Maps reveal, delineate, verify, orient, navigate, anticipate, historicize, conceal, persuade, and, on occasion, even lie. From the earliest maps in cave paintings and on clay tablets, to the predictive climate visualizations and crime maps and mobile cartographic apps of today and tomorrow, maps have offered far more than an objective representation of a stable reality. In this hybrid theory-practice studio we’ll examine the past, present, and future – across myriad geographic and cultural contexts – of our techniques and technologies for mapping space and time. In the process, we’ll address various critical frameworks for analyzing the rhetorics, poetics, politics, and epistemologies of spatial and temporal maps. Throughout the semester we’ll also experiment with a variety of critical mapping tools and methods, from techniques of critical cartography to sensory mapping to time-lining, using both analog and digital approaches. Course requirements include: individual map critiques; lab exercises; and individual research-based, critical-creative “atlases” composed of at least five maps in a variety of formats.

Your Contributions:

ATTENDANCE AND PARTICIPATION

We want to make sure we get the most out of our discussions, and that we benefit from one another’s expertise and experience in developing our individual projects. Thus, we need everyone to show up regularly, on time, and prepared – i.e., having both completed the assigned reading and any mapping exercises. You will be permitted two excused absences (“excused” means that you must have contacted me prior to class to inform me of your absence) for the semester. Additional excused absences – and any unexcused absences – will negatively affect your grade. More than three absences, excused or unexcused, will result in failure of the course; if you anticipate needing to miss several classes, you are advised to drop the course. A pattern of late arrivals is likewise detrimental.

I do not require you to complete weekly reading responses, simply because your work on the individual and group projects should keep you plenty busy. That said, I still do encourage you to take time before class to annotate the weekly readings, abstract them, and reflect on how they contribute to your understanding of the overarching themes of the course and to your own research and making process. Your consistent presence and regular, constructive contributions account for 15% of your final grade.

MAP CRITIQUE

We’ll dedicate some time in most of our classes to presenting and critiquing several (canonical/ exemplary/ experimental/ overwrought/ elegant/ etc.) maps in a variety of formats, to see what they do right and wrong, what they illuminate and obfuscate, how they integrate form and content effectively and poorly, and what lessons we can take away from them and apply, or avoid, in our own projects.

Each of you will post and publicly present one map critique – ideally, of a map that both addresses (in a direct or tangential way) the week’s theme and pertains to your semester project. Don’t think of this exercise as an additional assignment; use it to advance your own agenda. To identify a map for review, you might look through the websites I list below, under “Required Texts”; and the books I’ll be previewing in Week One. You could also
simply Google “your project topic” + “map”; I’ll bet you a dollar you’ll find a few options. Please consult with the other presenters for the week to work out who’s chosen which projects. You’re welcome to double- or triple-up on a particular map, provided you each offer a distinctive perspective.

Your **fifteen-minute presentation-and-discussion** should consist of two parts: (1) a critique and (2) a critical-creative application prototype. The critique should focus on a single mapping project and should employ some of the critical tools and criteria we discuss in Week 3. Your application is a critical-creative attempt to apply to your own research project the same effective and/or ineffective techniques used in the map you’ve critiqued. You might choose to exaggerate the failures of that map by creating a parody – or you might choose to try out some helpful features from your critique subject in order to generate mapping techniques that might aid in your own work. Be sure to identify what elements inspired you and why, and how and where we can see those elements’ influence in your map. Your application can take virtually any form and format – from a drawing to a paper prototype, from a quilt to a sound map. Keep in mind that this is only a prototype – a rough sketch, a maquette, a “napkin drawing”; we’re more concerned in this context with the ideas behind your project than with your execution.

Before class on your presentation day, please **post your 600- to 900-word text** – which should encompass both your critique and the explanation of your application exercise, along with documentation of your application – to our class website. You should aim to wrap up your formal presentation in seven or eight minutes (I’ll cut you off after ten), so we have plenty of time for discussion. And please be sure to have presentation media loaded/booted/hung/distributed before class begins so we can start on time. Your review is worth **15% of your final grade**.

**MAP LABS + ATLAS**

At the beginning of the semester you should begin to think about a fluid, capacious research topic that you’d like to explore through the maps you create over the course of the semester. Ideally, this topic will pertain to projects you’re exploring in your other classes or a thesis project, to a “through-line” you’ve pursued throughout the program, or to work you’re doing in your extracurricular life. You’ll need to submit a **600-word proposal for this project**, via Google Drive, before class on **September 15**. This proposal should include (1) a topic description, thematic overview, problem statement, or research question; (2) a discussion of your topic’s personal relevance, larger critical significance, timeliness, etc.; (3) a preliminary discussion of how your topic might lend itself to spatial/cartographic investigation (i.e., what can you learn by mapping it?); (4) a description of the geographic area(s) and scale(s) you plan to focus on in your maps; and (5) a tentative bibliography of at least seven sources (some scholarly publications, some popular publications, some precedent maps, etc.) that will likely prove useful in your research and practice. You’ll share your proposal in class, in an **informal 5-minute presentation**, on **September 22**. The proposal is worth **15% of your final grade**.

Each of the maps you then create over the course of the semester should pertain to this topic and cumulatively represent myriad ways of illustrating or investigating your subject. You’ll begin developing three of these maps in our in-class labs, and your **presentation of this work-in-progress** during our in-class review sessions, which typically take place two weeks after each in-class lab, will account for **15% of your final grade**.

You can then continue to develop these prototypes, or generate map ideas of your own. By the end of the semester, you should have a minimum of **five completed maps**, in at least three different “media formats” (e.g., hand-drawn, photographic, audio-based, online-interactive, etc.). You’ll then need to compile those maps into an **atlas, which you can present in whatever format you choose** (e.g., a book, a website, an installation, etc.), as long as you frame the contents as a cartographic set – as five “spatial variations on a theme.” You should make sure to offer some means of narratively or argumentatively navigating through your collection; generate connective threads between your individual maps; and provide critical/descriptive commentary reflecting on the unique medial qualities of each piece in the set (see, for example, how Annette Kim addresses the distinctive features of each map in her “Critical Cartography Primer,” pp. 113-145 of *Sidewalk City*). You’ll submit your
project at the start of class on December 15, and during that class each student will deliver a 10- to 15-minute presentation of his/her work (details to come). Your final atlas is worth 40% of your final grade.

Required Texts:

All readings are made available as pdfs on our course website. All copyrighted material is behind a firewall; you’ll be prompted to enter a username (student) and password (seecritfilez). Not so secret, eh?

That said, you’re invited to purchase copies of the following, since we’ll be using significant portions of these resources:

- Shannon Mattern, *Deep Mapping the Media City* (Minneapolis: University of Minnesota Press, 2015).

The following web resources are worth consulting regularly, too:

- *The Atlantic’s CityLab* posts on maps
- *Axis Maps Blog*
- *Cartogrammar* (Andy Woodruff)
- *Fuck Yeah Cartography!*
- *Making Maps: DIY Cartography* (John Krygier + Denis Wood)
- *Maps Mania*
- Dee Morris & Stephen Voyce’s series of posts on *Jacket2*
- Penn State’s online *Cartography and Visualization course*
- *David Rumsey Map Collection*
- *Stamen Design*
- *Strange Maps*
- *Wired Map Lab*
- *My own mapping links*

This course draws on insights and inspiration from four years’ worth of students in my “Urban Media Archaeology” studio – and is indebted to Jeremy Crampton’s Critical History of Cartography reader; Marisa Olson’s “Media Studies: Experimental Geography Reading List” (Rhizome, March 20, 2009); RISD’s Experimental Geography Research Cluster; Matthew Wilson’s “Critical GIS” graduate seminar; and Wilson’s “Critical and Social Cartography” course. I must also thank the fellows at the Digital Cultures Research Lab at Leuphana University, in Lüneburg, Germany, where I workshopped this syllabus in July 2015; as well as Karen Gregory and Lauren Klein for their helpful recommendations.
Policies and Procedures:

**SUBMITTING WORK VIA GOOGLE DRIVE**

You'll occasionally be asked to submit your work via Google Drive. Because I prefer to insert margin comments and propose revisions directly in/on your text, I need to work with an editable document (e.g., *not* a pdf). For this reason, I ask that you please either (1) create your documents in Google Drive; (2) convert them to Google Doc format when you upload them; or (3) upload documents in .doc format, which I can then download and annotate using “track changes,” and return to you via email.

**POSTING WORK ONLINE**

We'll all create accounts for our class's blog, and we'll briefly review how to post. You're invited to post any class-related material – events, exhibitions, news, etc. – at any time, and you'll occasionally be asked to share your work online. If you're not comfortable posting your work, please don't hesitate to talk to me.

**DEADLINES**

Assignment deadlines are noted on the syllabus. Late work will be penalized, and extensions will be granted only rarely, and only after consulting with me well in advance of the assignment deadline. Sorry – I know some other faculty are a bit more lenient with deadlines, but I tend to set aside big blocks of time for assignment review, and I provide substantial feedback – so missing deadlines means you miss your “window of opportunity” for feedback, which is an essential part of your learning in this course (and any course, for that matter).

A student who has not submitted all assigned work by the end of the semester does not receive an “Incomplete” by default. “Incompletes” are assigned only in extreme circumstances, and require that the student consult with me well before the end of the semester and sign a contract obligating him or her to complete all outstanding work by a date that we agree upon.

**ACADEMIC HONESTY**

All students are expected to familiarize themselves with the University’s [academic honesty policy](#). Plagiarism or cheating of any form will result in immediate failure of the course. No joke. If you have any questions regarding proper citation of sources or other academic integrity matters, consult the [University Learning Center](#).
SEPT. 1: ORIENTATION

Introductions
Syllabus Review
Getting our Bearings


• Aaron Reiss, “My 5 Favorite Maps: Bill Rankin” *The Atlantic CityLab* (September 26, 2014). See also Bill’s *top-10 list*.

References & Inspiration: I’ll bring these books to class so we can look through them. I’ve also request that copies of (almost) all of these titles be placed on reserve in the TNS Library; I encourage you to reference them throughout the semester.

• Katharine Harmon, *You Are Here: Personal Geographies and Other Maps of the Imagination* (New York: Princeton Architectural Press, 2004): maps of the body and spirit, maps of emotion and memory, maps of fictional places and cosmology, maps of air routes and stereotypes


• Nato Thompson, *Experimental Geography: Radical Approaches to Landscape, Cartography, and Urbanism* (Brooklyn: Melville House, 2008).


SEPT 8: CARTOGRAPHIC FUTURES, PRESENTS & PASTS

Field Trip: NYPL Map Division, 42nd St + 5th Ave, Room 117 (4-5pm)

The Mapping Revolution…

- Eva Salinas, with Sébastien Cauard, “The Politics of Making Maps” Canadian International Council (November 12, 2014) [final section, on how the study of mapping has changed].
- Scott Etkin, “Mapping the Earth and Its Future With Big Data” Data Informed (March 30, 2015) [on predictive mapping].
- Benjamin Freed, “Amazon Prime and Uber Are Changing the Map of Your City” Washingtonian (May 31, 2015) [on corporate-shaped cartographies].
- Henry Grabar, “Smartphones, and the Uncertain Future of ‘Spatial Thinking”’ The Atlantic’s CityLab (September 4, 2014) [on maps’ egocentric framework and liveness].
- Emily Underwood, “The New Cartographers” Science (March 18, 2013) [on cartographic careers].

…Maybe Isn’t So Revolutionary?

- Skim through David Turnbull, Maps are Territories website

SEPT 15: MAPS AS MEDIA² / LAB#1
Tools & Techniques for Critique

- Mike Foster, “The Lost Art of Critical Map Reading” Graphicarto [blog post] (February 27, 2014).
- Shannon Mattern, “Critiquing Maps II” Words In Space [blog post] (September 5, 2013).
- Bill Rankin, “Redrawing the Map” Architecture Boston 18:2 (Summer 2015) [on the programmer as cartographer, and maps’ continued utility as argumentative media].

Lab: Small-Group In-Class Map Critiques

Maps of the Chicago School of Sociology  
Bill Rankin, “Mapping Social Statistics: Race and Ethnicity in Chicago” [video]  
Rankin’s Radical Cartography
SEPT 22: CARTOGRAPHIC EPISTEMOLOGIES & BLIND SPOTS³

Guest: Bill Rankin (Skype 4-5pm)
Discuss Individual Project Proposals

Epistemology


Frames, Borders, Gaps, Cuts & Boundaries


SEPT 29: COGNITIVE MAPPING, DISSONANCE & RESISTANCE / LAB#2

- See the Hand Drawn Map Association
- Tim Wallace, “Kevin Lynch & The Imageable Boston” Bostonography (December 15, 2010) [and follow Wallace’s link to the “Perceptual Forms of the City” material in the MIT Archives].
- Kevin Lynch, “The Uses of Method” In The Image of the City (Cambridge, MA: MIT Press, 1960): 140-159 [consider also other sensory means of comprehending space].

Lab: You’ll create cognitive maps pertinent to your semester project, then reconceive those maps in terms of plotted “data” and re-draft using Krygier & Woods’s recommendations for collecting, orienting, organizing, distorting data, and considerations regarding projections. Detailed instructions to come. We’ll discuss what’s gained and lost in the translation process.

OCT 6: (CRITIQUING) CRITICAL CARTOGRAPHY & COUNTER-MAPPING

- Annette Kim, “Mapping the Unmapped” In Sidewalk City: Remapping Public Space in Ho Chi Minh City (Chicago: University of Chicago Press, 2015): 84-149. See also http://slab.today/

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OCT 13: INDIGENOUS MAPS, SPATIAL ONTOLOGIES & EPISTEMOLOGIES

Discuss Cognitive Maps from Week 5

Map Critiques: up to three students present their map critiques

- Aboriginal Mapping Network: See in particular the “About” page, the “Mapping Resources” and “The Living Atlas”
- Claudio Aporta, Michael Bravo & Fraser Tyler, Pan Inuit Trails
- Eva Salinas, with Sébastien Caquard, “The Politics of Making Maps” Canadian International Council (November 12, 2014) [read sections on counter- and indigenous mapping].
- Sam Sturgis, “Kids in India are Sparking Urban Planning Changes by Mapping Slums” The Atlantic’s CityLab (February 19, 2015).

OCT 20: LAB#3: MAPPING PLATFORMS

Guest Cartographer: Someone from Mapzen

- Maptime Resources + Tutorials
- Mapbox
- Mapzen
- CartoDB Academy
- ESRI + ArcGIS + StoryMaps
- Social Explorer

FRIDAY OCTOBER 23, 4-6pm: CartoDB FIELD TRIP

Optional, but highly recommended, field trip to the CartoDB offices in Bushwick, where we’ll take a tour with Andy Eschbacher, Map Scientist, who’ll also lead us through a mapping workshop. If this date doesn’t work for members of the class, we’ll consider Saturday October 24. Directions to come.

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OCT 27: THE TECHNO-CARTOGRAPHIC/ MILITARY-INDUSTRIAL/ CAPITALIST GAZE

**Map Critiques:** up to three students present their map critiques


NOV 3: MULTIMODALITY, MULTIVOCALITY & DEEP MAPPING

**Discuss Critical Mappings from Week 8**

**Map Critiques:** up to three students present their map critiques

- Shannon Mattern, *Deep Mapping the Media City* (Minneapolis: University of Minnesota Press, 2015).

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NOV 10: MAPPING SENSATION & AFFECT⁹

Map Critiques: up to three students present their map critiques

- Christian Nold, *biomapping* [leaflet]

NOV 17: THE MAPPING ARTS¹⁰ / LAB#4

Guest: Nina Katchadourian (4:00 – 5:30)

- See OpenGeofication
- See Nina Katchadourian’s map-based work

Lab: Sensory Maps + Deep Mapping – TBA

NOV 24: NO CLASS – THANKSGIVING HOLIDAY

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DEC 1: MAPPING TIME / LAB#5
Field Trip or Visit:
Representatives from NYPL Labs’ Space/Time Directory
- Topotime
- Space/Time Directory

Lab: Conceptual design workshop w/ NYPL Labs’ Space/Time Directory

DEC 8: PLUG-IN WEEK / LAB#6
Discuss Sensory Maps + Deep Maps from Week 12

This week, for the second half of class, we can explore topics or practice skills of your choosing. We'll dedicate the remainder of our time to an open lab, during which you to work on your final projects and solicit feedback from your classmates and from Shannon.

DEC 15: FINAL PRESENTATIONS

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Speculative Timelines research group  Rethinking Timelines Project @ University of Sydney  Topotime [see especially the documentation]