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HIST 214-004: Tech & Cult in Amer History

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History 214
Technology and Culture in American History

Spring 2024

Dr Teal Arcadi, Department of History/Law, Technology, and Culture Program.
Office Hours: Tuesdays, 1:30-2:30pm, Cullimore Hall 326.

Meeting Time and Location

Tuesdays and Thursdays, 11:30am-12:50pm, CKB 114.

Course Description

What is technology's function? This brief but vastly complex question is at the center of this course. It is a question that countless Americans have pondered throughout the nation's history, developing contrasting answers at different times. Guided by this essential but often overlooked question, we will examine technological innovation and change in US history from the colonial era right up to the present. Across that timespan, will consider how people imagined, constructed, and used technologies to do work, to govern society, and to make sense of the world. Our aim is to understand the role technology has played in the United States' development, for better and for worse. As the course unfolds, we will confront a second crucial question: does technology always mean progress for society, or does technological innovation have risks and downsides? By the course's conclusion, we will have nuanced answers to that question that will help guide our own technological innovations here in the twenty-first century.

Assigned Readings

There will be assigned readings most weeks, averaging about 25 pages in total each week. All readings will be available on Canvas or via links provided below in the syllabus. You must complete the readings for each class meeting BEFORE class.

Assignments

Syllabus quiz: pass/fail with unlimited attempts, 5% of the final grade if passed. This quiz is on Canvas and aims to make sure you understand the course's organization and logistics.

Discussion posts: pass/fail, twenty posts with three skips permitted, 20% of the final grade. You must submit a discussion post on Canvas the evening prior to every class meeting in which there is assigned reading. The discussion post should 1) identify the author(s)'s main arguments, 2) describe a part of the reading(s) you don't understand and 3) pose a question about the author(s)'s research methods. Each discussion post in total should therefore be 3-5 sentences and must be posted on Canvas by no later than **5pm the day prior** to each class meeting in which there is assigned reading.

Discussion opener: 10 points, 10% of the final grade. Once during the course, each student will be responsible for beginning a class meeting with a brief overview of the day's readings, followed by sharing 3-5 discussion questions to start our discussion. **See handout** on Canvas titled "Opening Discussion and Preparing Good Discussion Questions."

Participation: 10 points per class, 20% of the final grade. You are expected to listen actively in each class meeting, ask questions, contribute to discussion, and engage closely with all classroom activities. Your participation grade will be split into two halves of the semester: you will receive a participation grade worth 10% halfway through the semester, and another participation grade worth 10% at the end of the semester.

Pop quizzes: a series of quizzes throughout the semester will be worth 10% of the final grade.

Mid Term Exam: 50 points/15% of the final grade. You will receive a take-home final exam in **WEEK 6**, and have one week to complete it. You will have to write approximately three pages (double-spaced, 12-point type) of conceptual analysis of class material.

Final Exam: 100 points/25% of final grade. See handout.

Course Requirements

Enrolling in this class indicates an intellectual commitment on your part to the class and to all of the learners in it. Please be respectful of each other's learning needs at all times. If you have learning needs of any kind, please feel free to bring them to the attention of Dr. Arcadi so that we can ensure a productive and fair learning environment for everyone.

Laptops are permitted **only** for taking notes or for other educational needs. Use of devices for non-class-related purposes will result in an overall grade reduction of one half-letter per instance. Additionally, please be mindful that some students learn better *without* electronics; if you need to use your device to learn effectively that is acceptable, but remember that others around you may find it distracting and their needs are equally important.

Use of cellphones in class is strictly prohibited; use will result in an overall grade reduction of one half-letter per instance. Assignments handed in late **will not** be graded, unless you have official medical or academic dispensation. Finally, your decision to take this class includes a commitment to **attend every class meeting**; you may have **one unexcused absence.** Additional unexcused absences will result in an overall grade reduction of one half-letter per absence.

Academic Integrity and Plagiarism

Academic integrity is enforced in this course. Academic integrity is the cornerstone of higher education, and it is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working toward achieving. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found here:

It is the instructor's professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing, or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.

Students will also be required to submit their original written work digitally. Student work submitted digitally will be subject to review by turnitin.com, an online service used by NJIT instructors to detect plagiarism, AI use, and irregularities in sourcing and citation of the written word and claims. Plagiarism, use of AI, and/or other irregularities may result in failure of the course.

Schedule

Week 1. Introductions

Tuesday, January 16:
- Class intro.
- Read this syllabus carefully. Think about which day you would like to do your discussion opener.

- Online syllabus quiz circulated.

Before Thursday, January 18:
- Read Eric Schatzberg, "Want to Fix the Tech Industry? Start with the Humanities," *Washington Post*, June 10, 2019.
- Read Nuñez, Shaheen, and Dahl, "Let's Teach Computer Science Majors to Be Good Citizens. The Whole World Depends on It." *EdSurge*, March 15, 2021. Available here (about five pages): https://www.edsurge.com/news/2021-03-15-let-s-teach-computer-science-majors-to-be-good-citizens-the-whole-world-depends-on-it

- Assign discussion openers, which begin next week.

Week 2. Motivations and Methods

Before Tuesday, January 23:
Discussion opener:
- Read Robert L. Heilbroner, "Do Machines Make History?" *Technology and Culture*, vol. 8, no. 3 (July 1967), pp. 335-345.

Before Thursday, January 25:
Discussion opener:

- Read Langdon Winner, "Do Artifacts Have Politics? *Daedalus*, vol. 109, no. 1 (1980), pages 121-136.

Week 3. Colonial and Pre-Industrial Conditions

Before Tuesday, January 30:
Discussion opener:
- Read Patrick Malone, *The Skulking Way of War: Technology and Tactics Among the New England Indians (1991)*, pp. 42-66.

Before Thursday, February 1:
Discussion opener:
- Read Ruth Schwartz Cowan, Chapter Two, "Housewifery: Household Work and Household Tools under Pre-Industrial Conditions," pp. 16-39 (notes 234- 235) in *More Work for Mother* (1983).

Week 4. Connectivity, Part I: Canals

Tuesday, February 6:
Discussion opener:
- Read DeWitt Clinton, *Remarks on the Proposed Canal, From Lake Erie to the Hudson* (1816) (eleven pages).
- Read Carol Sherriff, *The Artificial River: The Erie Canal and the Paradox of Progress, 1817-1862* (1996), "Introduction," pp. 3-8, and part of Chapter 6, "The Perils of Progress," pp. 138-149.

Thursday, February 8: NO CLASS

Week 5. Connectivity, Part II: Enslaved Labor

Before Tuesday, February 13:
Discussion opener:
- Read Walter Johnson, Chapter Three, "The Steamboat Sublime," in *River of Dark Dreams* (2013), pp. 73-96 (notes pp. 439-445).

Before Thursday, February 15:
Discussion opener:
- Read Frederick Douglass, *Narrative of the Life of Frederick Douglass, An American Slave* (1845), selections on the Baltimore Shipyard, pp. 94-98.
- Read Aaron Hall, "Slaves of the State: Infrastructure and Governance through Slavery in the Antebellum South," *Journal of American History*, vol. 106, no. 1 (June 2019), pp. 19-46.

Week 6. No Class—Take-Home Mid Term Exam

Week 7. Speed, Part I: Railroads

Before Tuesday, February 27:
Discussion opener:
- Read *Resolutions of the Legislature of Kansas*, "The removal of all Indians…to aid in the construction of railroads" (two pages).
- Read Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: Norton, 2011), "Introduction," pp. xxi-xxxiv, and part of Chapter 1, "Genesis," pp. 1-9.

Before Thursday, February 29:
Discussion opener:
- Read Henry David Thorough, *Walden* (1854), pages 111-122.
- Read Jonathan Levy, *Ages of American Capitalism: A History of the United States* (2021), pp. 215-223.

Week 8. Speed, Part II: Assembly Lines

Before Tuesday, March 5:
Discussion opener:
- Read Frederick Taylor, *The Principles of Scientific Management*, Introduction and Chapter One, pages 5-29. Available here:
[https://www.google.com/books/edition/The_Principles_of_Scientific_Management/HoJMAAAA YAAJ?hl=en&gbpv=1&dq=frederick+taylor+scientific+management&printsec=frontcover/](https://www.google.com/books/edition/The_Principles_of_Scientific_Management/HoJMAAAAYAAJ?hl=en&gbpv=1&dq=frederick+taylor+scientific+management&printsec=frontcover/).
- Read Jonathan Levy, *Ages of American Capitalism: A History of the United States* (2021), pp. 325-340.

Thursday, March 7:
- Watch *Modern Times* (1936) in class.

SPRING BREAK

Week 9. Encoding, Part I: Highways and Computers

Before Tuesday, March 19:
Discussion opener:
- Read The President's Advisory Committee on a National Highway Program. *A Ten-Year National Highway Program*. Washington, DC: US Government Printing Office, 1955, pages III-VI, and skim the rest.
- Read Deborah Archer, "White Men's Road's Through Black Men's Homes: Advancing Racial Equity Through Highway Reconstruction," *Vanderbilt Law Review*, vol. 73, no. 5 (October 2020), Sections 1-II, pages 1261-1298.

Before Thursday, March 21:
 Discussion opener:
- Read Jennifer Light, "When Computers Were Women," *Technology and Culture*, vol. 43, no. 3 (July 1999), pp. 455-483.

Week 10: Encoding, Part II: Jim Crow, Jim Code

Tuesday, March 26:
Discussion opener:
- Read New Jersey State Bar Foundation, examples of Black Codes handouts (three pages).
Available here: https://njsbf.org/wp-content/uploads/2021/02/Examples_of_Black_Codes.pdf.
- Read Sigal Samuel, "Why It's So Damn Hard to Make AI Fair and Unbiased," *Vox*, April 19,
2022 (about eight pages). Available here: https://www.vox.com/future-perfect/22916602/ai-bias-fairness-tradeoffs-artificial-intelligence.
- Read James Vincent, "Twitter taught Microsoft's AI chatbot to be a racist asshole in less than a
day," *The Verge*, March 24, 2016. Available here (about three pages):
https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist.
- Watch in class: Ruha Benjamin, "Are Robots Racist?" Available here:
https://www.dropbox.com/s/j80s8kjm63erf70/Ruha%20Benjamin%20Guest%20Lecture.mp4?dl
=0.

Before Thursday, March 28:
Discussion opener:
- Readings to be assigned—more on digital infrastructure, following Tuesday's readings.

Week 11: Power

Before Tuesday, April 2:
Discussion opener:
- Read Robinson Meyer, "America's Approach to Energy Security is Broken," *The Atlantic*,
March 19, 2022. Available here (about six pages):
https://www.theatlantic.com/science/archive/2022/03/energy-independence-gas-prices/627117/.
- Read David Roberts, "Why Rich People Use So Much More Energy," *Vox*, March 20, 2022.
Available here (about seven pages): https://www.vox.com/energy-and-environment/2020/3/20/21184814/climate-change-energy-income-inequality.
- Robinson Meyer, "Unfortunately, I Care About Power Lines Now," *The Atlantic*, July 28, 2021.
Available here (about six pages): https://www.theatlantic.com/science/archive/2021/07/america-is-bad-at-building-power-lines-lets-fix-that-transmission-climate/619591/.

Before Thursday, April 4:
Discussion opener:
- Read David Archambault II, "Taking a Stand at Standing Rock," *New York Times*, August 25,
2016.
- Read Sue Skalicky and Monica Davey, "Tension Over Pipeline Hits Boiling Point," *New York
Times*, October 29, 2016.
- Read Nick Estes, *Our History is the Future: Standing Rock Versus the Dakota Access Pipeline,
and the Long Tradition of Indigenous Resistance* (2019), PAGES TBD.

Week 12: Current technological events.

Before Tuesday, April 9:

Discussion opener:

Before Thursday, April 11:
Discussion opener:

Week 13: Tradeoffs and Reevaluations

Before Tuesday, April 16:
Discussion opener:
- Andrew Marantz, "Antisocial Media: Reddit, Free Speech, and the Struggle to Detoxify the Internet," *New Yorker*, March 19, 2018. Available here (about fifteen pages):
https://www.newyorker.com/magazine/2018/03/19/reddit-and-the-struggle-to-detoxify-the-internet.
- Gabrielle M. Rejouis, "Why Is It Ok for Employers to Constantly Surveil Workers?" *Slate*, September 2, 2019. Available here (about three pages):
https://slate.com/technology/2019/09/labor-day-worker-surveillance-privacy-rights.html.
- Cory Doctorow, "Tik Tok's 'Enshittification'," *Pluralist*, January 21, 2023.
https://pluralistic.net/2023/01/21/potemkin-ai/#hey-guys

Before Thursday, April 18:
Discussion opener:
- Read Neil Maher, "Not Everyone Wanted a Man on the Moon," *The New York Times,* July 16, 2019 (about three pages). Available here: https://www.nytimes.com/2019/07/16/opinion/apollo-11-nasa-woodstock.html?searchResultPosition=1. PLEASE NOTE: NJIT provides all students with New York Times access. Follow these simple steps to sign up:
https://researchguides.njit.edu/nytimes/register.
- Listen to Gil Scott Heron, "Whitey On the Moon" (1970). Available here (2 minutes):
https://www.youtube.com/watch?v=goh2x_G0ct4.
- Read Patrick McCray, "It's Not All Lightbulbs," *Aeon*. Available here (about ten pages):
https://aeon.co/essays/most-of-the-time-innovators-don-t-move-fast-and-break-things.

Week 14: Review

Tuesday, April 23.

Thursday, April 25.