

# Mapping for Architecture, Urbanism, and the Humanities

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- Columbia University | GSAPP and A&S | Fall 2017
- ARCHA4122\_01\_2017\_3
- Fridays 9:00-11:00am | Studio@Butler
- Office hours: Tuesdays 2-4pm
- Professor: Michelle McSweeney (mam2518)
- Teaching Assistant: Buck Wanner (brw2103)

## Description

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We are in the midst of a technological revolution, resulting in seemingly endless amounts of data and the computing technologies to analyze and contextualize that data. In response, our relationship to the spaces we inhabit and those that we don't has shifted. We are challenged to make sense of spaces we have never visited, analyze data we did not collect and bring together people and ideas that have never met. As these forces propel us towards increased global awareness, we must remain critical of the tools and technologies that we use to represent, visualize, and analyze the world.

This course provides an introduction to critical mapping theory and geographic information systems tools. Of particular interest to Humanities students, this course seeks to address both historical and contemporary questions with reference to space and mapping. Through the use of open-source GIS software (qGIS) and open data (OpenStreetMap) students will learn how to critically use mapping tools and geographic data for spatial analysis and representation. In addition to using existing data, students will also be able to create or bring their own sets of data and questions from other courses and will be able to work with these in our class.

Using a hybrid flipped-classroom/seminar approach, students will work through web tutorials and hands-on in-class exercises to gain a better understanding of how these tools and data can be leveraged to analyze, represent and study past or present urban phenomena.

## Objectives

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By the end of this course, students will be able to:

- Employ best practices for visual communication of spatial information

- Critically read a map
- Critically apply mapping theory to spatial projects
- Make intentional design decisions when composing maps for publication
- Decide when to use a static map and when to use a webmap
- Use QGIS to analyze geographic information
- Strategically use maps and layers to tell a story
- Find and clean datasets for use in GIS
- Turn a static map into a webmap

## Grading

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30% Individual assignments and tutorials

15% Midterm

15% Map critique

30% Final project

10% White paper

## Course Design

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This course is a project-based, hybrid seminar/laboratory. Each meeting will be divided into two sections. In the first half, we will discuss one element of critical cartography based on the readings. In the second half, we will discuss the tutorial and its implications. To get the most out of the sessions, you will need to do the readings and attempt the tutorial in advance.

## Assignments

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There are weekly assignments that result from the tutorials. These are graded by submission only. You may work alone, in pairs or groups of three. Please submit whatever you have completed via email by Thursday night. You do NOT need to complete it to receive full credit. You do need to have attempted it. If you do not have anything to send, please write a 1 paragraph essay explaining how far you got and what problems you encountered. These will form the basis for the tutorial.

### Graded Assignments

- November 3: Midterm
- November 17: Map Critique

- December 8: Final Presentations
- December 15: Final Project & Whitepaper

## Midterm & Final

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The Midterm leads to the final. By the midterm, you should have a question or thesis that you want to explore, analyze, or explain using some type of map, broadly defined. This will form the basis of your final project. Projects can be web, digital, or analogue, but must take the viewer through your hypothesis, argument, or story. The final project will be the execution of your research and design. The white paper will discuss the methods you used and decisions you made. Detailed descriptions will be distributed at least three weeks in advance.

## Readings

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Are available on the course [Zotero Library](#) and via Canvas. You will receive an invitation, or you can request an invitation if you do not use your uni.

### Week 1 | September 8 | Introduction

#### [Maps from class](#)

#### Reading

- [Schivelbusch, Wolfgang](#). "Railroad Space, Railroad Time." The railway journey: The industrialization of time and space in the nineteenth century. Univ of California Press, 2014.

#### Tutorial

- Organization for mapping
- Personal Spaces
- [Download QGIS](#)

### Week 2 | September 15 | Maps as Spatial Visualizations

#### [Maps from class](#)

#### Reading

- Meirelles, Isabel. "Spatial Structures: Maps", Design for information: an introduction to the histories, theories, and best practices behind effective information visualizations. Rockport publishers, 2013.
- Gregory, Ian N. "A map is just a bad graph": Why spatial statistics are important in historical GIS. ESRI Press: Redlands, CA, USA, 2008.

## Tutorial 01

- Basic QGIS [Population Map](#)

## Week 3 | September 22 | Critical cartography

### [Maps from class](#)

### Reading

- Harley, John Brian. "Deconstructing the map." Cartographica: The international journal for geographic information and geovisualization 26.2 (1989): 1-20.
- Crampton, J. W. and Krygier, J. (2006). "An introduction to critical cartography." ACME 4 (1): 11-53

### Further reading:

- Crampton, Jeremy W. "Maps as social constructions: power, communication and visualization." Progress in Human Geography 25.2 (2001): 235-252.

## Tutorial 02

- [Data types & Quantitative 311 Maps](#)

## Week 4 | September 29 | Data

### Map

- [Slides from class](#)

### Reading

- Benedict Anderson, [Census Map Museum](#)
- Lisa Gitelman "Introduction" in "Raw Data" Is an Oxymoron, ed. Lisa Gitelman (Cambridge, Massachusetts; London, England: The MIT Press, 2013), 1-15.

- Knigge, LaDona, and Meghan Cope. "Grounded visualization: integrating the analysis of qualitative and quantitative data through grounded theory and visualization." *Environment and Planning A* 38.11 (2006): 2021-2037.

## Tutorial 03

- [Using the census](#)

## Week 5 | October 6 | Literary (& imaginary) Geography

### Maps

- Selections from Solnit

### Reading

- Solnit, Rebecca, and Joshua Jelly-Schapiro. "Centers and Edges." *Nonstop Metropolis: A New York City Atlas*. Univ of California Press, 2016.
- kanarinka. "The City Formerly Known as Cambridge: A Institute for Infinitely Small Things." *Truth and Accountability in Geographic and Historical Visualizations*. Routledge, 2011.
- Piatti, Barbara, and Lorenz Hurni. "Cartographies of fictional worlds." *Cartographic Journal* 48.4 (2011): 218-223.

## Tutorial 04

- [Vector analysis tools](#)

## Week 6 | October 13 | Projections

### Map

- [AuthaGraph Map](#)
- [slides from class](#)

### Reading

- Furman, Mark. "Mapping the Digital Empire: Google Earth and the process of postmodern cartography." *New Media and Society*, 2010.
- Monmonier, Mark. "Elements of the Map" *How to lie with maps*. University of Chicago Press, 2014.

- Monmonier, Mark. "The Peters Projection Controversy" Drawing the line: tales of maps and cartocontroversy

## Tutorial 05

- [Projections](#)

## Week 7 | October 20 | Humanistic mapping

### Maps

### Reading

- Drucker, Johanna. "Humanities approaches to graphical display." Digital Humanities Quarterly 5.1 (2011): 1-21.
- Dear, Michael. "Geocreavity". In GeoHumanities: Art, History, Text at the Edge of Place, ed. Michael Dear (2011)
- Mitchell, Peta. "'The stratified record upon which we set our feet': The spatial turn and the multilayering of history, geography, and geology," in (2011): 71-83.

## Tutorial 06

- [Georeferencing](#)

## Week 8 | October 27 | Historical Maps

- Meeks, Elijah, and Ruth Mostern. "The Politics of Territory in Song Dynasty China, 960–1276 CE." Toward Spatial Humanities: Historical GIS and Spatial History. Ed. Ian N. Gregory and A. Geddes. Bloomington: Indiana University Press, 2014.
- Guldi, Jo. "The spatial turn in history". Available at: <http://spatial.scholarslab.org/spatial-turn/the-spatial-turn-in-history/index.html>

## Tutorial 07

- [Annotation & Storytelling](#)

## Week 9 | November 3 - PROPOSAL DUE

Midterm - presentations

## Week 10 | November 10 | Webmapping

In-class Tutorial on Webmapping, Leaflet & a basic introduction to Javascript

Revisit [Annotation & Storytelling](#) Add Distance Maps or Sliders (To Be Posted)

Recommended

- Wallace, Timothy R., and Charles van den Heuvel. "Truth and accountability in geographic and historical visualizations." *The Cartographic Journal* 42.2 (2005): 173-181.

## Week 11 | November 17 | Map critique

Maps

Reading

- Monmonier, Mark. "Map Generalization" *How to lie with maps*. University of Chicago Press, 2014.
- Monmonier, Mark. "Blunders that Mislead" *How to lie with maps*. University of Chicago Press, 2014

THANKSGIVING BREAK - November 24

Week 12 - December 1 - MAP CRITIQUE DUE

Final project and technical assistance

- MAP CRITIQUE DUE

Week 13 - December 8

Final Project Presentations

Week 14 - December 15

Final Project and White Paper DUE