

GEOGRAPHY AND PLANNING

GPY 894: Advanced Studies in Human Geography II: Critical Geographies of Science and Technology

Contact Time	3 hours
Format	3hr seminar
Class Assessment (potential - TBD)	podcast on foundational theory; weekly written reflections; final term project (research paper, report, or creative output)

COURSE OVERVIEW

From present-day space exploration and Indigenous futurisms of the cosmos, to the ongoing colonial histories of medicine and surveillance infrastructure, relations of power and struggle have long shaped humans' engagements with science and technology. This course will introduce students to critical geographic approaches to think through the relationships between science, technology, society, and space, including postcolonial and feminist Science and Technology Studies (STS), Black and Indigenous Studies, and critical discourse analysis of environmental science. This course will ask students to dive deeply into both peer reviewed articles and monographs (books!) to distill key substantive arguments, but also to learn how to read such texts, to understand diverse methods, and to conceptualize large research projects. Course assessments will provide students the opportunity to develop and communicate their understanding in written and creative formats. This course is intended to appeal to a wide range of students across disciplines.

LEARNING OUTCOMES

- Synthesize and communicate foundational theories in critical geographic approaches to science and technology
- Describe how settler colonialism, racial capitalism, and traditional academic science have shaped present-day forms of science and technology
- Discuss how people struggling against systems of oppression appropriate hegemonic tools of science and technology, and often make their own in order to sustain life
- Explain how geography, space, and scale matter for thinking about science, technology, and medicine
- Communicate complex ideas in written, oral, and visual form

COURSE TOPICS

Together we will explore histories of colonial medicine, postcolonial experimentation, settler colonial science, and race-based surveillance technologies, among other things

COURSE READINGS (selections subject to change)

- Liboiron, Max. (2021). *Pollution is Colonialism*. Duke University Press.
- Browne, Simone (2015). *Dark Matters: On the Surveillance of Blackness*. Duke University Press.
- McKittrick, Katherine. Failure (My head was full of misty fumes of doubt). In *Dear Science and Other Stories* (pp. 103-121). Duke University Press.
- Maile, David Uahikeaikalei'ohu (2021). [On Being Late: Cruising Mauna Kea and Unsettling Technoscientific Conquest in Hawai'i](#). *American Indian Culture and Research Journal* 45(1)
- King et al (2018). Diversity in geoscience: Participation, behaviour, and the division of scientific labour at a Canadian geoscience conference. *Facets* 3(1): 415-440
- Benezra, Amber (2023). *Gut Anthro: An Experiment in Thinking with Microbes*. University of Minnesota Press.
- TallBear, Kim (2013). *Native American DNA: Tribal Belonging and the False Promise of Genetic Science*. University of Minnesota Press.
- Towghi, Fouziyha & Vora, Kalindi (2014) Bodies, markets, and the experimental in South Asia. *Ethnos* 79(1): 1-18, DOI: 10.1080/00141844.2013.810660
- Dempsey, J. (2015). Fixing biodiversity loss. *Environment and Planning A: Economy and Space*, 47(12), 2555–2572. <https://doi-org.proxy.queensu.ca/10.1177/0308518X15608079>
- Noble, Safiya Umoja (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York University Press. (selections).