University of Wisconsin-Madison
History of Science 150: The Digital Age Fall 2020
https://canvas.wisc.edu/courses/220985

Instructor	**Teaching Assistant**	**Teaching Assistant**
Prof. Devin Kennedy Department of History (he/him/his) dbkennedy@wisc.edu	Meghan O'Donnell Department of History (she/her/hers) meodonnell@wisc.edu	Winifred (Winnie) Redfearn Department of History (she/her/hers) wredfearn@wisc.edu

Course Meetings (all times central):

First meeting: ***Thursday, September 3, 8:50AM*** *(Online)*

Lectures: **Tuesday:** Online, Synchronous/Live, **8:50 AM-9:40 AM**
Thursday: Online, Synchronous/Live, **8:50 AM-9:40 AM**
(Lecture videos will be posted by the evening of the lecture, unless there are technical difficulties)

Discussion: **DIS 301-304 with TA: Winifred Redfearn**
First meeting: ***Monday, September 14***

DIS 301 Monday 1:20PM-2:10PM *Online*
DIS 302 Monday 2:25PM-3:15PM *Online*
*DIS 303 Monday 5:40PM-6:30PM *1217 Mosse Humanities*
*DIS 304 Monday 4:35PM-5:25PM *1217 Mosse Humanities*

DIS 305-308 with TA: Meghan O'Donnell
First meeting: ***Friday, September 11***

*DIS 305 Friday 8:50AM-9:40 AM *1101 Mosse Humanities*
*DIS 306 Friday 7:45AM-8:35 AM *1101 Mosse Humanities*
DIS 307 Friday 11:00AM-11:50AM *Online*
DIS 308 Friday 12:05PM-12:55PM *Online*

****In-Person Sections (303,304,305,306)****

*DIS 303, 304, 305, and 306 will meet ***online*** until September 25 / September 28**, and then in-person** on **alternating weeks**. Meeting online at first will allow us to take advantage of digital materials, minimize risk to the coronavirus during our return to campus, and allow introductions where we can see each other's faces in the early weeks before we need to put on masks to gather in person.

Office Hours:

Prof. Kennedy: Fridays 2-4 on BB Collaborate
Winnie Redfearn: Wednesdays 1-3P on BB Collaborate
Meghan O'Donnell: Mondays and Wednesdays 1-2PM on BB Collaborate
or by appointment

Course Description:

This course provides an introduction to the history of the computer from the 1940s to the present day. Over the course of the semester, students will become familiar with major developments in computer science and technology in their historical contexts, as well as recent trends in computing and society. We learn about machines, but emphasize the study of people: the institutions, scientists, workers, and social movements that invented, facilitated, and transformed digital technology in the 20th and early 21st century.

Learning Outcomes

Students, upon successful completion of the course, will be able to:

- Identify key technological developments, periods, and themes in the history of computing
- Engage primary cultural and technical sources from the history of technology in the 20th century
- Analyze ongoing developments in computer science and digital technology with historical and critical perspective
- Write and speak conscientiously about digital technology's effects in society
- Recognize a range of factors that contribute to technological change

Course Details

Prerequisites: None
Course Designation: Breadth - Humanities
Level: Elementary
Credits: 3*
Modality: Blended: online lectures, online and in-person discussion sections

Credit Hour Details

This class **meets for three, 50-minute class periods each week** (2 lectures, 1 discussion) over the fall semester and carries the expectation that students will work on course learning activities (reading, writing, watching supplemental video material and responding to quizzes on canvas, working on writing assignments studying for examinations) for about **2 hours out of the classroom for every class period (i.e. about 6 hours per week)**.

Required Texts

- O'Mara, Margaret *The Code: Silicon Valley and the Remaking of America* (Penguin, 2019, Paperback 2020) $20 [Any format]

Face Coverings:

Individuals are expected to wear a face covering while inside any university building, including during face-to-face section meetings. Face coverings must be worn correctly (i.e., covering both your mouth and nose) in the building if you are attending class in person. If any student is unable to wear a face-covering, an accommodation may be provided due to disability, medical condition, or other legitimate reason.

Students with disabilities or medical conditions who are unable to wear a face covering should contact the McBurney Disability Resource Center or their Access Consultant if they are already affiliated. Students requesting an accommodation unrelated to disability or medical condition, should contact the Dean of Students Office.

Students who choose not to wear a face covering may not attend in-person classes, unless they are approved for an accommodation or exemption. All other students not wearing a face covering will be asked to put one on or leave the classroom. Students who refuse to wear face coverings appropriately or adhere to other stated requirements will be reported to the Office of Student Conduct and Community Standards and will not be allowed to return to the classroom until they agree to comply with the face covering policy. An instructor may cancel or suspend a course in-person meeting if a person is in the classroom without an approved face covering in position over their nose and mouth and refuses to immediately comply.

Quarantine or Isolation Due to COVID-19

Students should continually monitor themselves for COVID-19 symptoms and get tested for the virus if they have symptoms or have been in close contact with someone with COVID-19. Students should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their instructor concerning their illness and the anticipated extent of their absence from the course (either in-person or remote). The instructor will work with the student to provide alternative ways to complete the course work.

Lecture Recordings

Lecture materials and recordings for History of Science 150 are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Course Requirements

Grade Components:
Lecture attendance (10%)
Weekly Canvas Quizzes (15%)
Discussion Section Participation (15%)
Mid-Term (15%)
Final Exam (20%)
Writing Project: Op-Ed (25%)*

Lecture attendance (10%)

Lectures, in addition to course readings, will cover the bulk of course content, including the material you will be responsible for in the mid-term and final exam. Attending lectures is critical to success in this course. You can either attend lecture live, or watch a recording which will be posted on Canvas by about noon on the day delivered with closed captioning.

You get automatic full credit on your attendance score if you attend or watch all lectures**. If you do not attend (a) lecture(s) live, you must watch the recording(s) for that week before the relevant discussion section (Friday if you're in Meghan's sections, the following Monday if you're in Winifred Redfearn's Sections)** so you can be prepared**.** You get two "freebies" (unexcused, unexplained absences); but after that, you'll **lose 1%** on your attendance grade for each lecture that you either do not attend live or do not watch on canvas **before discussion sections.** Either counts as an attendance at lecture.

If you experience challenges accessing course materials on this schedule, or if you experience technical or other issues, please be in touch with Professor Kennedy.

Weekly "Quizzes" (15%)

These quizzes, hosted on Canvas, open on Sundays and are **due weekly on Thursday by 11:59PM**. They should take no more than an hour to complete. They are *graded leniently*, and are used to provide supplemental material (clips, short articles) and quick activities (writing a journal about a topic from the week, a response to a video) to reinforce the main themes of the week and to prepare you for discussion sections.

Quiz Rubric

2 Points Answered the question or completed the task using appropriate course material from the week as explained in the question prompts
1 Point Provided an incomplete response that did not draw on the course material requested in the prompt
0 Points No attempt made / off-topic response

You will get two "freebies"—two unpenalized, uncompleted activities.
.5 points off for very late responses

Discussion Section Participation (15%)

In discussions, you will discuss course materials from the week (lectures, readings, film content) and perform additional activities (analyzing primary sources, watching and discussing clips).

You must attend all discussion section meetings. You are permitted two "freebies" (unexcused, unexplained absences) unexcused absences from discussion sections. Additionally, if something comes up (a doctor's visit, family situation) you can be in touch with your TA and Professor Kennedy to request an excused absence, but please try to do so in advance if possible to arrange alternative work. **You will lose 2% on your discussion grade for each additional unexcused absence.**

Additionally, you are graded on your contributions to class meetings and discussions, not simply in terms of the amount you speak, but also on your productive engagement with your classmates' ideas. In your first meetings, we will discuss in greater detail expectations for participation, ideas for how to build upon each other's comments, standards of behavior and respect in our classroom community, and the way you will be evaluated. (also see the rubric below).

Discussion Participation Rubric

Excellent (90-100)	Good (80-90)	Competent (70-80)	Inadequate (60-70)	Fail (0-60)
-Mastery over readings and previous discussion -Explores questions rigorously -Comes to class with interpretations and questions -Engages others respectfully	-Knows readings well -Consistent preparation and involvement -Offers analysis of texts in class	-Basic grasp of reading -Mostly offers facts or surface-level interpretations -Contributes when called upon but not actively engaged	-Insufficient command of reading -Attempts to contribute facts or interpretations when called but unable to offer substance	-Uninvolved -Unexcused -Disruptive

Examinations: Mid-term 15% Final: 20%

The mid-term and final exam are of the same format. The final is longer (more questions of the same format of the mid-term) and comprehensive. The mid-term covers weeks 1-7, and is in-class in week 8. The final covers weeks 1-15 and is during exam period.

The two exams will have questions of two types: A) multiple-choice questions that focus on the identification and explication of terms, technologies, events, and concepts in a few sentences; and B) short essays (of about 1-3 paragraphs that asks you to bring ideas and themes from course content across several weeks.

The mid-term and final are open-book and open notes. However, they will be time-limited. **We recommend working with your peers to produce a study guide** in advance of the exams with dates, facts, topics, summaries of readings, etc, as you won't have time during the exams to look up every concept or idea. You can use this guide during the exam.

More information will be given about examinations during the semester. In general, although we will not be testing you on your mastery of exact dates (to the year) or detailed knowledge of technical matters (e.g. what metals are used in CMOS technology), or a long list of names, or machines, we do expect you to have

1) Some command of a rough timeline of historical developments people, contexts, and events, (e.g. to know that SAGE was developed by IBM during the early Cold War; or that user-oriented computing emerged in the 1960s)

2) Familiarity with technologies discussed in lecture in the sense of knowing why they were historically important, including because of the people who made them or how they were influential in social or economic history (e.g. that the programming language COBOL was a very early one, and was developed by a consortium of businesses and the US military in the 1950s to create a standard across the many machines being produced during the period),

3) A repository of anecdotes from lecture, course readings and materials, and discussion sections, that you could use in an essay questions (e.g. the story of the ENIAC computers and the history of the 'hidden figures' at NASA to make an argument about the marginalization of women from the history of technology) .

Writing Assignment: Op-Ed Essay (25%) * split into 3 parts

There is one writing assignment in this course, split up into **three parts** which you will complete over the course of the semester. The assignment is to write an "op-ed" article of about 750-900 words about an issue in digital technology and society today that draws on course material, your own experiences and opinions, and some reading of newspaper and popular interest magazine articles. Detailed rubric and instructions will be provided at each stage of the assignment.

Part 1: Draft 5%
First, you'll write a draft of your op-ed, following models and guidelines provided in class and on canvas. You'll get full credit on the first part ***if you turn it in on time, and it's of the right length and format.***

Part 2: Peer-Review Letter 7.5 %
Second, you'll read, copyedit, and respond to a peer's op-ed, providing in-line edits and substantive suggestions in the form of a 150-200 word letter.

Part 3: Final Version 12.5%
The third part of the assignment is to produce a final version of the essay, drawing on the input of your peer (who will provide edits and brief feedback on your draft).

Resources for the Op-Ed

In addition to the samples and guidelines we will provide on the assignment instructions, we encourage you to take advantage of University resources for developing your draft, especially the History Department History Lab. They are offering ***remote appointments:*** https://history.wisc.edu/undergraduate-program/the-history-lab/. We also recommend the University Writing Center: https://writing.wisc.edu/individual/ for developing your skills.

Policy on late work:

Please be in touch with Professor Kennedy if you are having problems meeting deadlines on the quizzes and the writing assignment and keeping the pace of the course.

On **the draft:** one-half percentage point per day late

On the **peer review response**: one-half percentage point per day late

Late submission of the **final op-ed assignment** submission shall be **penalized one letter grade** per day. For example, an "A" Score will score an A- if it is one day late, and a B+ if two days late. No assignment will be accepted more than one week late, except for extraordinary circumstances.

Academic Integrity

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

Grading Scale

A = 93-100
AB = 88-92
B = 82-87
BC = 77-81
C = 72-76
D = 67-71
F = 66 or below.

Accommodations

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. I will work either directly with you or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Policy on Electronic Devices

Laptops and other note-taking devices are permitted during lectures, discussion meetings, and for in-class exams (using examination software to-be-provided). Technology offers many benefits to our notetaking, studying, and research practices. But they also have negative effects—multi-tasking can make us less conscientious of our peers. We expect you to be engaged and present at all times during lecture and class discussion.

Institutional statement on diversity:

"Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world." https://diversity.wisc.edu/

How to move through a typical week of this course and allocate your time:

Monday: ***(allocate 20 minutes)***	**Read** "The Week Ahead" email from Prof. Kennedy (arrives Monday morning). This lays out the plan, learning goals, and themes for the week, as well as information about assignments and examinations.

If you're in ***Winifred Redfearn's Sections (DIS 301-304)***

Monday: ***(1 hour)***	***Attend** discussion section online or in-person Be prepared to discuss the material read/viewed from the ***previous week*** including the previous week's lectures**.** ***Bring the material*** you read on a digital device or printed.

Monday-Thursday: ***(allocate about 4 hours)*** ***(allocate 1 hour)***	**Complete weekly out-of-class work** 1) **Do the reading** (or on a few occasions, watch a documentary) Readings/Videos are detailed in the week-by-week syllabus below, and on Canvas All readings, with the exception of readings from the book *The Code* are linked on canvas and available before the week in question 2) **Complete the weekly quiz** by 11:59pm Thursday (central time; ***quizzes open Sunday***)

Tuesday: ***8:50 am (1 hour)***	***Attend** morning lecture live (8:50-9:40am central time) virtually on BBCollaborate or watch recording on canvas before section*

Thursday: ***8:50 am (1 hour)***	***Attend** morning lecture live (8:50-9:40am central time) virtually on BBCollaborate or watch recording on canvas before section* ***Remember** to complete Quiz on canvas by 11:59pm*

if you're in ***Meghan O'Donnell's Sections (DIS 305-308):***

Friday: ***(1 hour)***	***Attend** discussion section online or in-person Be prepared to discuss the material read/viewed from the ***the week*** including lectures ***Bring the material*** you read on a digital device or printed.

Friday:	Stop by Prof. Kennedy's virtual office hours **2-4pm** on BB Collaborate for questions or to chat about the course

******You are required to either attend or watch all lectures.***
And to attend discussion sections (see attendance policy)***

Schedule of Classes, Readings and Assignments

Week 1: Introduction September 3 (Half-week)

No reading

Lecture 1 Introduction: What is the history of Comput*ing*?
September 3

No quiz this week

Theme One: Machinery of State (Weeks 2-3)

We begin the history of computing before digital computers. We examine earlier technologies in the late 19th and 20th century to see how human computing practices, analog machines, and punched card systems aided governments in the administration of state and colony. We use these histories to understand government supports for the military development of computers as we know them—stored-program, all-digital, electronic devices—in war efforts in World War II and the early Cold War.

Week 2: Computing *what* Exactly?: Censuses and Statistics (1890-1939) September 7 - 11

Read:

1. *[on canvas] T.C. Martin, "Counting A Nation by Electricity" (The Electrical Engineer Nov. 11, 1891) pgs. 521-530.*
2. *[link on canvas] Sahil Chinoy "The Racist History Behind Facial Recognition"* https://www.nytimes.com/2019/07/10/opinion/facial-recognition-race.html

Watch:

3. *[link on canvas] Khalil Gibran Muhammad "Big Data"* https://www.youtube.com/watch?v=2xuo32Z2EMA

Lecture 2 Three Precursors: Prony's Tables, Lovelace's Code, Turing's 'Machine'
September 8

Lecture 3 Government Machines: The Census by Punched Card
September 10

No quiz this week

**** Meghan O'Donnell's section starts Friday 9/12****

Week 3:	**Military Influences of Modern Computing (1940-1970)**	September 14 - 18

**** Winnie Redfearn's section starts Monday September 14 (covering week 2 material) ****

*** Op-Ed Assignment Provided ***

Read:

1. *[on canvas] Mina Rees "The Federal Computing Machine Program" (Science, Dec. 22, 1950) pg. 731-736.*
2. *Margaret O'Mara <u>The Code: Silicon Valley and the Remaking of America</u> "Introduction: The American Revolution", Chapter 1: "Endless Frontier" + Chapter 3 ("Shoot the Moon")*

Lecture 4 World War II and the Development of the Computer
September 15

Lecture 5 The Internet of War: Cold War Developments in the US
September 17

****First quiz on Canvas: due Thursday 11:59PM****

Theme Two: Business Machines (Weeks 4-6)

We examine developments in business, technology, labor, and society as computers became a big business after World War II. We'll touch on the history of electronics and programming languages, but focus on social developments: the experiences of engineers and coders, the institutions and capital that supported computing innovations, how computing entered new and old industries, and the early development of lasting patterns of globalized manufacturing and labor.

Week 4: The Emergence of Computer Businesses (1945-1975) September 21 - 25

Read:

1. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America Chapter 2 ("Golden State"),* Chapter 5 ("The Money Men") and Chapter 7 ("The Olympics of Capitalism")
2. *[link on canvas] Matthew Levin Cold War University: Madison and the New Left in the Sixties* Chapter 1: "Cold War University: Higher Education after World War II" *Pages 15-42.*

Lecture 6 Integrated Circuits: The Military-Industrial-Academic Complex
September 22

Lecture 7 Spinoffs and Startups: Changing Sites of Innovation
September 24

quiz on Canvas: due Thursday 11:59PM

Week 5: Programming Labor (1940-1975) September 28 - October 2

Read:

1. *[link on canvas] Jennifer Light "When Computers Were Women." (Technology and Culture, 1999) pg. 455-483.*

Listen

2. *[link on canvas] APM Podcast "Historically Black: NASA's Human Computers."* https://www.youtube.com/watch?v=5GEuTRMeepE .

Lecture 8 Women in Early Computing and the Development of Programming Languages
September 29

Lecture 9 Hidden Figures, the Software Crisis and the Civil Rights Era
October 1

quiz on Canvas: due Thursday 11:59PM

Week 6:	**Computerization (1955-1975)**	October 5 - 9

Read:

1. *[on canvas] James Carey and Joseph Beirne, 2 Speeches at the 1955 CIO National Conference on Automation in The Challenge of Automation*, 1956
2. *[link on canvas] Martin Greenberger "The Computers of Tomorrow" (The Atlantic, 1964)*

***Listen**:*

3. *99PercentInvisibible: Episode Project Cybersyn (Text, Video, and 23minute podcast)* https://99percentinvisible.org/episode/project-cybersyn/

Lecture 10 Computerizing America: From Factories to Finance to Government
October 6

Lecture 11 Cybernetics and Socialist Computing
October 8

quiz on Canvas: due Thursday 11:59PM

Theme Three: Coding Community (Weeks 7-11)

We explore how technologies developed for largely business and government use became 'personal' machines and tools for collaborating within and connecting communities. We consider technical developments (graphics, input devices, internet infrastructure, web browsers) as they were made and remade by governments, scientists, and activists, from the Vietnam era to the 1990s dot-com boom.

Week 7: Against the Machine (1965-1980) October 12 - 16

Read:

1. *[on canvas]* Stewart Brand "Spacewar: Fanatic Life and Symbolic Death Among the Computer Bums" (Rolling Stone, 1972)
2. *[on canvas] Fred Turner From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* 2006 excerpt from chapter 4 "Taking the Whole Earth Digital"
3. *[on canvas] "Calculus for Conquest"* (*Science for the People, Mar. 1973)*
4. *[on canvas] "Mainframe Interrupted: Joan Greenbaum on the Early Days of Tech Worker Organizing" (LOGIC 6, Jan. 2019)*

Lecture 12 The Anti-War Movement and Technology (virtual field trip!)
October 13

Lecture 13 How Hippies, Hackers, and Teachers made computing 'personal'
October 15

quiz on Canvas: due Thursday 11:59PM

Week 8: The Soul of a New Machine (1968-1984) October 19 - 23

Read:

1. *[link on canvas] Joy Lisi Rankin "Tech-Bro Culture Was Written in the Code" (Slate, Nov. 1, 2018)*
2. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America 2019*: Chapter 7 ("The Olympics of Capitalism"), Chapter 8 ("Power to the People"), Chapter 12 ("Risky Business"), Chapter 13 ("Storytellers") and Chapter 16 ("Big Brother")

Lecture 14 ***Mid-Term During Lecture* (covering content through week 7)***
October 20

Lecture 15 Inventing the PC: Apple and Microsoft
October 22

quiz on Canvas: due Thursday 11:59PM

Week 9:	**Going Online (1980-1999)**	October 26 - 30

Read:

1. *[on canvas] J.C.R Licklider and Robert Taylor, "The Computer as Communications Device" (Science and Technology, April 1968)*
2. *[link on canvas] Al Gore "Information Superhighway" Speech at the Benton Foundation, 1994.*
3. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America 2019* Chapter 14 ("California Dreaming"), Chapter 20 ("Suits in the Valley")

Lecture 16 Internet Infrastructure and Internet Culture before 1993
October 27

Lecture 17 The WWW and the Dot-Com Bubble
October 29

*** Op-Ed Assignment (Draft) Due Friday 11:59PM* on Canvas**

****no quiz this week****

Week 10:	**The Global Information Society (1980-1999)**	November 2 - 6

Op-Ed Project Part 3 Provided (Peer Review)

Read:

1. [link on canvas] Vannevar Bush "As We May Think" (The Atlantic, 1945)
2. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America* 2019 Chapter 15 ("Made in Japan")

***Watch** [links on canvas]::*

3. *New York Times Retro Report Y2K Bug: Much Ado About Nothing?* https://www.youtube.com/watch?v=SoGNiHV09BU
4. *The Information Society* PBS 1979 https://www.youtube.com/watch?v=waQy2WKHiwY

Lecture 18 The Information Society
November 3

Lecture 19 Y2k: Body Shops and Risk society
November 5

****quiz on Canvas: due Thursday 11:59PM****

Week 11:	**Governing the "Digital Frontier," (1994-2004)**	November 9 - 13

Read:

1. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America Chapter 19 ("Information Means Empowerment"), Chapter 21 ("Magna Carta"), and Chapter 22 ("Don't Be Evil")*
2. *[link on canvas] John Perry Barlow "A Deceleration of the Independence of Cyberspace" Eff.org 1996.*

Watch:

3. *[link on canvas] New York Times Retro Report Napster: Culture of Free* https://www.youtube.com/watch?v=CKrdsGdLVQ8

Lecture 20 Governance and the "Independence of Cyberspace"
November 10

Lecture 21 Old Industries and New Media in the Early 21st Century
November 12

****quiz on Canvas: due Thursday 11:59PM****

Unit Four: Trends and Controversies (Weeks 12-15)

We apply historical perspective to engage contemporary trends in computing and society, and ask what a "digital age" represents. We focus on three ongoing developments: the intensification of computing's environmental and human costs; the growing influence and potential harms of big data and automated intelligence systems in society (and emergence of worker's movements in contesting them); and the role and vulnerability of social media in social movements from the Arab Spring to recent trends.

Week 12: Networked Democracy November 16 -20

Op-Ed Peer Editing and Review Due on Canvas Wednesday November 18 11:59PM

Read:

1. *[link on canvas] Joan Donovan "First they Came for the Black Feminists" Online Feature, (The New York Times, Aug. 19, 2019)*
2. *[link on canvas]Zeynep Tufekci Twitter and Tear Gas: The Power and Fragility of Networked Protest* Excerpt on Wired.com
3. *Margaret O'Mara The Code: Silicon Valley and the Remaking of America* Chapter 23 ("The Internet is You")

Lecture 22 Social Media and Democracy: 2010-16
November 17

Lecture 23 Disinformation, Surveillance, and the Platform Businesses
November 19

No quiz this week

Week 13: AI, ML and Automated Injustice November 23 – 24 (Half-week)

Read:

1. *[link on canvas] Angèle Christin "The Mistrials of Algorithmic Sentencing" (LOGIC Issue 3, 2017)*
2. *[link on canvas] Charlton McIlwain Black Software: The Internet and Racial Justice From the Afronet to Black Lives Matters, 2019. Chapter 14 ("What happened at the homestead"), Chapter 15 ("Kansas City Burning"), and Chapter 16 ("The Man's Best Friend")*

Lecture 24 Policing and Algorithmic Harms, 1967-Today
November 24

(No Friday Section meeting, No quiz, no Thursday Lecture—Thanksgiving)

Week 14: Hidden Costs (2000-Present)	November 30 – December 4

Monday discussion sections do NOT meet

Read:

1. *[on canvas] Nitaska Tiku "Three Years of Misery Inside Google, The Happiest Company in Tech" (Wired, Sept. 2019).*
2. *[on canvas] Sarah Roberts Beyond the Screen: Content Moderation in the Shadows of Social Media Chapter 5: "Modern Heroes: Moderating in Manila"*

Lecture 25 Manufacturing and Operating Computers: the Environmental Effects
December 1

Lecture 26 Laboring at Digital Life: Gig Workers and the Tech Workers Movement
December 3

****quiz on Canvas: due Thursday 11:59PM****

Final Friday Discussion Section: Friday December 4

Week 15: Governing new technologies (2008-Present)	December 7 - 11

Final Monday Discussion Section: Monday December 7

Read:
No reading

Lecture 27 Special guest session from industry and government leaders on governance
December 8 of emerging technologies

Op-Ed Final Version Due Wednesday December 9, 11:59PM

Lecture 28 Wrap-up / TBA
December 10

No Friday Discussion Sections

No quiz

***Final Exam* Friday, December 18 12:25-2:25 PM**