# CPLS UN3770:
# Introduction to Digital Media
## Spring 2017
## [Room] | Tue/Thur, 1:10 - 2:25

Professor: Grant Wythoff
([gw2290@columbia.edu](mailto:gw2290@columbia.edu))
Heyman Center 304
Office Hours by appointment

---

**Skip to the schedule...**

## Description

Over the past decade, digital media have made strange the very fabric of our conversations, movements, aesthetic experiences, and political consciousness. These changes were prepared for by information theorists in the 1940s, cyberneticians in the 1950s, and the architects of networked computation in the 1960s. But only now have we begun to live out the futures that were dreamed of by these technologists. Today with our digital devices, we experience their dreams as beliefs, daily routines, and compulsions.

This class will introduce students to the history and theory of digital media. We will begin by examining the historical roots of the concept of "information," and then proceed along a "stack" of topics in digital culture: code, interface, device, infrastructure, and power. Each of these concepts will be explored through a comparative framework, using hands-on exercises and readings from across the disciplines, including the philosophy of computation, history of technology,

cultural studies, science fiction, and media theory. We will think historically (how have media been experienced as "new" at different moments in time?), theoretically (how exactly do we address "medium" as an object of study), and tactically (how can we use our local experience of digital devices as a framework for thinking global networks?).

## Unit Overview

- **Theories**
  - *definitions*
  - *tinkering*

- **Dreams**
  - *global cyberpunk*
  - *afrofuturism*

- **Approaches**

- **Code**

- **Interfaces**
  - *users*
  - *makers*

- **Devices**
  - *privacy*
  - *habits*

- **Infrastructures**
  - *networks*
  - *waste*

- **Power**
  - *control*
  - *publics*

# Grade breakdown

**20% attendance, participation, reading**

Including potential reading quizzes and in-class activities.

**20% writing exercises**

Students are required to post four total writing assignments to the CourseWorks blog by 7:00 am Tuesday during weeks 2, 4, 6, and 10 of the semester (they are marked in the schedule below). These updates can take the form of, among other things, a) an explanation, questioning, or complication of the week's readings, b) an update on your final project, or c) an interesting document, resource, or text (primary or secondary) that you've found related to the week's readings. There are no length requirements. This is simply a means of reading and thinking alongside one another as we work through these texts.

**30% midterm**

A written midterm exam, due to my inbox on the Friday before spring break (**March 10**), will consist of a selection of conceptual keywords that have emerged throughout the semester. You will be asked to define these keywords in brief explanatory essays. Please note that we're not looking for a dictionary definition, but rather an elucidation of the term as we have used it in the context of the class: in our discussions, in our readings, and in our individual research. You will be expected to cite relevant authors (though not exact quotes or page numbers) as well as class discussions.

**30% final paper / project**

A final paper of 8-10 pages (due **May #**) will engage with theoretical questions raised throughout the course and readings both from the syllabus and potentially of the student's own choosing. Because so much of the grade rests on this final paper, I encourage you to use your CourseWorks writing assignments to rehearse your arguments and speak with me throughout the term about your ideas. Potential essay topics will be offered in advance. The student may also choose her own topic.

# Policies

Weekly attendance in class is expected. If you must be absent from a session for a serious reason, then you should contact me before the missed class and explain why you will not be in attendance. Cases of continuous, unexplained absence will result in a penalty to your grade or your ineligibility to complete the course. Attendance and active participation in discussions are part of fulfilling the course requirements. I will notify an advising dean if you have three or more unwarranted absences. No extensions will be given except in extreme (and

verifiable) circumstances. These circumstances include reasons of health and extenuating circumstances, such as death of a family member.

Because we will be conducting some hands-on activities in class, you are asked to bring your laptop to class. Students must practice good screen etiquette: keep it to the side and don't stare too long.

# Schedule

## Theories

### January 17: introductions

### January 19: definitions

John Haugeland, "Analog and Analog," *Philosophical Topics* 12, no. 1 (Spring 1981): 213–25.

Matthew Katz, "Analog and Digital Representation," *Minds and Machines* 18, no. 3 (September 1, 2008): 403–8.

### January 24: tinkerers 1

***(First writing exercise due)***

James Gleick, *The Information: A History, A Theory, A Flood* (Vintage Books, 2012), pp. 3-12, 28-50, 78-124, 204-268 (~130p)

- Prologue

- 2 The Persistence of the Word (on theories of writing)

- 4 To Throw the Powers of Thought Into Wheel-Work (on Babbage)

- 7 Information Theory

- 8 The Informational Turn

- 13 Information is Physical (if time. . . )

### January 26: tinkerers 2

Alison Winter, "A Calculus of Suffering," in *Science Incarnate: Historical Embodiments of Natural Knowledge,* ed. Christopher Lawrence and Steven Shapin (University of Chicago Press, 1998), 202–39.

---

## Dreams

### January 31: global cyberpunk 1

William Gibson, *Neuromancer* (Ace Books, 1984), Part Two: The Shopping Expedition, pp. 43-98.

Xiao Liu, "Magic Waves, Extrasensory Powers, and Nonstop Instantaneity: Imagining the Digital beyond Digits," *Grey Room* 63 (Spring 2016): 42–69.

### February 2: global cyberpunk 2

Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge: MIT Press, 2014), p. 1-14, 95-140

- Prologue

- Introduction: Political and Technological Visions

- 4 Constructing the Liberty Machine

### February 7: afrofuturism 1

*(Second writing exercise due)*

Delany, *Stars in My Pocket Like Grains of Sand* (Middletown, CT: Wesleyan University Press, 2004 [1984]), selections.

### February 9: afrofuturism 2

Ytasha L. Womack, *Afrofuturism: The World of Black Sci-Fi and Fantasy Culture* (Chicago: Chicago Review Press, 2013), p. 3-24, 39-50

- Evolution of a Space Cadet

- Project Imagination

Mark Dery, "Black to the Future: Interviews with Samuel R. Delany, Greg Tate, and Tricia Rose," in *Flame Wars: The Discourse of Cyberculture*, ed. Mark Dery (Durham, NC: Duke University Press, 1994), 179–222.

---

## Approaches

### February 14

John Durham Peters, "Understanding Media," *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (University of Chicago Press, 2016), p. 13-52.

### February 16

Wendy Hui Kyong Chun, "Someone Said New Media," *New Media / Old Media: A History and Theory Reader,* 2nd ed. (Routledge, 2016)

---

## Code

### February 21

N. Katherine Hayles, "Print Is Flat, Code Is Deep: The Importance of Media-Specific Analysis," Poetics Today 25, no. 1 (2004): 67–90.

Wendy Hui Kyong Chun, "On 'Sourcery,' or Code as Fetish," *Configurations* 16, no. 3 (Fall 2008): 299–324.

### February 23

Adrian Mackenzie, "The Problem of Computer Code: Leviathan or Common Power?" (2003)

Nick Montfort et al., *10 PRINT CHR$(205.5+RND(1)); : GOTO 10* (Cambridge: MIT Press, 2012), selections

---

## Interfaces

### February 28: users 1

*(Third writing exercise due)*

Don Norman, "The Psychopathology of Everyday Things" in *The Design of Everyday Things* (Basic Books, 2013 [1988]), pp. 1-36.

Bruce Sterling, *Shaping Things* (Cambridge: MIT Press, 2005).

## March 2: users 2

Anne Friedberg, *The Virtual Window: From Alberti to Microsoft* (Cambridge: MIT Press, 2006), p. 1-24, 149-190.

- Introduction
- 4 The Screen

## March 7: makers 1

Nakamura, Lisa. 2014. "Indigenous Circuits: Navajo Women and the Racialization of Early Electronic Manufacture." American Quarterly 66(4): 919–941.

Steven J. Jackson, "Rethinking Repair," in *Media Technologies: Essays on Communication, Materiality, and Society* (Cambridge: MIT Press, 2014), 221–39.

## March 9: makers 2

### *(MIDTERM DUE)*

Debbie Chachra, "Why I am Not a Maker," *The Atlantic,* Jan 23, 2015, http://www.theatlantic.com/technology/archive/2015/01/why-i-am-not-a-maker/384767/.

Joi Ito, "Shenzhen Trip Report: Visiting the World's Manufacturing Ecosystem," [blog post], https://joi.ito.com/weblog/2014/09/01/shenzhen-trip-r.html

Tim Maughan, "The Changing Face of Shenzhen, the World's Gadget Factory," *Vice,* Aug 19, 2015, http://motherboard.vice.com/read/beyond-foxconn-inside-shenzhen-the-worlds-gadget-factory

An Xiao Mina, " 'Created' in China: Shenzhen is Making Hardware Like Silicon Valley Makes Apps," *Fusion,* Sept 7, 2016, http://fusion.net/story/338939/created-in-china-shenzhen-hardware-startups/

———————————————

**SPRING BREAK: March 13-17**

———————————————

## Devices

### March 21: privacy 1

Readings announced as events unfold.

### March 23: privacy 2

Readings announced as events unfold.

### March 28: habits 1

Dominic Pettman, *Infinite Distraction* (Polity, 2015).

### March 30: habits 2

Wendy Chun, *Updating to Remain the Same,* (Cambridge: MIT Press, 2016), Introduction and all interstitial sections, total around 50pp.

---

## Infrastructures

### April 4: networks 1

***(Fourth writing exercise due)***

Nicole Starosielski, *The Undersea Network,* (Duke University Press, 2015), pp. 1-25, 94-169.

- "Introduction: Against Flow"
- 3 "Gateway: From Cable Colony to Network Operations Center"
- 4 "Pressure Point: Turbulent Ecologies of the Cable Landing"

Project website at http://surfacing.in/

### April 6: networks 2

Christian Sandvig, "Connection at Ewiiaapaayp Mountain: Indigenous Internet Infrastructure" in *Race After the Internet,* ed. Lisa Nakamura and Peter Chow-White (Routledge, 2011), p. 168-200.

### April 11: waste 1

Jennifer Gabrys, *Digital Rubbish: A Natural History of Electronics,* (Univ. of Michigan Press, 2011), p. 1-44, 74-100

- Introduction: A Natural History of Electronics

- 1 Silicon Elephants: The Transformative Materiality of Microchips

- 3 Shipping and Receiving: Circuits of Disposal and the 'Social Death' of Electronics

### April 13: waste 2

Abhimanyu Shrivastava, "Transboundary Movement of E-Waste," *International Policy Digest,* Sept 13, 2016, http://intpolicydigest.org/2016/09/13/transboundary-movement-e-waste/

Andrew J. Hawkins, "E-Waste Empire," *The Verge,* June 22, 2016, http://www.theverge.com/2016/6/22/11991440/eri-e-waste-electronics-recycling-nyc-gadget-trash

---

## Power

### April 18: control 1

(Final project proposal due)

Bernard Harcourt, *Exposed: Desire and Disobedience in the Digital Age* (Cambridge: Harvard University Press, 2015), p. 1-28, 217-250.

- The Expository Society

- 8 The Mortification of the Self

- 9 The Steel Mesh

### April 20: control 2

Giorgio Agamben, *What is an Apparatus*? (Stanford Univ Press, 2009), p. 1-24.

**April 25: publics 1**

Danah Boyd, "White Flight in Networked Publics" in *Race After the Internet,* ed. Lisa Nakamura and Peter Chow-White (Routledge, 2011), p. 203-222.

Curtis Marez, "Cesar Chavez, United Farm Workers, and the History of Star Wars," in *Race After the Internet,* ed. Lisa Nakamura and Peter Chow-White (Routledge, 2011), p. 85-108.

**April 27: publics 2**

William Mazzarella, "The Myth of the Multitude, Or, Who's Afraid of the Crowd?," *Critical Inquiry* 36, no. 4 (2010): 697–727.

# Academic Integrity

Columbia's intellectual community relies on academic integrity and responsibility as the cornerstone of its work. Graduate students are expected to exhibit the highest level of personal and academic honesty as they engage in scholarly discourse and research. In practical terms, you must be responsible for the full and accurate attribution of the ideas of others in all of your research papers and projects; you must be honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet source. Graduate students are responsible for knowing and correctly utilizing referencing and bibliographical guidelines. When in doubt, consult your professor. Citation and plagiarism-prevention resources can be found at the GSAS page on Academic Integrity and Responsible Conduct of Research ([http://gsas.columbia.edu/academic-integrity](http://gsas.columbia.edu/academic-integrity)).

Failure to observe these rules of conduct will have serious academic consequences, up to and including dismissal from the university. If a faculty member suspects a breach of academic honesty, appropriate investigative and disciplinary action will be taken following Dean's Discipline procedures ([http://gsas.columbia.edu/content/disciplinary-procedures](http://gsas.columbia.edu/content/disciplinary-procedures)).

# Disabilities Accommodations

If you have been certified by Disability Services (DS) to receive accommodations, please either bring your accommodation letter from DS to your professor's office hours to confirm your accommodation needs, or ask your liaison in GSAS to consult with your professor. If you believe that you may have a disability

that requires accommodation, please contact Disability Services at 212-854-2388 or disability@columbia.edu. Important: To request and receive an accommodation you must be certified by DS.