**Anthropology of Science and Technology**

**21st-Century Brave New Worlds**

O wonder!
How many goodly creatures are there here!
How beautious mankind is!
O brave new world,
That has such people in’t!

- William Shakespeare, The Tempest

**ANTH 2502**
Professor Sarah Wagner
M W 2:20-3:35pm
ROME 351

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Office: 301 HAH
Office Hours: M 12:30-2:00 or by appointment

**Course Description**

This course examines the relationship between science and society, asking a series of questions about how scientific knowledge and emergent technologies affect our lives, identities, social relations, and material conditions. We start with considering contemporary debates about expert knowledge and evidence (e.g., “post-truth”; “fake news”; “selective sorting of facts”), and then turn to the question of how anthropologists might study scientific practice and why such an endeavor is valuable—a methodological as well as theoretical query. After considering the social construction of scientific facts, we turn to ethnographic studies of science and especially biotechnology in contemporary society. Here, anthropologically informed concepts such as kinship, power, and subjectivity help us evaluate the sociocultural import of these technologies for people in their everyday lives—from biomedical reckonings of personhood to forensic innovations and post-9/11 biometrics. By exploring these emerging technologies, especially in the field of genetics, we seek to trace the sociopolitical context in which scientific knowledge is produced and, in turn, applied. Our analysis of these examples should encourage you to read and think critically and to explore your own interests about intersections of technoscience and society in today’s world, as well as in times past.
**Student Learning Outcomes**
Upon successful completion of this course, students should be able to:
1. Demonstrate a general understanding of the social contingencies of knowledge production, specifically the production of scientific knowledge.
2. Discern interrelationships among science, society, and politics.
3. Evaluate emerging biotechnologies and their socio-political import in the United States and other countries.
4. Assess mainstream media representations of biotechnologies and concomitant debates concerning bioethics.
5. Exercise skills in critical reading, analytical reasoning, and oral communication of anthropological and social theory texts.
6. Communicate clearly and effectively, both orally and in writing, anthropological questions and concepts about the interface between science and society.

*Students may expect to spend 37.5 hours on direct instruction (i.e., class time), and 82.5 hours (an average of 5.5 hours per week) on independent learning (i.e., homework).*

**Course Requirements and Grading Criteria**

- Midterm exam (25%)
- Final exam (30%)
- Discussion questions and presentation (10%)
- Oral presentation (25%)
- Class participation (10%)

**Exams:** The midterm will be an in-class written exam consisting of short answer and essay questions. The final will be a take-home, open-book exam. Please note that you cannot make up the midterm exam except in the case of an emergency, and extensions will not be granted for the final exam; excused absences require official documentation, e.g., a note from your physician.

**Discussion questions and presentation:** At the beginning of the semester you will select a class (and respective assigned reading) from the syllabus for which you will lead the class discussion by generating 3 discussion questions and presenting a 5-minute synopsis of the material assigned. Your questions should encourage critical analysis of the text (e.g., asking how or why rather than who or what); you may wish to focus on close readings or broader thematic issues, or a combination of both.

These questions must be posted on Blackboard (in the designated weekly folder under the “Discussions” tab) by **8 pm** the night before class, and, in addition to presenting your synopsis, you should be prepared to lead the class discussion with these questions.

Please note: you are encouraged to meet with the course TA, Lara Rodriguez-Delgado (lararodriguez@email.gwu.edu) to help you prepare your questions and brief presentation.

**Oral presentations:** Each student will choose an example of an emergent biotechnology or scientific debate/controversy to research—from popular media representations about its development, associated controversy, and activism to more academic analyses of its
sociopolitical import. The research will culminate in a final oral report in the form of a 10-minute presentation using PowerPoint, Keynote, Prezi or similar software. The presentations will be organized thematically into panels for the semester-end colloquium, and students will be given feedback by their classmates and instructors.

**Participation:** The class participation grade is based not only on participation in class discussions but also on attendance. *After 3 missed classes, the participation grade will be lowered a full grade with each additional absence.*

Active participation is vital for a lively and engaging seminar. It comes in different shapes and forms: some people tend to speak up more often, while others listen and reflect. Push yourself to contribute to the discussion in different ways, including at times by moving out of your comfort zone. Maybe this means that rather than answering a question posed, you try to draw out a classmate; or, if speaking in class is harder for you, come prepared with a question or a passage from the text you’d like us to examine more closely. Above all, be engaged with and respectful of other people’s ideas.

**Technology in the classroom:** Cell phones must be silenced or turned off during the class period. The use of laptops is limited to taking notes. If you are using your laptop for any other purpose, you will be asked to shut the computer off immediately and will not be allowed to use it in the future.

**Additional Course Information**

**Academic Integrity:** All students must practice academic integrity. This means doing your own work, and when you use the words and ideas of others in any written work, you must: 1) identify direct quotations with quotation marks; and 2) indicate the source of ideas that are not your own by using social sciences notation form. If you have any questions at all about what this means, you should speak to the instructors. You should also consult the university’s academic integrity policy, which states that “Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” For the remainder of the code, see: [https://studentconduct.gwu.edu/code-academic-integrity](https://studentconduct.gwu.edu/code-academic-integrity).

In this course if you commit a breach of academic integrity on any assignment or exam, you will receive a zero for that assignment or exam. This infraction will be reported to the University's Academic Integrity Council. You will be clearly notified by the instructor in person OR by email before the Council is informed.
Support for Students outside the Classroom

Disability Support Services (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: https://disabilitysupport.gwu.edu/

Mental Health Services (UCC)  202-994-5300
The University Counseling Center (UCC) offers 24/7 assistance and referral to address students’ personal, social, career, and study skills problems. Services for students include:
- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals
  https://counselingcenter.gwu.edu/

Required Texts


These books are available for purchase at the university bookstore. All other assigned reading material is found on blackboard in weekly folders under “Electronic Reserves.” Students are required to bring copies of the assigned reading to class—either the hard copy (book or printed out PDF) or their laptops with the reading downloaded and readily available.
Course Design

Introduction
Week 1
W (1/18) – Introduction: knowledge production; science and society

Part I: Setting the scene: truthiness, fake news, and expertise in a “post-fact” era?
Week 2
M (1/23) – How technoscientific enters into the debate
Roundtable guest speakers: Chloe Ahmann, Raquel Machaqueiro, Lara Rodriguez-Delgado

W (1/25) – Let’s take climate change denial as an example

[And more recently:]
President Obama on the “selective sorting of the facts”: farewell address, ~ min. 22-27.

Part II: Studying the production of scientific knowledge
Week 3
M (1/30) – A brief introduction to the field of Science and Technology Studies (STS)

W (2/1) – The social construction of facts and unpacking the black box
Week 4
M (2/6) – Into and around the lab: an ethnographic study of nuclear arms production
Guest speaker: the author, Hugh Gusterson
Hugh Gusterson, Nuclear Rites: A Weapons Laboratory at the End of the Cold War, Ch 1-4

W (2/8)
Gusterson, Nuclear Rites cont., Ch 5, 6, 9, Postscript, and Comments on the Text

Part III: Biopolitics/biopower
Week 5
M (2/13) — “Community, Identity, Stability” - Science’s promise and perils
Aldous Huxley, Brave New World

W (2/15) – Biopower: theorizing technologies and politics of the body

Instructions for final oral presentation handed out.

Week 6
M (2/20) – No class (Presidents Day)

W (2/22) — Reproductive technologies and human engineering: constructing and managing risk
Nina Liss-Schultz, “We Are This Close to ‘Designer Babies’,” Mother Jones, February 8, 2016.
Shobita Parthasarathy, “CRISPR dispute raises bigger patent issues that we’re not talking about,” Backchannels, Society for the Social Studies of Science, April 29, 2016.
Watch the film, Never Let Me Go (based on the novel by Kazuo Ishiguro).

Week 7
M (2/27) – Genetics and kinship: 21st century reconfigurations

W (3/1) – Midterm exam
Part IV: Biomedical technology and personhood

Week 8
M (3/6) – Research topic synopses (oral presentations)

W (3/8) – Research topic synopses (oral presentations)

Week 9
NO CLASS — SPRING BREAK

Week 10
M (3/20) – Biological determinism and the “science” of race

W (3/22) – The politics of biomedical knowledge: HeLa
Rebecca Skloot, The Immortal Life of Henrietta Lacks
RadioLab: “Henrietta’s Tumor,” (both audio and video clips).

Week 11
M (3/27) – HeLa continued
Rebecca Skloot, The Immortal Life of Henrietta Lacks

W (3/29) – Genomics/genetics as property, history, and potential profit?

Week 12
M (4/3) – Genetics and social identity: race/ancestry/subjectivity
Alondra Nelson, The Social Life of DNA

W (4/5)
Alondra Nelson, The Social Life of DNA

Part VI: The politics and practice of documenting individual identity

Week 13
M (4/10) DNA Testing and the US criminal justice system
W (4/12) - DNA Testing and the US criminal justice system cont.


**Week 14**

M (4/17) – Forensic genetics and technologies of remembrance


W (4/19) – Forensic science and post-conflict repair


**Week 15**

M (4/24) – Technologies of security and surveillance: biometrics in a post-9/11 world


**Final exam handed out in class:** Students will be required to turn in their final exam during the scheduled exam period (TBA).

W (4/26)* – Colloquium I

**Week 16**

M (5/1) – Colloquium II

W (5/3) – Colloquium III

Th (5/4) – Colloquium IV (make-up day)

F (5/4) – Colloquium V (reading day)

*Note: The final oral presentations will take place during the last week of classes, extending into the designated make-up and reading days (Thursday and Friday, 5/4 & 5/5).