Genetics & Society (SOCI 138)

SP 2025. MWF 4-4:50am in Mandeville Center B-150

Professor Jon Ruiz (jjr026@ucsd.edu)

 Office hours: M/W 12-1pm in SSB 474

TA: Ayumi Matsuda-Rivero (aematsud@ucsd.edu)

 Office hours: W 1-3pm via Zoom (please sign up through the following link: calendy.com/aematsud/soci138\_officehours)

For well over a century now, genetics has powerfully shaped how we think about human difference. This class will explore the many ways in which studying our genomes and inheritance patterns has informed public understanding and policy on topics like disability, reproduction, rare disease, intelligence, sociality, delinquency, personal identity and race and ethnicity in the United States. We will also see how social forces shape genetics research itself and discuss controversies surrounding gene patenting, forensic science, and genetic testing for disease, risk and ancestry. Readings will be drawn from the genetics literature, popular culture, and the social sciences. By the end of the class, students will possess the critical knowledge base to understand the enormous promises and potential pitfalls of contemporary genetics and genomics.

**Assessment**

Assessment for the class will consist of several reading response memos, a midterm exam, and a final exam. The breakdown of final grades will be as follows:

Attendance: 10% of your grade.

Memos: 30% of your grade. Each student will submit a total of five reading response memos. You can choose which weeks to write on (the only week you cannot select is week 5). Memos must be submitted by 11:59pm the Sunday of the week you are writing on. Memos are 300-500 words, will be graded pass/fail, and are to be submitted via the Assignments page in Canvas. All memos must summarize at least one reading in the syllabus for that week and present a question, criticism, or comment for further discussion. You may also engage with other readings.

Midterm Essay: 20% of your grade. 5-7 double-spaced pages, due Sunday of week 5.

Final exam: 40% of your grade. The final will focus on the second half of the course and will be conducted in-person during finals week.

**Readings**

All texts are available on Canvas. I recommend setting up a VPN to access online readings off campus. See instructions [here](https://blink.ucsd.edu/technology/network/connections/off-campus/VPN/). Please let me know if you have trouble accessing the readings.

Some readings will contain technical genetics terms. I strongly recommend that you consult publicly available resources like Wikipedia or the [NIH/NHGRI glossary](https://www.genome.gov/genetics-glossary).

**Course policies**

Cheating and plagiarism:

Students are expected to do their own work and to cite sources according to established norms as outlined in the UCSD Policy on Academic Integrity. The policy can be found here: h: http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2. A FAQs page on what counts as cheating can be found here: [http://academicintegrity.ucsd.edu/faq/index.html](http://academicintegrity.ucsd.edu/faq/index.html%20).

Cheaters will receive a failing grade on the assignment or exam and/or the entire course. They may also be referred for additional disciplinary action elsewhere at UCSD. If you are unsure about what is considered either plagiarism or cheating, please ask.

Missing/late exams and assignments:

Failure to turn in your take-home exams on time without a valid excuse will result the deduction of one half-letter grade for every day (or part thereof) after the deadline. Excuses communicated after the deadline will only be accepted in exceptional circumstances.

Contesting grades:

You may contest any grades by sending the assignment or exam to me. However, please be aware that this may result in a lower grade than the one given by the course TA.

Struggles with the class:

If you are having trouble with any aspect of the class, including deadlines, it is always best to contact me as soon as possible. That way we can address the problem before you have fallen too far behind or lost too many points from your final grade.

Disability accommodations:

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD). Students are required to present their AFA letters to Faculty (please contact me privately) and to the OSD Liaisons in the Sociology Department in advance so that accommodations may be arranged.

**Week 1: What do we mean by ‘gene’?**

Monday (3/31)

Introduction, no readings

Wednesday (4/2)

Keller, Evelyn Fox. 2002. *The Century of the Gene*. Harvard University Press. Introduction.

Friday (4/4)

Keller, Evelyn Fox. 2002. *The Century of the Gene*. Harvard University Press. Chapter 2.

**Week 2: Eugenics**

Monday (4/7): No class

Galton, Francis. 1904. “Eugenics: Its Definition, Scope, and Aims.” *American Journal of Sociology* 10(1):1–6.

Paul, Diane B. 1995. *Controlling Human Heredity, 1865 to the Present*. Humanities Press. Chapters 1-2.

Wednesday (4/9)

Paul, Diane B. 1995. *Controlling Human Heredity, 1865 to the Present*. Humanities Press. Chapters 3.

Friday (4/11)

Kevles, Daniel J. 1998. *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. Cambridge, MA: Harvard. Chapter VII.

**Week 3: Eugenics (cont.), DNA, chromosomes, and the rise of modern medical genetics**

Monday (4/14)

Stern, Alexandra Minna. 2005. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley: University of California Press. Chapters 3 and 4.

Wednesday (4/16)

Comfort, Nathaniel. 2014. *The Science of Human Perfection: How Genes Became the Heart of American Medicine*. Reprint edition. Yale University Press. Chapters 5 and 6.

Friday (4/18)

Lindee, M. Susan. 2008. *Moments of Truth in Genetic Medicine*. The Johns Hopkins University Press. Chapter 4.

Hedgecoe, Adam M. 2001. “Geneticization: Debates and Controversies.” in *eLS.*

**Week 4: Behavior genetics, intelligence, and criminality**

Monday (4/21)

Richardson, Sarah S. 2013. *Sex Itself: The Search for Male and Female in the Human Genome*. University of Chicago Press. Chapter 5.

Wednesday (4/23)

Panofsky, Aaron. 2014. *Misbehaving Science: Controversy and the Development of Behavior Genetics*. Chicago: University of Chicago Press. Chapter 3.

Friday (4/25)

Gould, Stephen Jay. 1994. “Curveball.” *The New Yorker*, November 28, 139–49.

**Week 5: Review and Midterm Exam**

Monday (4/28): Review session

Wednesday (4/30): Review session

Friday, (5/2): Midterm exam

**Week 6: Testing newborns and fetuses for genetic diseases, and culture (briefly)**

Monday (5/5)

Timmermans, Stefan and Mara Buchbinder. 2013. *Saving Babies? The Consequences of Newborn Genetic Screening*. Chicago: University of Chicago Press. Chapter 1.

Wednesday (5/7)

Timmermans, Stefan and Mara Buchbinder. 2013. *Saving Babies? The Consequences of Newborn Genetic Screening*. Chicago: University of Chicago Press. Chapter 2.

Friday (5/9)

Nelkin, Dorothy and M. Susan Lindee. 2004. *The DNA Mystique: The Gene as a Cultural Icon*. University of Michigan Press. Introduction and Chapter 6.

**Week 7: Identity and race**

Monday (5/12) Presidents’ Day, no class!

Hacking, Ian. 2006. “Genetics, Biosocial Groups & the Future of Identity.” *Daedalus* 135(4):81–95.

Wednesday (5/14)

Cooper, Richard S., Jay S. Kaufman, and Ryk Ward. 2003. “Race and Genomics.” *New England Journal of Medicine* 348(12):1166–70.

Friday (5/16)

Fullwiley, Duana. 2007. “The Molecularization of Race: Institutionalizing Human Difference in Pharmacogenetics Practice.” *Science as Culture* 16(1):1–30.

**Week 8: Genomics, postgenomics, and the politics of ownership**

Monday (5/19)

Collins, Francis S. 1999. “Medical and Societal Consequences of the Human Genome Project.” *New England Journal of Medicine* 341(1):28–37.

Rose, Hilary and Steven Rose. 2013. *Genes, Cells and Brains: The Promethean Promises of the New Biology*. Verso Books. Chapter 1.

Wednesday (5/21)

Skloot, Rebecca. 2011. *The Immortal Life of Henrietta Lacks*. New York: Broadway Books. Excerpt.

Callaway, Ewen. 2013. “Deal Done over HeLa Cell Line.” *Nature* 500(7461): 132-133.

Friday (5/23)

Liptak, Adam. 2013. “Justices, 9-0, Bar Patenting Human Genes.” *The New York Times*, June 13.

Andrew, Lori B. 2002. “Genes and Patent Policy: Rethinking Intellectual Property Rights.” Nature Reviews Genetics 3(10): 803-808.

**Week 9: Genetic testing, rare disease, and a new eugenics**

Monday (5/26)

Memorial Day, no class!

Wednesday (5/28)

Mnookin, Seth. 2014. “One of a Kind.” *The New Yorker*, July 21.

Rochman, Bonnie. 2012. “Why Cheaper Genetic Testing Could Cost Us a Fortune.” *Time*, October 26. Retrieved December 21, 2012.

Harmon, Amy. 2007. “After DNA Diagnosis: ‘Hello, 16p11.2. Are You Just Like Me?’” *The New York Times*, December 28.

Friday (5/30)

Duster, Troy. 2003. *Backdoor to Eugenics*. Routledge. Chapter 7 and Afterword.

Baltimore, David et al. 2015. “A Prudent Path Forward for Genomic Engineering and Germline Gene Modification.” *Science* 348(6230):36–38.

Pollack, Robert. 2015. “Eugenics Lurk in the Shadow of CRISPR.” *Science* 348(6237):871–871.

**Week 10: Genetics of sociality, and review**

Monday (6/2)

Darwin, Charles. 1874. *The Descent of Man*. Chapter IV and V.

Lehrer, Jonah. 2012. “Kin and Kind.” *The New Yorker*, March 5.

Wednesday (6/4): Review

Friday (6/6): Review