

SPRING 2017 COURSE SYLLABUS:
TECHNOLOGY & DEMOCRACY RESEARCH (GEOG 650)
Instructor: Dr. Scott Kirsch, Geography Department, UNC-Chapel Hill

Tuesdays 3:30-6:30 Hanes Hall 0112
Office: Carolina Hall 306 **Office hours :** W: 1-3; F: 2-3; and by appointment
Email: kirsch@email.unc.edu **course homepage** via: <https://sakai.unc.edu/>



Overview

Are society's technological choices open to democratic participation? How are the relations between technology and democracy being reconfigured, and how might they be? In *GEOG 650 Technology & Democracy Research*, students explore political, cultural, and geographical dimensions of technological change through inquiry-based learning around key social and environmental issues. During Spring 2017, course themes will include geographies of energy and waste, and intersections of the arts and sciences in environmental communication, with a focus on both North Carolina settings and global contexts. As part of group research projects developed over the course of the semester, students produce [digital atlases](#) and [resource pages](#), including original maps and reproductions of archival images, and publish them on websites created through UNC's Digital Commons initiative. Bringing together a combination of seminar, research workshop, and experiential learning approaches, student research groups work collaboratively with guidance from UNC faculty to produce and communicate research that addresses important questions impacting the status of "technology & democracy" in the world today.

Through the inquiry-based learning approach, the purpose of the course is for students to explore the implications of living in a pervasively *technological* world, and through readings, lectures, and original research, to raise questions about the politics and governance of technology in real world settings. Students will be exposed to a range of research methods and new media practices, including archival methods,

web-based mapping applications, 'counter-mapping', and website building, and encouraged to develop research skills which may be applied in future professional, civic, or scholarly projects.

Format

Unusual? Experimental. Just plain odd? Call it "Project- and methods-oriented." Rather than being evaluated primarily through quizzes and exams, students will be evaluated mainly on the basis of knowledge produced, including active participation in class activities as well as individual and group research and mapping projects. The premise is to combine an inquiry-based learning approach - stemming from the idea that we learn most by asking questions and seeking answers - with experiential education and engagement with real environmental problems.

The weekly seminar will be organized around readings and formal discussion of course texts; lectures and research presentations (by Kirsch as well as occasional visitors); methods workshops; use of artistic, documentary and new media resources; in- and out-of-classroom visits with a range of on-campus experts, organizations, and institutions; and ultimately, our own collaborative research projects. Hence, a "technology & democracy workshop," as the [course](#) used to be called.

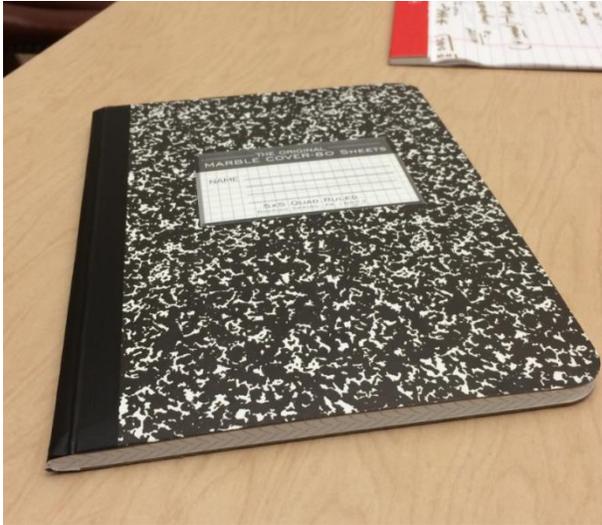
Research emphasis. Hence, this is also a course about *doing* research, emphasizing fundamental concerns about the evaluation of sources, interpretation of different kinds of geographical data, explanations, analyses, representation and communication of research findings. Students will develop skills in identifying research problems. Special workshops running throughout the semester will focus on methodology and research practices; cartography and new media; the archive and open source; and other themes. While a set of general project frameworks will be designed for students to engage with, they will develop projects in areas of special interest, and work collaboratively to produce informative, digital media-based projects that include both textual and graphic components.

Requirements

<input type="checkbox"/> Informed class participation	15%
<input type="checkbox"/> "Almost weekly response exercises"	15%
<input type="checkbox"/> 'Mappings' projects (2): geographies of energy & waste	10%
<input type="checkbox"/> Annotated bibliographies (2)	10%
<input type="checkbox"/> Group research projects (includes digital atlas and resource pages; research paper)	30%
<input type="checkbox"/> <u>Mid-term quiz (1); + final/reflection paper (1)</u>	20%
	<u>100</u>

All assignments (and due dates) will be given in class and posted on sakai. Since student contributions to seminar discussion and research groups are among the major emphases of the course, keeping up with course readings and informal weekly response assignments is essential.

Textbook:



None. Additional required readings, to be read in advance of each week's meeting, are listed in the schedule below, including several chapters from *Key Methods in Geography* (Clifford et al., eds, 2010), abbreviated as [KMIG]. Unless indicated, all texts will be posted as pdfs or linked on *sakai*. You should *expect to read between ~25-65 pages per week* from a variety of sources - academic journals, book chapters, periodicals, websites, in addition to your reading for your research projects, along with some additional materials that may be distributed for class visitors or practicums -- so please set aside time accordingly.

Provisional Schedule & Reading List

Since there are many moving part to syllabus, it remains subject to revision!

Part I: Introduction - TECHNOLOGY & DEMOCRACY Research

- Jan 17 *Introductions; Energy landscapes*
- Jan 24 *Technology as a keyword*
- Andrew Ross, "**Technology**" in T. Bennett, L. Grossberg, M. Morris (eds), *New Keywords: A Revised Vocabulary of Culture and Society*. (Wiley, 2005)
 - Heesen, A.T. "**The notebook: a paper-technology**" In B. Latour and P. Weibel *Making things public: atmospheres of democracy* (Cambridge, Mass, MIT Press, 2005), pp 582-589.
 - Ashley Carse, "**Keyword: Infrastructure. How a humble French engineering term shaped the modern world**" in *Infrastructures and Social Complexity* (eds. P. Harvey et al.), (London/New York: Routledge, 2016)
 - Kaebnick et al., "**Precaution and governance of emerging technologies**" *Science* 354 (November 2016), 710-711.
 - Peter Kropotkin, "**What geography ought to be**" *The Nineteenth Century* 18 (1885). Republished (abridged) in H. Bauder and S. Engel-Di Mauro (eds), *Critical Geographies: A Collection of Readings* (Praxis (e)Press, 2008), 11-22.
- Jan 31 *Geog 650 Ackland Study Gallery: Technology & Environment*
***Meet at Ackland Museum, 3:30**
- Yusoff, Kathryn, and Gabrys, Jennifer. 2011. **Climate change and the imagination.** *WIRES Climate Change*.

- Winner, Langdon. 1995. "**Citizen Virtues in a Technological Order**" in A. Feenberg, A. Hannay (eds), *Technology and the Politics of Knowledge*, pp. 65-84. Indiana University Press.
- <http://citizensense.net/projects/>

Feb 7

Rethinking expertise, science, & democracy; Research projects

- Clive Barnett, "**Democracy**" in D. Gregory et al. (eds), *The Dictionary of Human Geography* (Oxford: Wiley-Blackwell, 2009, 5th edn), 150-152.
- Noortje Marres, "**Issues spark a public into being: A key but often forgotten point of the Lippmann-Dewey debate**" in B. Latour and P. Weibel (eds), *Making Things Public: Atmospheres of Democracy* (ZKM and MIT Press, 2005), 208-217.
- <http://www.geoengineeringwatch.org/>
- Institute for Ethics and Emerging Technologies. <http://www.ieet.org/index.php/IEET/about>
- THE LOKA INSTITUTE For Science and Technology of, by & for the People. <http://loka.org/>
- <http://citizensense.net/data-stories/>
- Clifford, French and Valentine, "**Getting Started in Geographical Research ...**" [KMiG, 3-15]
 - Recommended: M. Healey & RL Healey, "**How to conduct a literature search**" [KMiG, 16-35]

Part II: RESEARCH & MAPPING PRACTICUM*: USING GEOGRAPHICAL PERSPECTIVES IN WASTE, ENERGY, AND ENVIRONMENTAL JUSTICE RESEARCH [*tentative schedule: stay tuned to sakai:announcements for scheduling updates]

Feb 14 *Mapping social environments. Introduction to web-based mapping applications with Amanda Henley, Geography and GIS librarian. Meet 3:30pm @ the Research Hub @ Davis Library*, 2nd Floor.*

- Chris Perkins, "**Mapping and Graphicacy**" [KMiG, 350-373]
- A.M. Joyner and Allan N. Parnell, "**Maximizing the power of Geographic Information Systems in racial justice**" *Clearinghouse Review: Journal of Poverty Law and Policy* 47(2013): 185-193.
 - See also: <http://www.cedargroveinst.org/>
- George Joseph, "30 Years of Oil and Gas Pipeline Accidents, Mapped" Nov 30, 2016 <http://www.citylab.com/weather/2016/11/30-years-of-pipeline-accidents-mapped/509066/>

Feb 21 *Environmental Justice*

- Ken Geiser and Gerry Waneck, "**PCBs and Warren County**" in R. Bullard (ed) *Unequal Protection* (San Francisco: Sierra Club Books, 1994), pp 43-52.
- North Carolina Environmental Justice Network <https://ncejn.wordpress.com/>

- Marsh, B., Parnell, A.M., and A.M. Joyner, "**Institutionalization of racial inequality in local political geographies**" *Urban Geography* 31(2010): 691-709.
- Andrew Curley, "Water is Life and Life is Sovereignty: Context and Considerations for Critical Geographers" *Antipode Interventions* December 13, 2016 <https://antipodefoundation.org/2016/12/13/water-is-life-and-life-is-sovereignty/>

Feb 28 Archive; doing historical research **Meet 3:30pm @ Wilson Library***

- Miles Ogborn, "**Finding Historical Sources**" [KMIG, pp 89-102]
- Mike Featherstone, "**Archive**" *New Encyclopedia Project*, 591-596
- Cloke et al. "**Official sources**" in Cloke et al. *Practising Human Geography*, 41-61. (London: Sage, 2004).
- "Mapping #1" due

Mar 7 Creative mapping and counter-cartography workshop;

- Rob Bartram, "**Geography and the Interpretation of Visual Imagery**" [KMIG, pp 131-140]
- <http://www.countercartographies.org>
- <http://publiclab.org/>
 - <http://mapknitter.org/>
- Annotated Bibliography and Mid-Term Quiz (take-home) due

Mar 14 **SPRING BREAK NO CLASS**

Part III: MAPPING GEOGRAPHIES OF ENERGY AND WASTE

Mar 21 *Energy landscapes*

- Karl S. Zimmerer, "**New geographies of energy**: Introduction to the special issue" *Annals of the Association of American Geographers* 101(2011): 705-711.
- Rebecca Lave and Brian Lutz, "**Hydraulic fracturing: A critical physical geography review**" *Geography Compass* 8(2014): 739-754.
- <http://www.gold.ac.uk/news/citizen-sense-pennsylvania-invests/>
- Deborah Coughlin, "**The women fighting fracking in their own backyard**" https://broadly.vice.com/en_us/article/the-women-fighting-fracking-in-their-own-backyard?utm_source=broadlytwitterus

Mar 28 *The Superfund and geographies of waste; Energy futures; Visiting speaker*:*
UNC Superfund Research Program (<http://sph.unc.edu/superfund-pages/srp/>)

- <http://www.epa.gov/superfund/> [Selections]

- <https://www.epa.gov/hfstudy> (Selections: EPA's Study of Hydraulic Fracturing for Oil and Gas and Its Potential Impact on Drinking Water Resources)
- Kirsch S. 2013. *Cultural geography I: Materialist turns*. *Progress in Human Geography* 37: 433-441.
- "Mapping #2" due

Apr 4 *Projects: Research practicum*

- Meghan Cope, "**Coding Transcripts and Diaries**" [KMiG, 440-452]
- Recommended (again): M. Healey & RL Healey, "**How to conduct a literature search**" [KMiG, 16-35]

Apr 11 *Going nuclear?*

- Charles Perrow, "**Nuclear denial: From Hiroshima to Fukushima**" *Bulletin of the Atomic Scientists* 69 (2013): 56-67.
- "**Rethinking Nuclear**" (2012 GEOG 650 Digital Atlas) <https://rethinkingnuclear.web.unc.edu/>
- <https://www.weforum.org/agenda/2016/03/5-years-after-fukushima-world-nuclear-powerhouses/>
- Gerry Canavan, "**After Fukushima**, a tour of the Shearon Harris nuclear power facility" *Independent Weekly* 6/01/2011.
- <http://www.wral.com/duke-suspends-plans-for-shearon-harris-expansion/12408113/>
- Dan Frosch, "**Amid toxic waste, a Navajo village could lose its land**" *New York Times* Feb 19, 2014.

Apr 18 *New models of science and public engagement*

- Living Knowledge, The International Science Shop Network, <http://www.livingknowledge.org/>
- Syracuse Community Geography & Syracuse Hunger Project <http://communitygeography.org/>
- <http://www.loka.org/trackingconsensus.html>
- Kirsch, S. 2007. "Risk Society" in P. Robbins (ed), *Encyclopedia of Environment and Society*, pp 1524-1526. Thousand Oaks, CA: Sage Publications.
- Robbins P and Moore SA (2013) Ecological anxiety disorder: diagnosing the politics of the Anthropocene. *Cultural Geographies* 20: 3-19.

Apr 25 *Technology & Democracy Workshop 2015 Teknologirådet*: NC Energy futures*

- [*Technology Councils (Danish)] Readings TBA
 - Annotated Bibliography 2/Final reflection papers due
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Final exam: Tues May 9: **GROUP RESEARCH PRESENTATIONS***

- ❖ **Please note that your full participation and observance of the Honor Code is expected in this course.**
<http://studentconduct.unc.edu/>
- ❖ Please inform the instructor if you have special needs which require accommodations in or out of the classroom in order for you to fully participate in this course.

*Computation Center: UNIVAC" circa 1959 From the University of North Carolina at Chapel Hill Photographic Laboratory Collection, 1946-1990 (#P0031/18478_0001)

