwin*
-

Week 3:

January 24: Narratives in Science, Narratives as Science

Questions to consider: How do social constructions of identity influence the way we talk about science? What are the implications for this? Do narratives of science influence how we think about the world around us?

In-Class: The Great Sperm Race

Readings:

- Emily Martin, "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles"
-

Week 4:

January 31: Who We Talk About When We Talk About Scientists

Questions to consider: What is science? How did the scientific method emerge historically as a standard procedure of the natural sciences? How did various fields of science develop in the 19th century? How can a focus on Darwin and Wallace help us understand this period and its implications for today?

Readings:

- Cynthia Eagle Russett, "Introduction," from *Sexual Science: The Victorian Construction of Womanhood*
- Antoinette Brown Blackwell, "Sex and Evolution"
- Irene Clyde, "The Aethnic Union"

To Do This Week:

Please bring your news article (digital or printed) to discuss with your review partner(s)

Week 5:

February 7: Evolution, Eugenics, and Sex

Questions to consider: What is "eugenics"? How do Darwin's theories of evolution lead to a belief in eugenics? What are the lasting effects of eugenics on science?

Readings:

- Harriet Washington, "The Birth of American Gynecology," from *Medical Bondage: Race, Gender, and the Origins of American Gynecology*
- Heidi L. Lujan and Stephen E. DiCarlo, "The 'African gene' theory: it is time to stop teaching and promoting the slavery hypertension hypothesis," *Advances in Physiology Education* (2018)

To Do This Week:

Friday: News Assignment Due via Canvas (Feb 9)

Week 6:

February 14: Science and Technology in the 20th Century

Questions to consider: How did the political events of the twentieth century impact the development of technology? How did people's faith in 'science' change over this period? What are the consequences of this for us today?

Readings:

- Susan Lindee, "The Epistemology of Frozen Peas: Innocence, Violence, and Everyday Trust in Twentieth-Century Science," from *Why Trust Science?*
- Cassidy R. Sugimoto and Vincent Larivière, *Equity for Women in Science*: Chapter 1 "Production"

To Do This Week:

Friday: Complete your Game of Life: Scientist analysis on Canvas

Week 7:

February 21: The Problem With “Lady Brains” (This is a sarcastic title)

Questions to consider: How do historical assumptions about biological sex influence the study of psychology and endocrinology? Why do gendered narratives in science persist, even though technology advances?

In-Class: Darwin Correspondence Project

Readings:

- Stephanie A. Shields, “Functionalism, Darwinism, and the Psychology of Women: A Study in Social Myth,” *American Psychologist* 30:7 (1975), 739-754
 - Rokeya Sakhawat Hossain, “Sultana’s Dream”
-

Week 8:

February 28: Bodies of Knowledge, Bodies as Knowledge

Questions to consider: How did the discovery of hormones change the discourse around gender in the body and explain behavior and gender expression? What impact does the gendering of hormones have on our work today?

Readings:

- Sarah S. Richardson, “Sexing the X: How the X Became the ‘Female Chromosome’”
 - Kevin Guyen, “Straightwashing: The Cleaning and Analysis of Queer Data”
 - Kathryn Bond Stockton, “Gender Has a History and It’s More Recent Than You May Realize”
-

Week 9:

March 6: Thinking About Scientific Studies

Questions to consider: How do we read a scientific study? How do we negotiate issues of bias in science? How do we consider the implications of scientific research? How does the Ceci, Kahn, and Williams study demonstrate some of the issues we’ve been discussing?

Readings:

- Read the Scientific Study Worksheet (in Canvas) before the other readings
- Ceci, Kahn, and Williams, “Exploring Gender Bias in Six Key Domains of Academic Science: An Adversarial Collaboration”
- Choose one piece from the University of Wisconsin Madison database (in Canvas)

To Do This Week:

Friday: Scientific Study Analysis due via Canvas

Week 10: SPRING BREAK—YAY!

Week 11:

March 20: ARCHIVES TRIP!

- ***Please meet outside Hillman Library today!***

To Do This Week:

Sunday: Instagramming the Archives Assignment due via Canvas (March 24)

Week 12:

March 27: The Digital Present

Questions to consider: What is the internet? Does its use meet its potential? How does the creation of the internet mirror the historic trends we've studied thus far?

Readings:

- Lizzie O'Shea, "An Internet Built Around Consumption is a Bad Place to Live," from *Future Histories: What Ada Lovelace, Tom Paine, and the Paris Commune Can Teach Us About Digital Technology*
- Alexander Monea, "Straightcode" from *How the Internet Became Straight*
- Blue Neustifter, "Unknown Number"

To Do This Week:

By Friday: Please watch your colleagues' "Instagramming the Archives" videos, and complete the online response in Canvas

Week 13:

April 3: Building Equitable Algorithms

Questions to consider: How do digital algorithms work? How do algorithms become biased? How is identity created and reinforced in digital spaces? How does the growth of digital technology and knowledge reinforce, rather than overcome, stereotypes and assumptions?

In-Class: Building Algorithms

In-Class: Fun with Chatbots

Readings:

- Ruha Benjamin, "Coded Exposure" from *Race After Technology*
- Paula Hall & Debbie Ellis, "A systematic review of socio-technical gender bias in AI algorithms"

To Do This Week:

Sunday: Last day to turn in Twilight Zone analysis paper

Week 14:

April 10: The Soul of Chat GPT

Questions to consider: What *is* ChatGPT? How does it work? What can it do...and what *can't* it do? Is it alive? Why are we even asking this question?

In-Class: Spellcasting with ChatGPT

Readings:

- Nicole Gross, “What ChatGPT Tells Us about Gender: A Cautionary Tale about Performativity and Gender Biases in AI”
- Fabio Motoki, Valdemar Pinho Neto, and Victor Rodrigues, “More human than human: measuring ChatGPT political bias

To Do This Week:

Sunday: Generative AI Assignment due via Canvas (April 14)

Week 15:

April 17: Living in a Digital Future

Questions to consider: What obligation do we have to the automatons we are developing? What obligations do we have to the society in which those automatons will live? What skills do we need to fulfill those obligations?

Readings: Laura Major & Julie Shah, “Robots Don’t Have to be Cute,” from *What to Expect When You’re Expecting Robots: The Future of Human-Robot Collaboration*

Final Project Due April 25