

Technoscience and Culture

Instructor: Prof. Shoan Yin CHEUNG (she/her/hers)

Course Info:	Lecture	Tuesday, 2:30 – 4:15 p.m.	LSK 206
	Tutorial	Tuesday, 4:30 – 5:15 p.m.	LSK 206

Course Overview

What does it mean to live with technology? How do science and technology shape understandings of ourselves, the worlds we inhabit, and each other? What are the hazards of scientific progress?

While modern universities may separate the study of science and technology from arts and culture, this course takes as its premise that science and technology are social phenomena. We call this concept “technoscience.” Our course approaches technoscience as a social and cultural institution to show how deeply it is implicated in shaping our everyday worlds, including the structuring of difference along the lines of race, nation, class, gender, and dis/ability. Through topics like biomedicine, surveillance, and even time, this course will explore the interplay between technoscience and culture in global and local contexts. It will provide tools for rethinking the idea that science, technology, and expertise is “objective,” and for analyzing the ways that technoscience shapes our unequal and interconnected world — and its political consequences.

This is a survey course intended to introduce students to foundational concepts for analyzing how science, technology, and society intersect in our contemporary world. It would also be appropriate for students from STEM interested in gaining a critical understanding of technoscientific enterprise.

The language of instruction for this course will be English only.

Course Objectives

By taking this class, you will develop the ability to:

- Become familiar with key theories on the relationship between science, technology, and culture
- Identify how culture, power, identity and politics shape the development of science and technology
- Constructively engage with critiques of scientific progress and expert authority
- Orally communicate about these issues

Assessment

Journaling (30%)
Short Posts (20%)
Presentation (30%)
Final Essay (20%)

Course Schedule

1. **Sep. 3** **Introduction: Technoscience and Culture**
2. **Sep. 10** **Cultures of Knowing**
 - Banu Subramaniam, “Interdisciplinary Hauntings” and “Through the Prism of Objectivity,” *Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity* (2014)
3. **Sep. 17** **Science, Medicine and Metaphor**
 - Nancy Leys Stepan, “Race and Gender: The Role of Analogy in Science,” *Isis* (1986)
 - Emily Martin, “The Egg and Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles,” *Signs* (1991)
4. **Sep. 24** **Technology and Modernity?**
 - Leo Marx, “Technology: The Emergence of a Hazardous Concept,” *Technology and Culture* (2010)
5. **Oct. 1** **Public Holiday, No Class**
6. **Oct. 8** **Technologies of Time**
 - E.P. Thompson, “Time, Work Discipline and Industrial Capitalism,” *Beyond the Body Proper* (1967)
 - Iwan Rhys Morris, "The Nervous System of Britain: Space, Time and the Electric Telegraph in the Victorian Age," *British Journal of the History of Science* (2000)
7. **Oct. 15** **Gender and Technology**
 - Judy Wajcman, “Feminist Theories of Technology,” *Cambridge Journal of Technology* (2010)
 - Yulia Frumer, "The Fourth Industrial Revolution, Humanoid Robots, and the Politics of Labor and Concealment in Japan" *Medium* (2019)
8. **Oct. 22** **Techno-Orientalism**
 - Huang He, "The Racial Interface: The Computational Origins of Minority Modeling," *Media-N* (2022)

- Long Bu, “Asian Roboticism: Connecting Mechanized Labor to the Automation of Work,” *Perspectives on Global Development and Technology* (2020)

9. Oct. 29 The Convenience Economy

- [VIDEO] “Meet the Mechanical Turk, an 18th Century Chess Machine,” *BBC* (2013)
- Veena Dubal, *The Time Politics of Home-Based Digital Piecework* (2020)
- Lin Zhang, “Platforming Family Production: The Contradictions of Rural Digital Labor in China,” *The Economic and Labour Relations Review* (2021)

10. Nov. 5 Politics of Infrastructure

- Terrance Lee and Howard Lee, “Tracing Surveillance and Auto- Regulation in Singapore: ‘Smart’ Responses to COVID-19,” *Media International Australia* (2020)
- Shannon Mattern, “Networked Dream Worlds,” *Real Life Magazine* (2019)

11. Nov. 12 Technoscience Workshop

12. Nov. 19 Social Surveillance

- Virginia Eubanks, “The Allegheny Algorithm,” *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (2018)
- [VIDEO] “Nosedive,” *Black Mirror* (2016)

13. Nov. 26 Final Presentations