

FW22 AP/HIST 2820 3.0A How to Think About Technology: Hacking the History of Machines (Fall term)

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Expanded Course Description (expanded from course calendar description):

The course begins with questions that we rarely ask about technology itself: What, exactly, is technology? How new is it, as an idea? Does it drive history, or is it shaped by larger forces of politics, culture, and society? Does technology bring progress? And if so, for whom?

Using examples from the Renaissance to the early twenty-first century, from Canada and around the world, the course also challenges students to continually refine their perspectives on the subject. We examine four themes, three weeks at a time — Openness and Secrecy; Individuals and Systems; Risk and Accident; and Automation and Intelligence. The course uses those themes, together with specific historical episodes, to raise further issues, examining how working technologies embody politics, social values, and identities; how technological risks and accidents jeopardize them; and how people and technical artifacts have drawn and redrawn the boundaries between openness and secrecy, public and private, humans and machines.

Specific topics include: the machines of Leonardo da Vinci, intellectual property from Gutenberg to YouTube, transportation from the Golden Age of Sail to driverless cars, nuclear accidents, genetically modified organisms, electrical blackouts, computer privacy and hacking.

Additional Requirements:

For Lassonde students, this course fulfills 3.0 credits of International Development Studies concentration requirement.

Required Course Text/Readings:

TENTATIVE

Course discussion will be based on chapters selected from the following, as well as other readings: Edgerton, David. *The Shock of the Old: Technology and Global History Since 1900*, Oxford; New York: Oxford University Press, 2011.

Hughes, Thomas Parke. *Human-Built World: How to Think About Technology and Culture*, Chicago: University of Chicago Press, 2004.

Maxigas. "Hackers against Technology: Critique and Recuperation in Technological Cycles." *Social Studies of Science* 47, no. 6 (December 1, 2017): 841–60.

Mullaney, Thomas S., Benjamin Peters, Mar Hicks, and Kavita Philip, eds. *Your Computer Is on Fire*. Cambridge, MA, USA: MIT Press, 2021.

All readings will be made available in digital format on eClass.

Weighting of Course:

TENTATIVE Grade Breakdown

- Discussion/Participation 20%

- Assignment I: Hackathon participation and write-up 20%
- Assignment II: Material object analysis (3-5 pages) 15%
- Midterm 20%
- Final 25%

Organization of the Course:

This course meets twice a week (TR 10-11:20 a.m.). Tuesdays will be an 80-minute lecture format; Thursdays will consist of two 40-minute discussion sections. At our first class you will sign up to regularly attend either the 10:00-10:40 a.m. or 10:40-11:20 a.m. discussion section.

Course Learning Objectives:

1 - better understand the history of technology from the Renaissance to the early twenty-first century, including being aware of the limited and contested nature of the complex and changing place of technology in social, cultural, economic, and environmental history.

2 - identify some methodologies and theoretical approaches used to delimit and contest our historical knowledge about technology, including technological determinism, social construction, systems thinking, and normal accidents.

3 - analyze primary sources in clear and effective prose

4 - engage with peers in discussion of historical source-material, arguments, and public concerns.

Additional Information/Notes:

Depending on the situation with the pandemic, hybrid attendance options and make-up assignments will be possible on a short-term basis for students who have exposures to Covid, etc.; however this class is designed for in-person participation.