

THE CULTURAL POLITICS OF PROGRESS:
TECHNOLOGIES, SOCIETIES, & CULTURES

COURSE DESCRIPTION:

Technology histories are too often narratives of how Western knowledge and skills have progressed towards increasingly perfect understandings and uses of nature. Yet, technologies do not evolve autonomously or deterministically. Instead, they are products of the cultural and political systems within which they develop, so developments in them can only be explained within those contexts. Conversely, the ways in which societies perceive and manipulate nature are important indicators of their value and belief systems.

This course will analyze historical developments in many technologies in order to explore the relationships between these developments and their cultural and political contexts. Particular cases will focus on the popular dissemination of new developments, industrialization, and the recent shift from optimism to concern about the exploitation of resources. We will examine standardization's roles both in increasing productivity and in regulating labor. We will also explore the role of progress discourse and technocratic ideologies as they relate to attitudes about class, gender, and race.

REQUIRED READINGS:

The following titles are available in the Auraria Bookstore. **Other required readings are on electronic reserve or online through Auraria Library.** See listings on pages 3 and 4.

- Smith, Merritt Roe, and Clancey, Gregory. *Major Problems in the History of Technology*. Boston: Houghton Mifflin Company, 1998.
- Pacey, Arnold. *Technology in World Civilization: A Thousand-Year History*. Cambridge, MA: The MIT Press, 1990.

SEMINAR REQUIREMENTS (For details, see below.):

- (1) Class attendance and participation, including preparing questions for discussion.
- (2) An analytical research paper and class presentation.
- (3) Observation of History Department style and plagiarism guidelines, as well as CLAS policies included in this syllabus.

COURSE OUTLINE:

Note: “S&C” refers to the Smith & Clancey collection. Numbers refer to chapters in Pacey and in S&C.

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| 1. | A Car for Caesar’s Army.
Why Worry, Dr. Frankenstein?
Technology or Science? | <u>January 22</u> | Russell;
Layton; SST |
| 2. | What is Technology? What is Progress? | <u>January 29</u> | S&C 1;
Staudenmaier;
Lipartito |
| 3. | Globalization, circa 700 CE—ever & anon | <u>February 5</u> | S&C 2,3;
Carney;
Pacey 1-7 |
| 4. | When Did We Get Modern? | <u>February 12</u> | S&C 4-9
Pacey 8-11 |
| 5. | 1st Term Project Roundtable | <u>February 19</u> | |
| 6. | Noble Tinkering. Is It Dead? | <u>February 26</u> | S&C 10, 12
Takahashi |
| 7. | Information Ages—18th & 20th Centuries
Proposals with thesis statement & outline due. | <u>March 4</u> | Headrick;
Darnton;
S&C 13 |
| 8. | 2nd Term Project Roundtable | <u>March 11</u> | |
| 9. | Gendered & Racial Interactions
with Technologies | <u>March 18</u> | Cowan; Fouché;
Slaton;Shackleford |
| 10. | Presentations (1st drafts due 1 week later) | <u>April 1</u> | |
| 11. | Presentations (1st drafts due 1 week later) | <u>April 9</u> | |
| 12. | Presentations (1st drafts due 1 week later) | <u>April 15</u> | |
| 13. | Optimistic Narratives | <u>April 22</u> | Turner; Del Sesto |
| 14. | Pessimistic Narratives | <u>April 29</u> | S&C 11;
Carson; Marx |

15. Balancing Pessimism & Optimism

May 6

Stine; biofuel
news articles

• **Term projects due (two drafts)**

May 13, 6:00 p.m.

READINGS ON ELECTRONIC RESERVE:

- Carson, Rachel. *Silent Spring*. pp. 1-13. Boston: Houghton Mifflin Company, 1962.
- Del Sesto, Stephen L. "Wasn't the Future of Nuclear Power Wonderful?" in Corn, Joseph J., ed. *Imagining Tomorrow: History, Technology, and the American Future*. Cambridge, MA: The MIT Press, 1986. Chapter 3.
- Fouché, Rayvon. Selections from *Black Inventors in the Age of Segregation Granville T. Woods, Lewis H. Latimer, and Shelby J. Davidson*. Baltimore: Johns Hopkins University Press, 2005.
- Marx, Leo. "The Idea of 'Technology' and Postmodern Pessimism." in Merritt Roe Smith & Leo Marx, eds. *Does Technology Drive History? The Dilemma of Technological Determinism*, pp. 237-257. Cambridge, MA: MIT Press, 1994.
- Russell, Edmund. "The Garden in the Machine: Toward an Evolutionary History of Technology." in Susan R. Schrepfer and Philip Scranton, eds. *Industrializing Organisms: Introducing Evolutionary History*. New York and London: Routledge, 2004.
- Shackleford, Ben A. "Masculinity, the Auto Racing Fraternity, and the Technological Sublime." In Horowitz, Roger, ed. *Boys and Their Toys? Masculinity, Class, and Technology in America*: New York: Routledge, 2001.
- Staudenmaier, John M. "Perils of Progress Talk: Some Historical Considerations." In Steven L. Goldman, ed. *Science, Technology, and Social Progress*, pp. 268-298. Bethlehem: Lehigh University Press, 1989.

READINGS ONLINE (some are also available in hard copy)

- Carney, Judith. "Landscapes of Technology Transfer: Rice Cultivation and African Communities." *Technology and Culture* 37 (1996): 5-35.
- Cowan, Ruth Schwartz. "The 'Industrial Revolution' in the Home: Household Technology and Social Change in the 20th Century." *Technology and Culture* 17 (January 1976): 1-23.

- Darnton, Robert. “An Early Information Society: News and the Media in Eighteenth-Century Paris.” *American Historical Review* 105 (2000): 1-35. See also <<http://www.indiana.edu/~ahr/darnton/>>.
- Headrick, Daniel R. “Toward a History of Information Systems.” *Antenna* 11, no. 1 (November 1998): 4-5, 11. Available at <mercurians.org>.
- Layton, Edwin T. Jr. “Through the Looking Glass: or, News from Lake Mirror Image.” *Technology and Culture* 29 (July 1987): 594-607.
- Lipartito, Kenneth. “Picturephone and the Information Age: The Social Meaning of Failure,” *Technology and Culture* 44 (2003): 50–81.
- Slaton, Amy. “Suitable for Framing: Fingerprints and the Rise of Criminal Identification.” *Technology and Culture* 43 (2002): 777-781.
- Stine, Jeffrey K. “A Sense of Place: Donald Worster’s *Dust Bowl*.” *Technology and Culture* 48 (2007): 377-385.
- Turner, Fred. “Where the Counterculture Met the New Economy: The WELL and the Origins of Virtual Community.” *Technology and Culture* 46 (2005): 485-312.
- Takahashi, Yuzo. “A Network of Tinkerers: The Advent of Radio and Television Receiver Industry in Japan.” *Technology and Culture* 41 (2000): 460-484.
- Biofuel News Articles for Class #15. (from *NewsBank*).
 - “Once a Dream Fuel, Palm Oil May Be an Eco-Nightmare.” *New York Times*. (January 31, 2007).
 - “Energy Farming Worsens Global Warming.” *Seattle Post-Intelligencer (WA)* (September 20, 2007).
 - “What’s the future of world's biofuels?” *Des Moines Register* (October 18, 2007).
 - “Amazon Balancing Act: Farm Growth vs. Forests.” *St. Petersburg Times* (December 8, 2007).

TERM PROJECT

The term project will be an analytical paper that applies a set of questions to a single topic, such as a particular technology or category of technologies, a particular period of time or region. The theoretical methods employed in the essays in chapter 1 of the Smith & Clancey anthology may be used as models.

Other options include comparisons across time, region, technology, or other category. Why have different attitudes towards specific technologies or technologies in

general existed at different times and/or places? This option requires a comparative approach. As a general rule, look through the index for *Technology and Culture* to begin projects.

Feel free to explore alternatives and to suggest various subjects for your papers. Narratives that do not address analytical problems will not be acceptable. Keep in mind that the regional focus of your project will determine to what fields you can apply degree credit for the course. Written proposals with thesis statement and outline are due by March 4 as a safeguard to avoid your spending valuable time on unmanageable subjects.

Whatever the topic, a good analysis asks stimulating questions of the evidence and seeks out additional evidence when the questions exceed the scope of the evidence at hand.

The term paper should be about thirty pages long, typed and double spaced, and following departmental guidelines. A full and clean draft will be due the week after your presentation to the class. It will be graded, as will the final draft. When turning in the final draft, include the first draft. Please do not use plastic covers for your papers.

GRADING AND ADMINISTRATIVE DETAILS:

(1) Grade evaluations will include class participation and deportment as well as attendance and punctuality. Tardiness or leaving early by more than five minutes will also be noted as they substantially disrupt the class as a whole. All readings are due according to the dates on the course outline. Assignments must be turned in to me personally and on time in order to guarantee full credit. Otherwise I will reduce grades by a full letter, that is, for instance, from A- to B-. Maintain at least two electronic copies of all work.

Evidence that you have thought about the assignments and class discussions will provide a major criterion for grading. Show in your papers and in-class contributions that the readings and discussions have made a difference in your understandings of history and technologies. Apply thoughtful analysis to the questions the course raises. Be prepared to ask and answer questions during each class.

See the attached “Guidelines for Assessing Assignments.” These are the criteria by which I will evaluate your work.

(2) Class Discussions:

Asking questions: At least two students per class will sign up to initiate discussions by raising two or three questions based on the readings for that day. This is not to be a formal presentation; it will be evaluated according to how it encourages discussion of the readings. As a general rule, neither asking for comparisons of the past with the present nor asking for predictions of the future will lead to fruitful discussions. On the other hand,

asking for comparisons between periods of the past or regions or technologies, can be quite fruitful. Everyone must be able to answer the questions from class readings or discussions. We are seeking analyses and explanations, connections, not summaries; point out or critique logic, evidence, and arguments. Of course, anyone can ask questions at any time, and the class will appreciate all thoughtful questions and ideas.

As with any adult learning situation, cooperation and participation are prerequisites. Students must absorb and process the reading material before class and, therefore, be able to contribute to the collective experience of discussions. Optimal class participation contributes thoughtfully and pertinently to the class discussions; students should gauge the frequency of their contributions according to that guideline.

Out of consideration for your colleagues, please turn off cell phones before class begins, and do not bring meals into the classroom.

(3) The History Department's plagiarism policy:

The History Department assumes that all work is your own. Any words or ideas that you take from another source, including lectures or outside assistance, need to be acknowledged or cited. Not doing this is considered plagiarism. Plagiarism includes absence of attribution when quoting sources; rewording another person's ideas and implying they are your own; utilizing the argument or structure of a text without citation; attempting to conceal the degree to which a source has been used; obtaining work from a website and submitting it as your own; and submitting the work of another student, with or without that student's permission. Plagiarists may face failure of the specific assignment, failure of the entire course, and referral for University discipline, which may result in suspension or expulsion. As these rules merely reflect common sense and ethics, ignorance cannot mitigate the plagiarist's culpability. For further clarification of the issue, see the University's Academic Honor Code (<<http://www.cudenver.edu:81/gspa/policy/academichonor.html>>) or the American Historical Association's Statement on Standards of Professional Conduct (<[#Statement on Plagiarism](http://www.theaha.org/pubs/standard.htm)>).

(4) The proportions for grading are as follows:

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| • In-class discussions and prepared questions on readings | 35% |
| • Oral presentations of project | 10% |
| • First version of research analysis paper | 20% |
| • Final version of research analysis paper | 35% |

(6) In addition to announcements made and written handouts distributed in class, I will likely contact you between classes on occasion, which I will do through individual and group email messages. One of the requirements for this course is that you maintain a UCD email address, check it regularly for messages, be sure it is working, and let me know if you change your email address. You are responsible for any messages, including

assignments and schedule changes, that I send to you via email or post on Blackboard. You also may contact me via email, in addition to seeing me during office hours or calling me.

OFFICE HOURS

Tuesdays, 4:00 - 5:00, in Room KC 554 and by appointment. I am also available by telephone (303/556-4497) and e-mail <pamela.laird@cudenver.edu>.

I strongly urge everyone to make at least one appointment with me to discuss term projects on an individual basis. Individualized discussions can be especially beneficial for framing analytical questions and directing research strategies. I will be glad to discuss other matters, as well.

UCD & College of Liberal Arts & Sciences Policies:

- Incomplete grades (IW or IF) are NOT granted for low academic performance. To be eligible for an Incomplete grade, students MUST (1) successfully complete a minimum of 75% of the course, (2) have special circumstances beyond their control that preclude them from attending class and completing graded assignments, and (3) make arrangements to complete missing assignments **with the original instructor**. Verification of special circumstances is required. Completion of a CLAS Course Completion Agreement is strongly suggested. The CLAS Course Completion Agreement is available from the CLAS Advising Office, NC 2024.
- If you are a student in the military with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact the College of Liberal Arts & Sciences Associate Dean or Advising Office immediately.
- The University of Colorado at Denver and Health Sciences Center is committed to providing reasonable accommodation and access to programs and services to persons with disabilities. Students with disabilities who want academic accommodations must register with Disability Resources and Services (DRS), 177 Arts Building, 303-556-3450, TTY 303-556-4766, FAX 303-556-2074. I will be happy to provide approved accommodations, once you provide me with a copy of DRS's letter.
- Students are responsible for knowing and abiding by the UCD Student Code of Conduct. You may download this document at http://thunder1.cudenver.edu/studgovt/resources/docs/Student_Code_of_Conduct.doc.

Guidelines for Assessing Assignments

	Exemplary	Competent	Inadequate
Content	Identifies and develops main themes with depth and completeness, strong support, and adequate detail. <u>Employs themes, ideas, and principles from course readings & discussions.</u>	Identifies and develops main themes in a vague way, or not as deeply as they might be. Supporting evidence and analyses are lacking in detail or they are unclear. Little use of course ideas or materials.	Identifies and develops main themes poorly or not at all. Analysis is missing, as is supporting evidence. No or poor use of course ideas or other materials.
Research	Solid and imaginative exploration and use of appropriate primary sources, scholarly articles and monographs. Sources build on each other, open new avenues of thought, and establish argument with originality.	Secondary sources only, or inappropriate use of primary sources. Unimaginative but adequate exploration and use of materials.	Too little evidence of any to address analytical questions with originality and depth. Heavy reliance on a single source or fragmentary use of secondary sources. Note that any evidence of plagiarism result in a failing grade.
Analysis	Uses evidence to argue a point. Asks interesting and novel questions of the evidence. Considers context, contingency, actors' roles and purposes, and significance of findings. Adds value to evidence. Applies concepts from course. Seeks explanation.	Narrative with some consideration of context and other explanatory factors. Crude or simple application of course ideas, methods, or materials.	Simply accumulates evidence within a narrative that lacks contextualization and other explanatory factors. No use of course ideas, methods, or materials.
Organization	Organization is unified, apt, and coherent. The order and structure of the paper, paragraphs, and sentences are compelling and move the reader along. Transitions are purposeful and clear.	Writing's logical order and structure is inappropriate and does not advance the paper's goals. Paragraphs, sentences, and/or transitions are sometimes effective but sometimes not.	Lacks clear structure and Paragraphs and sentences be convoluted and difficult to understand, or they may be choppy. Transitions are awkward and unclear.