

STSC-003: Technology & Society

Tues/Thurs 12-1:30pm, Cohen 402

Instructor: Prof. Etienne Benson (ebenson@upenn.edu). Office Hours: Cohen Hall 365, Monday 1-3pm.

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Course overview

This course is an introduction to the history and social study of technology. It begins with an examination of the concept of “technology” itself, which has been closely bound up with ideas of modernity, progress, expertise, and innovation since it came into wide use in the early twentieth century. It then turns to the history of industrialization since the eighteenth century, exploring the diverse factors — technical, economic, social, and cultural — that have contributed to the emergence and transformation of industrial societies. The third section of the course examines a few selected topics in depth, including the role of technology in war, environment, health, and computing, as well as the question of whether technological change can or should be controlled. The final section of the course is focused on small-group explorations of technology-related sites around Philadelphia. The course aims to strengthen your understanding of the historical roots and social contexts of contemporary technology and your skills in critically reading and writing historical and social-scientific texts.

Assignments and grading

Weekly responses (30%): At the beginning of most weeks during the semester (see schedule below for exceptions), you will be given a prompt related to the week’s readings and lectures. Your 100- to 200-word response is due via Canvas by Friday, 12:00pm (noon). Each response will be graded as either as not submitted (0%), unsatisfactory (70%), or satisfactory (100%). The due date is strict, and only responses submitted before the weekly deadline will receive credit. To avoid the risk of losing work-in-progress, you are encouraged to first write and edit your response in a document on your computer and then paste it into the text entry field on Canvas.

Group field-trip presentation (15%) and individual report (15%): Two weeks toward the end of the semester will be devoted to small-group explorations of technology at sites around Philadelphia. You will be assigned to a group based on your ranking of choices from a predetermined list of sites and will visit that site together with your group at a time of your own choosing. You should plan to take at least two hours for your site visit, including travel time; you may schedule the visit at any time, as long as it takes place before your group’s scheduled meeting with the instructor to discuss your observations and ideas about the site you have visited during the week of April 10/12 (there will be no lectures on these days). Your group will deliver a short presentation during the class session on either April 17 or April 19. You will also write a short individual reflection on your group’s site visit, which is due by 12:00pm (noon) on Friday, April 20.

Final exam (40%): The final exam will cover material from the entire semester.

Readings

There is one required book for the course, which is on reserve at Van Pelt Library and available for purchase at the Penn Bookstore (3601 Walnut St.). It can also be purchased as an ebook. All other readings are available as PDFs via the course’s Canvas website.

David Edgerton, *The Shock of the Old: Technology and Global History Since 1900* (Oxford University Press, 2011).

Course website

The course Canvas site can be found at <https://canvas.upenn.edu/courses/1390652>. Make sure that you have access to the site as soon as possible. You will need it throughout the semester to access readings, to submit assignments, to view grades and feedback, and to receive important announcements. You may want to check your Canvas settings to ensure that you are receiving notifications by email. Because technical problems sometimes occur, always double-check to be sure that your submitted assignments have been correctly uploaded.

A note on the use of electronic devices during lectures

Laptop computers can be a very efficient means of taking notes and searching through text, but they are also fantastically good at distracting not only their users but also those around them. You are therefore strongly encouraged to take lecture notes the old-fashioned way — that is, with a pen or pencil and paper. Precisely because it is slower and more laborious than typing for most people, writing by hand encourages you to think rather than simply to transcribe and to identify key ideas rather than getting lost in the details. If you do use a laptop to take notes in class, do not use it for social media, shopping, games, reading the news, working on assignments, or any other purposes unrelated to the lecture. Students who choose to use laptops, tablets, smartphones, or other electronic devices for such purposes — which are disruptive both to their learning and to the learning of others — will be asked to leave the classroom.

Academic integrity and non-discrimination policy

Although we all come to the course with different preparation, aims, and institutional positions, we are here to learn and discover together, and each of us is responsible for doing our part to create a respectful and productive classroom environment. Everyone involved with the course will be expected to abide by Penn's [Code of Academic Integrity](#). Because plagiarism and other violations of academic integrity undermine the learning process for the individual as well as for the broader academic community, they will result in a failing grade and possible disciplinary action. No form of harassment or discrimination on the basis of religion, race, ethnicity, class, gender, sexual orientation, age, disability, etc., by either the instructional staff or the students, will be tolerated. If you believe these policies are being violated or insufficiently enforced, please inform the instructor, your academic advisor, the [College Office](#), and/or one of the other appropriate University of Pennsylvania offices (some of which are listed [here](#)).

Special accommodations

All appropriate efforts will be made to accommodate disability status, religious obligations, childcare and other family responsibilities, and other special needs. If you anticipate needing special accommodations or having conflicts with the course requirements for these or other reasons, please inform the instructor as soon as possible, ideally within the first two weeks of the semester. Requests for disability accommodations will require documentation through [Student Disability Services](#). In case of injury, illness, or family emergency that interferes with your ability to complete assignments or attend lectures, please contact the instructor as soon as possible to make alternate arrangements.

Schedule

Date	Lecture	Readings	Assignments
Part I: Foundations			
January 11	Introduction	--	--
January 16	Technology, a hazardous concept	SOTO (<i>The Shock of the Old</i>) Intro & Ch. 1 ("Significance"); Fallows, " The 50 Greatest Breakthroughs Since the Wheel "	Weekly response (due noon Friday)
January 18	Which technologies matter?		
January 23	Inventing modernity	SOTO Ch. 2 ("Time"); Russell & Vinsel, " Hail the Maintainers "; Fast Company, " The World's Most Innovative Companies 2017 " (read descriptions of top 10)	Weekly response
January 25	Hail the maintainers		
Part II: Industrialization			
January 30	Coal, colonies, calculus	Pomeranz, "Without Coal? Colonies? Calculus?"; Pritchard & Zeller, "The Nature of Industrialization"; Marx & Engels, " Manifesto of the Communist Party " (Intro & Part I only)	Weekly response
February 1	The nature of industrialization		
February 6	System builders	SOTO Ch. 4 ("Maintenance"); Ford, <i>My Life and Work</i> (1922, pp. 91-130 only); White, " Farewell, My Lovely! " (1936)	Weekly response
February 8	Making, buying, using, fixing		
February 13	Gigantomania	SOTO Ch. 5 ("Nations"); Josephson, "Projects of the Century"; Kruschchev and Nixon in Moscow (Video, 15:30, 1959)	Weekly response
February 15	Kitchen debates		
February 20	Globalization and "deindustrialization"	SOTO Ch. 3 ("Production"); Hurley, "From Factory Town to Metropolitan Junkyard"; " iPhone factory struggles with suicides " (Video, 3:38, 2010); Merchant, " Life and death in Apple's forbidden city " (2017)	Weekly response
February 22	Toxic legacies, novel risks		
Part III: Case Studies			
February 27	Industrialized warfare	SOTO Ch. 6 ("War"); Gusterson, "Toward an Anthropology of Drones"; Rothenberg, " Interview with a U.S. Air Force Drone Pilot "; Scahill, " The Assassination Complex "	Weekly response
March 1	The drone strike		
March 13	Green revolutions	Cullather, "A Parable of Seeds"; Fleming, "The Climate Engineers"; Lukacs & Keith/Wagner on geo-engineering (2017)	Weekly response
March 15	Controlling climate		
SPRING BREAK			
March 20	Owning ideas	Biagioli, "Patent Republic"; Kevles, " Can They Patent Your Genes? "; " In the Family " clip (Video, 4:30, 2008); AMP vs. Myriad, U.S. Supreme Court decision (2012)	Weekly response
March 22	Patenting life		
March 27	Information machines	Ceruzzi, <i>Computing</i> (pp. 99-154); Irani, "Cultural Work of Microwork"; " What it's really like to be an Uber driver " (2014); " Inside Uber: How the company attracts top talent despite its reputation " (2017)	Weekly response
March 29	"Human-as-a-service"		

April 3	Steering innovation	SOTO Ch. 8 ("Invention") & Conclusion; Kelly, " Amish Hackers "; Kingsnorth, " Dark Ecology "	Weekly response
April 5	Opting out		
Part IV: Group Projects and Wrap-Up			
April 10	No lecture – group meetings with instructor		--
April 12	No lecture – group meetings with instructor		--
April 17	Group presentations		--
April 19	Group presentations		Individual report due Apr. 20, 12:00pm (noon)
April 24	Wrap-up	--	--