

# Politics of Code

## FILM 240

Wed 4:00-7:00  
Dwinelle 226  
No Lab

Prof. Jacob Gaboury  
Office Hours: Monday 3-5pm  
Office Location: 6223 Dwinelle

### COURSE DESCRIPTION

This course begins with the twin propositions that all technology is inherently political, and that digital technologies have come to define our contemporary media landscape. Software, hardware, and code shape the practices and discourses of our digital culture, such that in order to understand the present we must take seriously the politics of the digital. Beginning with an overview of cybernetics, information theory, systems theory, and distributed communications networks, the course will primarily focus on the politics and theory of the past twenty years, from the utopian discourses of the early web to the rise of immaterial labor economies and the quantification and management of subjects and populations. The course will be structured around close readings of specific technologies such as distributed networks, programming languages, and digital software platforms in an effort to ground critical theory with digital practice. Our ultimate goal will be to identify a political theory of the present age - one that takes seriously the role of computation and digitization.

### Required Texts

NOTE: All texts but our final three books will be available for purchase as a course reader from University Copy. It is therefore essential that you bring a copy of the readings to each class and refer to them in our discussion. The following four books will be read in full and should be purchased as physical copies:

Bridle, James. *New Dark Age: Technology and the End of the Future*. Verso Books, 2018.

Bucher, Taina. *If... Then: Algorithmic Power and Politics*. Oxford University Press, 2018.

Coleman, E. Gabriella. *Coding Freedom: The Ethics and Aesthetics of Hacking*. Princeton University Press, 2012.

Edgerton, David. *Shock of the Old: Technology and Global History since 1900*. Profile books, 2011.

## CLASS SCHEDULE

**08/22**

### INTRODUCTION

Syllabus Presentation

General Introductions

**08/29**

### POLITICS

Winner, Langdon. "Mythinformation" in *The Whale and the Reactor: A Search for Limits in an Age of High Technology*. University of Chicago Press, 2010.

Latour, Bruno. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts" In *Shaping Technology-Building Society. Studies in Sociotechnical Change*. Wiebe Bijker and John Law eds. MIT Press. (1992) 225-259.

McPherson, Tara. "US operating systems at mid-century: The intertwining of race and UNIX." In *Race after the Internet*. Routledge (2013) 27-43.

Philip, Kavita, Lilly Irani, and Paul Dourish. "Postcolonial computing: A tactical survey." *Science, Technology, & Human Values* 37, no. 1 (2012): 3-29.

#### *Supplemental:*

Crawford, Kate. "Can an algorithm be agonistic? Ten scenes from life in calculated publics." *Science, Technology, & Human Values* 41, no. 1 (2016): 77-92.

Winner, Langdon. "Do artifacts have politics?." *Daedalus* (1980): 121-136.

Pinch, Trevor J., and Wiebe E. Bijker. "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, no. 3 (1984): 399-441.

Shilton, Katie. "Values levers: Building ethics into design." *Science, Technology, & Human Values* 38, no. 3 (2013): 374-397.

**09/05**

### CODE

Bucher, Taina. *If... Then: Algorithmic Power and Politics*. Oxford University Press, 2018.

*Supplemental:*

Gillespie, Tarleton. "The relevance of algorithms." *Media technologies: Essays on communication, materiality, and society* 167 (2014).

Chun, Wendy Hui Kyong. "On" sourcery," or code as fetish." *Configurations* 16, no. 3 (2008): 299-324.

Mackenzie, Adrian. "The performativity of code: Software and cultures of circulation." *Theory, Culture & Society* 22, no. 1 (2005): 71-92.

Kittler, Friedrich A. "Code" in *Software Studies: A Lexicon*. Fuller, Matthew, Roger F. Malina, and Sean Cubitt, eds. MIT Press, 2008. 40-47.

**09/12**

**SOFT**

Kay, Alan. "Computer Software" *Scientific American*. Vol. 251 No. 3. September 1984. 53-59.

Chun, Wendy Hui Kyong. "On software, or the persistence of visual knowledge." *Grey Room* (2005): 26-51.

Galloway, Alexander R. "Language wants to be overlooked: On software and ideology." *Journal of Visual Culture* 5, no. 3 (2006): 315-331.

Kittler, Friedrich A. "There is No Software" in *The Truth of the Technological World: Essays on the Genealogy of Presence*. Stanford University Press, 2014. 147-155.

Manovich, Lev. "There is only software." *Doing Cultural Studies: the story of the Sony Walkman* (2011): 136-138.

*Supplemental:*

Fuller, Matthew, Roger F. Malina, and Sean Cubitt, eds. *Software studies: A lexicon*. Mit Press, 2008.

Manovich, Lev. *Software takes command*. A&C Black, 2013.

Chun, Wendy Hui Kyong. *Programmed visions: Software and memory*. MIT Press, 2011.

Wardrip-Fruin, Noah. *Expressive Processing: Digital fictions, computer games, and software studies*. MIT press, 2009.

**09/19**

**HARD**

Ensmenger, Nathan. "Dirty Bits: An Environmental History of Computing" Draft Manuscript. January 2017.

Burrington, Ingrid. "A Rare and Toxic Age" *Increment*. Iss. 4. February 2018.  
<https://increment.com/energy-environment/a-rare-and-toxic-age/>

Burrington, Ingrid. "The Environmental Toll of a Netflix Binge." *The Atlantic*, December 16, 2015.  
<http://www.theatlantic.com/technology/archive/2015/12/there-are-no-cleanclouds/420744/>

Bratton, Benjamin H. "Earth Layer" in *The Stack: On Software and Sovereignty*. MIT press, 2016. 75-107.

Todd Frankel and Peter Whoriskey, "The Cobalt Pipeline," "In Your Phone, In Their Air," "Tossed Aside in the White Gold Rush," *Washington Post* (September 30; October 2; December 19, 2016).  
<https://www.washingtonpost.com/graphics/business/batteries/congo-cobalt-mining-for-lithium-ion-battery/>  
<https://www.washingtonpost.com/graphics/business/batteries/graphite-mining-pollution-in-china/>  
<https://www.washingtonpost.com/graphics/business/batteries/tossed-aside-in-the-lithium-rush/>

*Supplemental:*

Hu, Tung-Hui. *A Prehistory of the Cloud*. MIT Press, 2015.

Peters, John Durham. *The marvelous clouds: Toward a philosophy of elemental media*. University of Chicago Press, 2015.

Veronese, Keith. *Rare: The High-Stakes Race to Satisfy Our Need for the Scarcest Metals on Earth*. Amherst, New York: Prometheus Books, 2015.

*Technosphere Magazine*. Haus der Kulturen der Welt. Berlin, 2016-2018.  
<https://technosphere-magazine.hkw.de/>

**09/26**

**FREEDOM**

Coleman, E. Gabriella. *Coding Freedom: The Ethics and Aesthetics of Hacking*. Princeton University Press, 2012.

*Supplemental:*

Stallman, Richard. "The GNU manifesto." (1985): 273-280.  
<http://www.gnu.org/gnu/manifesto.html>

Kelty, Christopher M. *Two bits: The cultural significance of free software*. Duke University Press, 2008.

Benkler, Yochai, and Helen Nissenbaum. "Commons-based peer production and virtue." *Journal of political philosophy* 14, no. 4 (2006): 394-419.

**10/03**

**NO CLASS**

"Screen Images Reloaded" Workshop Presentation. Lucerne University of Applied Sciences and Arts. Lucerne, Switzerland.

**10/10**

**CONTROL**

Irani, Lilly. "The cultural work of microwork." *New Media & Society* 17, no. 5 (2015): 720-739.

Stark, Luke. "Algorithmic psychometrics and the scalable subject." *Social studies of science* 48, no. 2 (2018): 204-231.

Nakamura, Lisa. "Indigenous circuits: Navajo women and the racialization of early electronic manufacture." *American Quarterly* 66, no. 4 (2014): 919-941.

Levy, Karen EC. "The contexts of control: Information, power, and truck-driving work." *The Information Society* 31, no. 2 (2015): 160-174.

*Supplemental:*

*Black Mirror* "Nosedive" Season 3, Episode 1. Directed by Joe Wright. Written by Charlie Brooker. Netflix. October 21, 2016.

Stark, Luke, and Kate Crawford. "The conservatism of emoji: Work, affect, and communication." *Social Media+ Society* 1, no. 2 (2015): 2056305115604853.

Noble, Safiya Umoja. *Algorithms of Oppression: How search engines reinforce racism*. NYU Press, 2018.

Eubanks, Virginia. *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press, 2018.

O'Neil, Cathy. *Weapons of math destruction: How big data increases inequality and threatens democracy*. Broadway Books, 2016.

**10/17**

**NO CLASS**

Panel Presentation. Association for the Study of the Arts of the Present (ASAP).  
New Orleans, LA.

**10/24**

**DISRUPT**

Edgerton, David. *The Shock of the Old: Technology and Global History since 1900*. Profile Books, 2011.

*Supplemental:*

Block, Fred, and Matthew R. Keller. "Where do innovations come from? Transformations in the US economy, 1970–2006." *Socio-Economic Review* 7, no. 3 (2009): 459-483.

Isaacson, Walter. *The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution*. Simon & Schuster. (2014).

Hughes, Thomas P. "The evolution of large technological systems." *The social construction of technological systems: New directions in the sociology and history of technology* 82 (1987).

Edwards, Paul N. "Infrastructure and modernity: Force, time, and social organization in the history of sociotechnical systems." *Modernity and technology* 1 (2003): 185-226.

**10/31**

**MAINTAIN**

Russell, Andrew, and Lee Vinsel. "Hail the Maintainers." *Aeon Essays* (2016).

Jackson, Steven J. "Rethinking Repair" in *Media technologies: Essays on communication, materiality, and society*. Gillespie, Tarleton, Pablo J. Boczkowski, and Kirsten A. Foot, eds. MIT Press, 2014. 221-239.

Mattern, Shannon. "Community Plumbing." *Places Journal* (July 2018).

Star, Susan Leigh. "The ethnography of infrastructure." *American behavioral scientist* 43, no. 3 (1999): 377-391.

Houston, Lara, Steven J. Jackson, Daniela K. Rosner, Syed Ishtiaque Ahmed, Meg Young, and Laewoo Kang. "Values in repair." In *Proceedings of the 2016 CHI conference on human factors in computing systems*, pp. 1403-1414. ACM, 2016.

*Supplemental:*

Cowan, Ruth Schwartz. *More work for mother*. Basic Books, 1983.

Federici, Silvia. *Wages against housework*. Bristol: Falling Wall Press, 1975.

Rosner, Daniela K., and Morgan Ames. "Designing for repair?: infrastructures and materialities of breakdown." In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing*, pp. 319-331. ACM, 2014.

"Special Issue: Maintenance & repair in science and technology studies." *TECNOSCIENZA: Italian Journal of Science & Technology Studies*. Denis, Jérôme, Alessandro Mongili, and David Pontille eds. 6, no. 2 (2016).

"Special Issue: R3PAIR." *continent..* Lara Houston, Daniela K Rosner, Steven J. Jackson, Jamie Allen, eds. Iss. 6.1 2017.  
<http://continentcontinent.cc/index.php/continent/issue/view/27>

**11/07**

**RELATION**

Deleuze, Gilles. "Postscript on control societies." *Negotiations: 1972–1990* (1995): 177-82.

Dourish, Paul. "Packets, Protocols, and Proximity: The Materiality of Internet Routing." *Signal Traffic: Critical Studies of Media Infrastructures* (2015): 183-204.

Galison, Peter. "War against the center." *Grey Room* (2001): 5-33.

Brunton, Finn. "Constitutive interference: Spam and online communities." *Representations* 117, no. 1 (2012): 30-58.

*Supplemental:*

Baran, Paul. "On distributed communications networks." *IEEE transactions on Communications Systems* 12, no. 1 (1964): 1-9.

Deleuze, Gilles, and Félix Guattari. "Introduction: rhizome." *A thousand plateaus: Capitalism and schizophrenia 2* (1987): 3-25.

Hall, Eric. *Internet core protocols: The definitive guide*. "O'Reilly Media, Inc.", 2000.

Vaidhyanathan, Siva. *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy*. Oxford University Press, 2018.

**11/14**

**EVASION**

Blas, Zach, and Jacob Gaboury. "Biometrics and Opacity: A Conversation." *Camera Obscura: Feminism, Culture, and Media Studies* 31, no. 2 (92) (2016): 155-165.

Galloway, Alexander. "Black box, black bloc." *Communization and its discontents: Contestation, critique, and contemporary struggles* (2011): 238-249.

McGlotten, Shaka. "Black data." *No tea, no shade: New queer of color critique* (2016).

Browne, Simone. "Branding Blackness" in *Dark Matters: On the Surveillance of Blackness*. Duke University Press, 2015. 89-129.

Gaboury, Jacob. "Becoming NULL: Queer relations in the excluded middle." *Women & Performance: a journal of feminist theory* (2018): 1-16.

*Supplemental:*

Galloway, Alexander. 2017. "The Swervers vs. the F\*ck-Annies." *Alexander R. Galloway Blog*. May 22. <http://cultureandcommunication.org/galloway/the-swervers-vs-the-fck-annies>.

González, Jennifer. 2009. "The Face and the Public: Race, Secrecy, and Digital Art Practice." *Camera Obscura* 24 (1 (70)): 37-65.

Brunton, Finn, and Helen Nissenbaum. 2015. *Obfuscation: A User's Guide for Privacy and Protest*. Cambridge, MA: MIT Press.

**11/28**

**FUTURES and ENDS**

Bridle, James. *New Dark Age: Technology and the End of the Future*. Verso Books, 2018.

Final Paper Lightning Talks

**12/12**

**FINAL PROJECTS DUE**



## **ASSESSMENT**

Engagement: 10%

Presentations: 20%

Weekly Reflections: 30%

Final Project: 40%

## **ENGAGEMENT**

I expect you to attend and actively engage in class. You will notice that you are being graded not simply on your attendance, but on your engagement with the class. Engagement can mean any number of things, from asking questions in class to engaging course material both in and out of class. I recognize that different students have different learning styles, and may find it challenging to speak up every day in discussion. The important thing is that you find ways to make your engagement legible to me as best you can. If you think you are struggling with this, please meet with me during office hours to discuss.

## **PRESENTATIONS**

Twice over the course of the semester, you will be responsible for leading discussion on the class readings for that day. Each class period I will begin with a 20-30 minute lecture/presentation on the broader framework of the reading we have done, its disciplinary home and historical context. Your responsibility will be to stick closely to the text, draw out its arguments and conflicts, and lead the class through key concepts that we might derive from the work. You are encouraged to produce handouts or supply media objects to help us think through and apply the readings to our own work.

## **WEEKLY REFLECTIONS**

*(adapted from Lily Irani)*

Each week, I ask you to spend time reflecting and synthesizing the readings for the week. I offer two modes for doing this:

1. **Precis:** a summary, reflection, and critical inquiry into the readings. The précis is a place where you can explicitly draw connections and contrasts between issues that animate your scholarship and the week's readings. You should focus on generous engagement, linking the readings to our discussions or to projects you are interested in. Obey the spirit, not the rule, so other reflective forms like field notes are fine.

2. Proposition: low-stakes sketches of one or two forms of materialized intervention -- including but not limited to design interventions, tactical media, or media production -- motivated by the insights, problematics, or critiques of the readings. Devote a paragraph (or more if you need) explaining the link between course materials and the sketches.

Each week, bring your reflection on paper to the class. Make sure any text is at least 14-16 point font for easy reading for a distance. We will tape them to the wall and read them together standing up to kick off the class.

The reflection must be posted to the wall within the first five (5) minutes of class. Since we start the class with everyone's contributions, please be on time. You may miss one week without penalty, and do not need to write a reflection for the weeks you present.

## **FINAL PROJECT**

*(adapted from Lucy Bernholz)*

Your final project is due on May 12 and can take one of two forms:

1. Design Intervention. Identify a problem, discuss relevant literature, and prototype an alternative.
2. In-Depth Case Study. Identify an example of politics in/as technology; situate within literature and debates; explain what circumscribes, challenges, or constricts its boundaries, and who participates; offer a theoretical claim on the nature of its political configuration.

Design interventions will be shorter than case studies, but will be supplemented by a functional prototype. Case studies will take the shape of a formal paper of 12-15 pages. We will host lightning talks on the final day of class where you will rehearse your argument and receive preliminary feedback.

## **POLICY ON INCOMPLETES**

I may offer extensions on writing assignments only if you provide me with at least three days' notice and sufficient evidence that you are working on an idea that requires more time. This does not guarantee an extension, but rather is the base requirement for a request. Do not ask for an extension the day before an assignment is due, or if you have not started writing yet. Late assignments will be docked 1/3 a grade for each day they are late (B+ to a B, B to a B-, etc.).

## **ACADEMIC INTEGRITY**

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic integrity page at the Center for Student Conduct's website at: <http://sa.berkeley.edu/conduct/integrity>.

## **DISABILITY SUPPORT SERVICES**

If you have a documented physical, psychological, medical or learning disability that may impact your course work, please contact the Berkeley Disabled Students Program, 260 César E. Chávez Student Center, #4250, (510) 643-0518. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.