

INF302H – Integrative Approaches to Technology and Society

Winter 2026

Lecture: Thursdays, 9am-11am
Bissell 507

Tutorial: Thursdays, 11am-12pm
Bissell 507 / 116

Instructor

Professor: Gustavo Ferreira
gustavo.ferreira@utoronto.ca

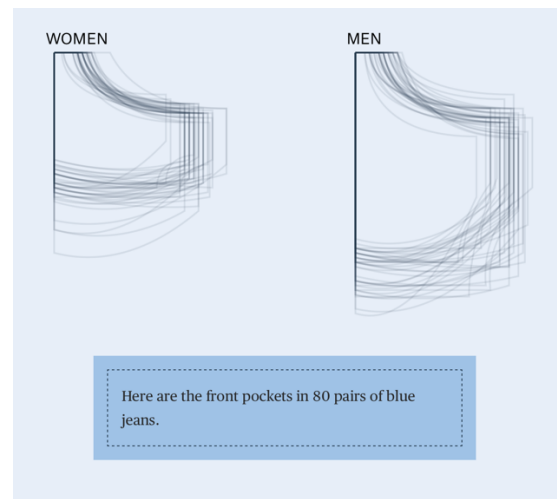
Office Hours: By appointment
(link available on Quercus)

TA: Brendan Allen
brendan.allen@mail.utoronto.ca

Office Hours: TBD

TA: Rowan Munson
rowan.munson@mail.utoronto.ca

Office Hours: TBD



Diehm, Jan, and Amber Thomas. 2018. "Women's Pockets Are Inferior." The Pudding. August 2018. <https://pudding.cool/2018/08/pockets/>.

Cruz, Sabrina, dir. 2024. *Why Women's Pockets Are Useless*. YouTube. Answer in Progress. https://www.youtube.com/watch?v=jA_e1Ew-Oog.

Acknowledgement of Traditional Land

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

Course Description

This course explores how society, culture, and understanding of the human condition influence, and are influenced by technological development. It focuses on the study of interdependent and institutionalized systems of law, economics, culture and technology, exploring the conditions of stability and instability in these systems. We will survey the available theories and methods for understanding large scale socio-technological systems.

Course Learning Outcomes (CLOs)

Students who have successfully completed this course will be able to:

CLO1: Gain knowledge of dominant historical and contemporary theories and approaches to understanding the complex role of technology in society, including the shift from determinism to relativism; social constructivism; questions of power; and major paradigms that define the field of Science and Technology Studies (STS).

CLO2: Develop skills in recognizing and analyzing the socio-technical complexity of information practice, and methods for studying the integrated relationship between technology and society from multiple perspectives, including technology as practice, as applied science, as its own form of knowledge, as a site of struggle and power, and as source of democratic and agentic potential

Relationship between BI Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs)

BI Program Learning Outcomes (PLOs)	CLO 1 contributes to these PLOs	CLO 2 contributes to these PLOs
PLO 2	X	X
PLO 3:	X	
PLO 10:		X

Assessments

Assessment of student learning will be conducted through exercises that evaluate taking part in the course experience (formative assessment) and mastery of its content (summative assessment). Both types can be present in a single assignment. The assignments below are not designed to punish students for "not knowing"; they are intended to reflect students' interests and effort and, most importantly, to represent intellectual achievement. They directly relate to or reproduce practices engaged in by authors of course materials and their content, and create opportunities to produce evidence of learning these practices and ideas, and critically evaluating them.

Assignment Overview			
Category	Assignment	Due Date	% of final grade
A1 - Learning Journey	A1.1 - Course Check-in 1	5 Feb	2
	A1.2 - Course Check-in 2	5 Mar	2
	A1.3 - Research Talk Response	6 Apr	6
	A1.4 - Course Catalogue	6 Apr	15
A2 - Failed Tech Analysis	A2.1 - Failed Tech Podcast Work-in-Progress	5 Feb	5
	A2.2 - Failed Tech Podcast	25 Feb	20
A3 - Sociotechnical Analysis	A3.1 - Anatomy of a Technology Infographic	26 Mar	25
	A3.2 - Anatomy of a Technology Presentation	2 Apr	15
	A3.3 - Anatomy of a Technology Short Paper	7 Apr	10

Assignment Descriptions

More details and rubrics will be available on Quercus. If you submit assignments by the due date, you will receive feedback on assessed material (at least 10% of the total grade) before the drop deadline. Check the “Late submission policy” for more details.

All assignments presuppose you have read all required readings and other materials, and you have participated in class, office hours and out-of-class activities.

A1 - Learning Journey - 25% Final Grade

Goal: assess the progress of achievement of the 2 CLOs: students' achievement of outlining the contents of the course and recognizing and analyzing concepts, multiple perspectives, debates and methodologies studied in the course.

Throughout the term, students will maintain a handwritten, physical notebook or binder in which they will collect reading notes, lecture notes, in-class write-ups, and artifacts that helped them learn. These will be compiled into a physical catalogue that tells the story of what they learned and presents these notes and artifacts as evidence of their participation in the course.

- **In-class Write-ups:** during **lectures** and **tutorials**, students will produce different types of assignments which result in short pieces of texts (short-answer questions and prompt responses). These will address all readings, ask for reflections or stances, or ask for development of projects and plans, which may include quotes from the texts, summaries, key arguments and other elements.

- **Lecture notes:** Notes you take during lectures and tutorials that account for what happened in class and contents discussed.
- **Artifacts:** physical objects, pictures of in-class moments and objects, out-of-class objects or pictures of spaces or moments, peer annotations, assignment sheets, crude primary sourced data from research, magazine or newspaper articles (other materials can be validated with instructors).

A1.1 and A1.2 Course Check-ins: During the semester, students will submit all pages of their notebooks referring to a period of the course to evidence their participation and understanding of materials.

A1.3 Research Talk Response: During the semester, students will be required to attend a public research talk at the iSchool, the Centre for Culture & Technology or another Higher Education institution. They will then write a short critical report (500 words) connecting the talk to at least one concept discussed in class.

A1.4 Course Catalogue: a compilation of all materials collected, clearly reorganized in sections, subsections and presentation paragraphs that tell a coherent story, including an introduction and a final reflection.

Note on costs:

A binder, enough sheets and a pen can be purchased for less than C\$10. The cost of printing typed notes, pictures and text highlights to add to your physical binder can cost from 10 to 75 cents per page at the university.

A2 - Failed Tech Analysis - 25% of Final Grade

Goal: evaluate students' recognition, analysis and use of methods of study of complex sociotechnical objects and initiatives in the course's first unit. (CLO 2)

In the first assignment, students will exercise a sociotechnical analysis by telling the story of a failed technology or technological product and presenting how the relationship between social, cultural, material and technical conditions contributed to its failure. The story and analysis will be presented in a 5- to 8-min podcast episode.

The show will be a production of the whole class, and each duo or trio will produce one episode. Students will have a script template, an opening and closing song, and a collection of sound effects to use in their episode, all in the same format.

A2.1 - Failed Tech Podcast Work-in-Progress: A draft script, samples of data gathered and short summaries for each dimension analyzed.

A2.2 - Failed Tech Podcast: The finalized episode, submitted and ready to be listened to in class, with a short informal explanation on submission day.

A3 - Sociotechnical Analysis 50% of Final Grade

Goal: evaluate students' recognition, analysis and use of methods of study of complex sociotechnical objects and initiatives derived from the whole course. (CLO 2)

For the main assignment, individual or groups of up to 3 students will analyze a technology or technological initiative (Following the example of Crawford and Joler's piece from the first week, and others).

A3.1 - Anatomy of a Technology Infographic: the production of a poster with a visualization of a specific technological piece, component or artifact based on the student's analysis. This poster will present an infographic that visually organizes information about the technology. Your focus should be on elucidating to the reader the complexity of technologies in its various dimensions: social, cultural, material and technical.

A3.2 - Anatomy of a Technology Presentation: If space is provided to us in the Student Commons, your group will print out your poster and exhibit it to the faculty on the last day of class. During class hours, you will be available to discuss your anatomy with your classmates and the public in the faculty as preparation for your short paper. If the Student Commons is not available, we will set up the presentations in our classroom.

A3.3 - Anatomy of a Technology Short Paper: Following Crawford and Joler's example, your group will write a paper (1000 to 1500 words) to accompany your infographic. This text will explain your infographic or map and provide more depth to the reader, referencing course readings, data and other peer-reviewed literature that inspired it, detailing your analysis and what motivated your choices in the graphic.

Brief Course Schedule

All dates in this schedule are tentative and subject to change. The detailed course schedule is at the end of the syllabus.

Overview		
Week	Topic	Date
I – Technology and Society		
Week 1	Integrating (in-class reading)	8 Jan
Week 2	Snow day	15 Jan
Week 3	What counts as a technology?	22 Jan
Week 4	How do societies shape technologies? Pt 1: relations	29 Jan
Week 5	How do societies shape technologies? Pt 2: politics	5 Feb
Week 6	How do societies and technologies co-construct each other?	12 Feb
Reading Week		16 to 20 Feb
II - The Sociotechnical Otherwise		
Week 7	On rear-view mirrors and looking back (no readings)	26 Feb
Week 8	How to make the sociotechnical readable?	5 Mar
Week 9	TBD: a mix of these two questions: How does indigenous technoscience reframe reality? How does marginal knowledge reframe technology?	12 Mar
III – The Sociotechnical everyday		
Week 10	What escapes technological design and how?	19 Mar
Week 11	What technological design reinforces and why?	26 Mar
Week 12	Disintegrating? Sociotechnics Expo (no readings)	2 Apr

Contact, Assumptions and Conduct

For contact about the course's structure and assessments, students can do so directly during office hours, by email or indirectly through a student representative. To book office hours, we will use an MS Bookings link on Quercus. You can direct other private inquiries to me or the TA by email, and we will try to respond within two business days.

All course updates and official information will be discussed *in class*. Quercus will be updated based on what happens in class. Emergency announcements from Quercus will also be sent to your email.

Basic assumptions

1. You will be in class. Presence, dialogue, and interaction are integral to knowledge production.
2. More than one thing can be true. It depends on the circumstances and details.

3. This is an undergraduate course. At this point, you know what a peer-reviewed paper is, you can search for it, and you have a good idea of how academic texts work.
4. While using digital technology is part of our daily lives, this does not mean you know how to use every interface or media language.
5. You have the independence and initiative to seek guidance for your work within (Instructors and classmates) and outside of the course (Library resources, Student Advising, Writing Support, etc.). This includes office hours.
6. You are being introduced to a few specialized concepts that relate to fundamental humanities concepts. You may not be familiar with all of them. This is expected.
7. You can and should make mistakes. The classroom is the place to do it. The consequence for mistakes is more dialogue and collective learning.
8. You want to break with “common sense” and use your perspective to problematize situations and theories, thereby changing your own and others’ perspectives. This does not mean to be a “contrarian” or “devil’s advocate.”
9. You are willing to experiment with non-digital tools and technologies. Use notebooks, pens, pencils, collages, and other materials.
10. You have and are further developing critical thinking skills: you want to imagine and find out how things ought to be, not just how they currently are.
11. We are working together, not against each other.

Class Conduct

When interacting with others, you should always be attentive to their well-being, use polite and non-aggressive language, justify your positions, and give sources of information. When expressing opinions, always consider how your thoughts align with various realities and perspectives.

We value **solidarity as a learning practice**: think and take your positions from a solidary position. You can do this by acknowledging how your context both affects and is affected by others, and how everyone, including instructors and classmates, shares common goals and interests. Your actions should be focused on these common goals. Be open to help and be helped.

Charitable, Critical and Hate-Readings

The choice of topics and readings is based on what I judge to be the most effective to achieve our CLOs, regardless of their controversy or widely recognized or lesser-known problematic elements. Required readings are not merely supplementary content, but a significant part of the topic. **You must read them!**

Here's a good guide on academic reading by Paul Edwards:

<http://pne.people.si.umich.edu/PDF/howtoread.pdf>

Your reading should always be **charitable**: assume (author and instructor) honesty, and seek their best (if flawed) argument, not its worst, to argue against.

In cases where there are controversies about authors, content, or their use of particular terms, we should always consider their context, limitations, and contributions while also questioning their effectiveness in achieving our goals. However, we should not ignore or dismiss the text without engaging with it constructively. This is a **critical** reading process. Even when assuming honesty, keep imagining alternatives to what they say.

You are allowed one "**hate-reading**" during the semester (in writing or discussion), in case you just can't stand the author or their arguments. But you should direct your rage wisely. Once you use it, it's gone.

Formatting, Citation and Reference Styles

Whenever you submit a text-based document, it must be formatted according to basic academic writing elements. You should use a serif font (such as Times New Roman), size 12pt, double-space and 2.54 cm (1 inch) margins in a letter-sized page.

The university offers MS Word for writing. There are open-source options, such as LibreOffice and LaTeX, or note-taking markdown apps like Obsidian and Bear, which can export PDFs with these basic formatting elements.

For citations and reference styles, I strongly recommend using the Chicago-style author-date format. You can find more information and writing references in the Chicago Manual of Style Online. This style does not suppress the full author's name, helping with identification. However, you can choose from widely used styles such as APA, MLA.

I recommend using Zotero to manage, track, and generate your sources, citations, and reference lists.

Late Submission Policy

Two types of activities generate assessment in this course: In-class and out-of-class.

In-class activities

These are the ones made in the presence of the instructors and classmates during official class time. This type includes activities you do in part out of class, but that need to be finalized in class. They cannot be compensated, except when Accessibility Services grant specific accommodations **in advance**. **If you missed it, it's gone.**

Out-of-class activities

These are writings, reports, recordings, productions and any other type of activities that generate a final deliverable done out of official class time, not necessarily in the

presence of the instructors, and to be submitted on Quercus or delivered in person. These have deadlines, which will then be graded and returned with feedback from the deadline up to 3 weeks afterwards.

After the deadline, **you can submit your assignment at any point in the semester until one week after the end of classes without penalty.** However, **late submissions will only be graded and returned to you** when final grades are finalized and submitted to e-marks **at the end of the term (deadline for grade submissions).** This means that **if you do not submit assignments by the deadline, you might not have feedback before the last official day to drop the course.**

I **strongly** advise you to follow the assignment due dates. They are set to reflect our grade submission deadlines and to provide a reasonable time for assessment and feedback. To ensure you receive feedback in a timely manner and your projects progress properly, please submit your assignments on time. All assignments labelled as late by Quercus will fall under this policy. If you miss the deadline by a few hours or one full day, you **may** still receive feedback as if you submitted on time, **but this is not guaranteed.** This is dependent on whether we have time to go back to barely-late assignments.

Within the instructor's purview, no additional extensions or penalties will be accepted for any reason. Please, do not ask.

I encourage you to read about Accessibility Services by following the link in the Faculty Policies section below, explore other accommodations for your assignments if needed, and then discuss them with me.

Generative AI Policy

I **strongly** advise against using Generative AI in general. **The use of such tools for in-class assignments is prohibited.** Students may choose to use generative artificial intelligence tools as they work through the out-of-class assignments in this course; this use must be documented in an appendix for each assignment. The documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work.

Course instructors reserve the right to ask students to explain their process for creating their assignment, to remove marks for formality criteria in cases of flawed documentation, and to consider GenAI to affect other marking criteria (i.e. degrading writing quality, inaccuracies or hallucinations).

If you have not used GenAI in your assignment, you must add the statement as the last line of the document, after references:

“Generative AI Statement: I (we) did not use any Generative AI tool (such as MS Copilot, ChatGPT, Claude, Gemini) in the planning, creation or finalization of this assignment.”

Detailed Course Schedule

All dates are tentative and may change.

Each week has specific learning goals that correspond to our CLOs. Additionally, all topics include the following learning goals:

- Identify and rephrase each author's central claim or thesis.
- Summarize their arguments.
- Provide accurate definitions of the key terms the authors use.

Week 1 – Integrating – 8 Jan

Teaching philosophy, syllabus, assessments and all things formal.

Learning Goals

Explain the rationale of the course, its routines, what the expectations are and how to meet them (from the instructors' and students' perspectives). Understand how complex the relationship is between a piece of technology and sociocultural, political and economic structures.

In-Class Reading

Crawford, Kate, and Vladan Joler. 2019. "Anatomy of an AI System." *Virtual Creativity* 9 (1): 117–20. https://doi.org/10.1386/vcr_00008_7.

Week 2 – What counts as a technology? – 15 Jan

An overview of the concept of technology.

Learning Goals

Explain the concept of technology in its nuances and contradictions.

Required Reading

Schatzberg, Eric. 2018. "Introduction." In *Technology: Critical History of a Concept*, 1st ed., 1–15. Chicago: University of Chicago Press.

Schatzberg, Eric. 2018. "Conclusion." In *Technology: Critical History of a Concept*, 1st ed., 214–36. Chicago: University of Chicago Press.
<https://doi.org/10.7208/9780226584027>.

Week 3 – How do societies shape technologies? Pt 1: relations – 22 Jan

A relational theory of technology that privileges the social construction of mechanisms and reality.

Learning Goals

Explain the social processes that lead to technological development and how these culture, politics and knowledge are built-in technologies.

Required Reading

Pinch, Trevor, and Wiebe E. Bijker. 2012. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, by Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, 11–44. The MIT Press. <https://muse-jhu-edu.proxy3.library.mcgill.ca/book/19813>.

Week 4 – How do societies shape technologies? Pt 2: politics – 29 Jan

Further detailed theory of social construction of technology with special attention to the material qualities and politics of technology and social life.

Learning Goals

Explain how objects, artifacts, devices and mechanisms become and operate as political entities.

Required Reading

Winner, Langdon. 1980. "Do Artifacts Have Politics?" *Daedalus* 109 (1): 121–36. <https://www.jstor.org/stable/20024652>.

Week 5 – How do societies and technologies co-construct each other? – 05 Feb

An attempt to resolve the society and technology dichotomy by explaining how their relationship is codependent and its results co-constructed.

Learning Goals

Understand and evaluate the mutual influence between technology and culture.

Required Reading

Haraway, Donna. 2006. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century." In *The International Handbook of Virtual Learning Environments*, edited by Joel Weiss, Jason Nolan, Jeremy Hunsinger, and Peter Trifonas, 117–58. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-1-4020-3803-7_4.

Week 6 – On rear-view mirrors and looking back – 12 Feb

We review the first half of the course and look ahead to the second.

Learning Goals

Summarize and apply concepts of technology, social construction and co-construction to contemporary problems of technological development.

No Required Reading

READING WEEK – NO CLASSES – 16 to 20 Feb

How about disrupting and destroying a piece of technology during the break? Post pictures!

Week 7 – How to make the sociotechnical readable? – 26 Feb

The study of infrastructures. We move on to new imaginaries and tactics to defy, redefine and make public what technologies are and can be.

Learning Goals

Recognize and analyze the less visible sociocultural dimensions of technological artifacts.

Required Reading

<p>Star, Susan Leigh. 1999. "The Ethnography of Infrastructure." <i>American Behavioral Scientist</i> (Thousand Oaks) 43 (3): 377–91. https://doi.org/10.1177/00027649921955326.</p>

Week 8 – How does indigenous technoscience reframe reality? – 5 Mar

We look at the issues with the Western notion of technology and use indigenous technoscience as an alternative, more appropriate way to understand and relate to technology.

Learning Goals

Critique Western, colonizing, technological development and adoption and develop a more nuanced approach to study and use technology by understanding indigenous perspectives.

Required Reading

<p>TallBear, Kim. 2013. "The DNA Dot-Com - Selling Ancestry." In <i>Native American DNA: Tribal Belonging and the False Promise of Genetic Science</i>, 67–103. Minneapolis, UNITED STATES: University of Minnesota Press.</p>
--

Week 9 – How does marginal knowledge reframe technology? – 12 Mar

We further our critique of Westernized technology by questioning the modern notion of objectivity and challenging relativism by understanding positionality as a source of higher levels of objectivity.

Learning Goals

Understand and evaluate the ideas of objectivity and relativism in technoscience. Explain the notion of “strong objectivism” as an effective way of addressing questions of knowledge and marginality.

Required Reading

<p>Harding, Sandra. 1995. “‘Strong Objectivity’: A Response to the New Objectivity Question.” <i>Synthese</i> 104 (3): 331–49. https://doi.org/10.1007/BF01064504.</p>

Week 10 – What escapes technological design and how?– 19 Mar

The course moves on to detail impositions of and challenges to technology. This week, we analyze how human agency refuses or does not conform to technological norms.

Learning Goals

Describe social processes that lead to deviant or disruptive uses of technology.

Required Reading

<p>Wyatt, Sally. 2003. <i>Non-Users Also Matter: The Construction of Users and Non-Users of the Internet</i>. October 10. https://doi.org/10.7551/mitpress/3592.003.0006.</p>
--

Week 11 – What technological design reinforces and why? – 26 Mar

The final readings of the course focus on how technology can extend social structures and how this recognition can drive alternative approaches to technological design.

Learning Goals

Recognize and evaluate alternative technological design strategies.

Required Reading

<p>Costanza-Chock, Sasha. 2020. “Introduction: #TravelingWhileTrans, Design Justice, and Escape from the Matrix of Domination.” In <i>Design Justice: Community-Led Practices to Build the Worlds We Need</i>. The MIT Press. https://doi.org/10.7551/mitpress/12255.001.0001.</p>
--

<p>Costanza-Chock, Sasha. 2020. “1 Design Values: Hard-Coding Liberation?” In <i>Design Justice: Community-Led Practices to Build the Worlds We Need</i>. The MIT Press. https://doi.org/10.7551/mitpress/12255.001.0001.</p>

Week 12 – Disintegrating? Expo-technologies – 2 Apr

We explore the results of your sociotechnical analysis and how the course's fundamental ideas provided the conceptual and historical tools for achieving our CLOs.

Learning Goals

Demonstrate mastery of the course content and its application to contemporary sociotechnical questions.

No Required Readings**Faculty policies, resources and more**

Students must be familiar with all information related to grading policies, health and wellness, accessibility services and accommodations, academic integrity, student absence and declaring an absence in ACORN, and academic dates and deadlines. This information is common to all undergraduate courses syllabi and can be found on [Required Common Syllabus Elements Undergraduate Courses 2025-2026 \(PDF\)](#)

Note on Copyright

INF302 - Integrative Approaches to Technology and Society © 2026 by Gustavo Ferreira is licensed under Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International. To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-sa/4.0/>