



THE UNIVERSITY OF BRITISH COLUMBIA

School of Information
Faculty of Arts

We acknowledge that we are on the traditional, ancestral and unceded territory of the hən̓q̓əmi̓n̓əm̓ speaking Musqueam people.

iSchool Mission: Through innovative research, education and design, our mission is to enhance humanity's capacity to engage information in effective, creative and diverse ways.

LIBR 559A: Sociotechnical Perspectives of Information Systems – Course Syllabus (3)

Program:	MLIS, DUAL, MAS (with GA permission)
Year:	2023 Summer Term 1 (May 15 – June 22)
Course Schedule:	Mon + Wed, 2pm – 5pm
Location:	Hebb 116
Instructor:	Dr. Kevin Day
Office location:	
Office phone:	
Office hours:	By appointment
E-mail address:	kevinday@mail.ubc.ca
Learning Management Site:	http://lthub.ubc.ca/guides/canvas/

Course Goal: The purpose of this course is to explore the sociotechnical aspects of information systems. This course will draw upon multiple perspectives, including information science, sociology, anthropology, human-computer interaction, and media and communication studies to critically examine the ways in which technologies shape and are shaped by their contexts of use. To this end, we will focus on information practices within groups, communities and organizations, the constraints and opportunities afforded through technologies, and how social, political, and historical influences are intertwined with technology.

FNCC specialization: The assignments in this course can serve the requirements of the First Nations Curriculum Concentration (FNCC). If students would like to take this course for FNCC credit, they are invited to contact me to discuss this option.

Learning Outcomes: Upon completion of this course students will be able to

- Understand and utilize different perspectives in the appraisal of information technology [1.2]*
- Identify social, technical, historical, political and organizational factors that shape and are shaped by technology [1.3, 1.4]*
- Describe instances where technologies have failed, succeeded, or had unintended consequences and the potential reasons behind these outcomes [1.3, 1.4]*
- Analyze the implications of sociotechnical factors on the design, adoption, evaluation and use of technology, especially in information settings [1.3, 1.4, 4.1]*
- Evaluate different types of information systems in various contexts, such as learning and workplace environments, including libraries [1.3, 1.4, 4.1]*

Course Topics:

- Historical perspectives on technology and society



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- Artifacts and Practices
- Technology and the workplace
- Technology and social relationships
- Design approaches
- Implementation: adoption and diffusion
- Use: intended and unintended outcomes

Prerequisites:

MLIS and Dual MAS/MLIS: completion of the MLIS core.

MAS: completion of MAS core and permission of the iSchool Graduate Advisor

Format of the course: In-person, with meetings twice a week. Classes will consist of lectures, presentation, exercises, and discussions.

Estimated number of weekly hours students should dedicate to this class (preparation activities + class activities): approximately 9 -10 hours per week (readings, preparation, assignments); please note there are 2 lectures per week

Required and Recommended Reading:

Required Readings:

- Billey, A., Drabinski, E., & Roberto, K. R. (2014). What's Gender Got to Do with It? A Critique of RDA 9.7. *Cataloging & Classification Quarterly*, 52(4), 412–421. <http://doi.org/10.1080/01639374.2014.882465>
- Crawford, K. (2021). *Atlas of AI: Power, politics, and the planetary costs of artificial intelligence*. Yale University Press.
- Diaz, A. (2008). Through the Google Goggles: Sociopolitical Bias in Search Engine Design (pp. 11–34). Springer Berlin Heidelberg. Available at: https://link.springer.com/content/pdf/10.1007%2F978-3-540-75829-7_2.pdf
- Doyle, A.M., Lawson, K., and Dupont, S. (2015). Indigenization of knowledge organization at the Xwi7Xxwa Library. *Journal of Library and Information Studies*, 13(2), 107-134. Available at: <http://jlis.lis.ntu.edu.tw/article/v13-2-s1.pdf>
- Eubanks, V. (2018). *Automating inequality: how high-tech tools profile, police, and punish the poor*. St. Martin's Press.
- Feenberg, A. (1999). *Questioning technology*. Routledge.
- Friedman, B., Kahn, P. H., Borning, A., & Hultgren, A. (2013). Value Sensitive Design and Information Systems. In N. Doorn, D. Schuurbiens, I. van de Poel, & M. E. Gorman (Eds.), *Early engagement and new technologies: Opening up the laboratory* (pp. 55–95). Springer Netherlands. Available at: https://link.springer.com/content/pdf/10.1007%2F978-94-007-7844-3_4.pdf
- Fuchs, C. (2017). *Social media : a critical introduction*. London: Sage.
- Kantayya, S. (2020). *Coded bias*. 7th Empire Media. <https://stream.mcintyre.ca/ubc/title/22712>



- Latour, B. (1988). Mixing Humans and Nonhumans Together: The Sociology of a Door-Closer. *Social Problems*, Vol. 35, No. 3, June 1988.
- Lindberg, O. (2020). Designing a greener web: An interview with Gerry McGovern. *Shaping Design*. <https://www.editorx.com/shaping-design/article/gerry-mcgovern-designing-greener-web>
- Nieuwsma, D. (2004). Alternative Design Scholarship: Working Toward Appropriate Design. *Design Issues*, 20(3), 13-24. Available at: <http://www.jstor.org/stable/1511985>
- Noble, S. U. (2018). *Algorithms of Oppression*. NYU Press.
- O'Neil, C. (2016). *Weapons of math destruction : how big data increases inequality and threatens democracy*. Allen Lane.
- Obringer et al. (2021). The overlooked environmental footprint of increasing Internet use. *Resources, Conversation and Recycling*, Vol. 167. <https://www.sciencedirect.com/science/article/pii/S0921344920307072>
- Walsham, G. (1997). Actor-Network Theory and IS Research: Current Status and Future Prospects. In *Information Systems and Qualitative Research* (pp. 466–480). Boston, MA: Springer US. Available at: https://link.springer.com/content/pdf/10.1007%2F978-0-387-35309-8_23.pdf
- Webster, F. (2014). *Theories of the information society* (4th Edition). Routledge.
- Winner, L. (1980). Do Artifacts Have Politics? *Daedalus*, Vol. 109, No. 1, Modern Technology: Problem or Opportunity? (Winter, 1980), pp. 121-136. The MIT Press. Available online at: <https://innovate.ucsb.edu/wp-content/uploads/2010/02/Winner-Do-Artifacts-Have-Politics-1980.pdf>
- Zanolli, B. et al. (2018). Feminist infrastructure and community networks: An opportunity to rethink our connections from the bottom up, seeking diversity and autonomy. *Global Information Society Watch*. https://giswatch.org/sites/default/files/gw2018_t7_feminist_infrastrucutre.pdf

Recommended Readings:

- Arias-Hernandez, R. (2013). Exceptional Engineering: Challenges and Opportunities for Socially Just Engineering in Non-governmental Organizations in Colombia. In J. Lucena (Ed.), *Engineering Education for Social Justice* (pp. 227–242). Available at: https://link.springer.com/content/pdf/10.1007%2F978-94-007-6350-0_11.pdf
- Cooke, N. A., Sweeney, M. E., & Noble, S. U. (2016). Social Justice as Topic and Tool: An Attempt to Transform an LIS Curriculum and Culture. *The Library Quarterly*, 86(1), 107–124. <http://doi.org/10.1086/684147>
- D'Ignazio, C., & Klein, L. (2020). *Data Feminism*. MIT Press.
- Lewis, E. (Ed.). (2020). Indigenous Protocol and Artificial Intelligence Position Paper. <https://www.indigenous-ai.net/position-paper>
- Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: or How the Sociology of Science and the Sociology of Technology might Benefit Each Other. *Social Studies*



of Science, 14(3), 399–441. Available online at: <http://www.ihs.uw.edu.pl/wp-content/uploads/2012/10/The-Social-Construction-of-Facts-and-Artefacts.pdf>

- Pipkin, E. (2021). Here is the article you can send to people when they say ‘But the environmental issues with cryptoart will be resolved soon, right?’ *Medium*.
<https://everestpipkin.medium.com/but-the-environmental-issues-with-cryptoart-1128ef72e6a3>
- West, M., Kraut, R., & Han, E. C. (2019). I’d blush if I could: Closing gender divides in digital skills through education. UNESCO + EQUALS Skills Coalition.
<https://unesdoc.unesco.org/ark:/48223/pf0000367416.page=1>

Course Assignments:

Assignment Name	Due Date	Weight	Graduate Competencies
In-class Discussions	Weekly in class	10%	1.2, 1.3, 1.4, 4.1
Co-construction of Society and Technology – Analytic Report	June 4	30%	1.1, 1.2, 1.3, 1.4, 4.1
In-class Presentation – Extensions from Readings	Various classes throughout the term	25%	1.2, 1.3, 1.4, 4.1
Proposal for Socially-Just Information System, Products, or Services	July 2	35%	1.1, 1.2, 1.3, 1.4, 4.1, 4.2

Course Schedule:

Date	Topic	Readings
May 15: Lecture 1	Introduction Politics of technology	Winner (1980) (excerpts) Diaz (2008)
May 17: Lecture 2	SCOT, ANT, and the co-construction of society and technology	Latour (1988) Walsham (1997)
May 24: Lecture 3	Change & the Information Society: Bell & Castells	Webster (2014): Ch. 4 + 6 (excerpts)
May 24: Lecture 4	Status Quo & the Information Society: Schiller & Feenberg	Webster (2014): Ch. 8 (excerpts) Feenberg (1999): Ch. 4 (excerpts)
May 29: Lecture 5	Big Data and Inequality	O’Neil (2016): Ch. 1, and one of the following (Ch. 5, 7, or 8) Coded Bias (2020)
May 31: Lecture 6	Social Media and Inequality	Fuchs (2017): Ch. 5 and 11
June 5: Lecture 7	Values in the design of information technology	Friedman et al. (2013) Nieusma (2004)
June 7: Lecture 8	Information Systems for Socially and Culturally Diverse Communities I	Billey et al. (2014) Zanolli et al. (2018)



June 12: Lecture 9	Information Systems for Socially and Culturally Diverse Communities II	Noble (2018): Ch.5 Doyle et al. (2015)
June 14: Lecture 10	Information Systems for Socially and Culturally Diverse Communities III	Eubanks (2018): Ch. 1, and one of the following (Ch. 2, 3, or 4)
June 19: Lecture 11	Information Systems and Ecology	Obringer et al. (2021) Lindberg (2020) Crawford (2021): Ch. 1
June 21: Lecture 12	Guest Lectures + Potential Future Directions	

Attendance: Attendance is required in all class meetings. If you know you are going to be absent, please inform me beforehand if possible. Students are expected to have completed the assigned readings prior to the class.

Evaluation: All assignments will be marked using the evaluative criteria given on the [iSchool web site](#). Assignments have to be delivered by the expected due date. Late assignments within a week of the expected deadline will be received and penalized with deduction of points as a late assignment penalty. After one week of the expected deadline, late assignments will not be accepted or graded unless you have been granted an explicit exception by the instructor.

Required Materials: All reading materials will be provided by the instructor.

Academic Concession: If you miss marked coursework for the first time (assignment, exam, presentation, participation in class) and the course is still in-progress, **speak with me immediately** to find a solution for your missed coursework. Any concessions that will result in a change to the student record (such as late withdrawal from the course) will be referred to the Faculty of Graduate and Postdoctoral Studies for evaluation. If this is not the first time you have requested concession or classes are over, please consult the [Faculty of Graduate and Postdoctoral Studies' webpage on academic concession](#), and then contact me where appropriate.

Policies and Resources to Support Student Success: UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (<https://senate.ubc.ca/policies-resources-support-student-success>)

Academic Integrity: The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are



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kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the [UBC Calendar: Student Conduct and Discipline](#). Academic misconduct includes cheating, plagiarism, and self-plagiarism <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,959> (§7)

Academic Accommodation for Students with Disabilities: Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with the [Centre for Accessibility](#) (previously known as Access & Diversity). The Centre will determine that student's eligibility for accommodations in accordance with [Policy LR7: Accommodation for Students with Disabilities \(Joint Senate and Board Policy\)](#). Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with the Centre for Accessibility should the accommodations affect the essential learning outcomes of a course.

Canvas: UBC's e-learning system <https://canvas.ubc.ca> will be used to organize class resources, slides, and additional material. It will also be used to manage assignments, grades, and in-class exercises. Make sure that you check the course space in Canvas constantly for announcements, resources, assignments, feedback and grades.