

POL 270-01 Minicourse: Mapping Political Data

Fall 2019

Bliss 031
Tu/Fri 3:30p - 4:50p
.5 units

Instructor: Dr. Daniel Bowen
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Office: Thursdays 1:30p-3:30p
Tuesdays: 11:00a-12:00p or by appointment

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Course Description and Purpose

Maps are sophisticated displays of visual information, developed over thousands of years. Maps offer a synthesis between various types of important information and the spatial environment in which we interact; maps are thus one natural way for humans to understand who we are and why we act the way we do. Not only are maps vessels for us to pass on information about our lived environment - both natural and built spaces - maps are increasingly used as tools to visualize political, social, and economic data as well as to extract previously unknown but spatially-constructed information. This mini-course will familiarize students with American political geography and train students to make visually-appealing displays of geospatial political data using geographic information systems (GIS). The class introduces students to an open-source software program, QGIS, and the basics of modern GIS map-making. The course is .5 units and meets only during the 1st Quarter. Students' class experience culminates in the completion of their map project (described below).

Course Goals / Learning Outcomes

The course meets the following learning goals set out by the Political Science Department:

- (4) Critical Thinking: Students will be able to read analytically, understand complex relationships and concepts, identify underlying assumptions, "dissect" scholarly texts, and synthesize their own politically-related interpretations, arguments, or positions.
- (5) Original Research: Students will be able to conduct original research using appropriate primary and secondary sources and the empirical research tools characteristic of the discipline.
- (7) Historical, Social and Cultural Sense of Place: Students will be able to recognize and understand the impact of diverse settings on political phenomenon — to locate themselves within an historical, social, and cultural setting; to grasp politics in a conceptual manner; and to transfer that conceptual understanding to other situations.

The course is also designed to meet the following Middle States/HSS learning outcomes:

- (3) Scientific and quantitative reasoning: learning how to use scientific method and performing appropriate analyses is a focus of instruction.
- (5) Critical analysis and reasoning: ability to critique the arguments of others in the discipline, the construction of one's own arguments, and using evidence are key areas of instruction.

Fourth Hour: The class meets The College's fourth hour requirements by being more academically rigorous and containing additional learning tasks that will engage you in the study of cartography and graphical displays of quantitative information.

Course Required Materials

In order to expose students to contemporary uses of GIS software in political science research, we will read a handful of book chapters and journal articles. Book chapters will be available through the course's Canvas page, and journal articles are accessible via FREE pdf download at the library's website (use Google Scholar): <http://www.tcnj.edu/~library/research/index.html>.

Map Project

The central component of the class is the successful completion of a map projects. Students will design a sophisticated, visually-appealing, and informative map. The basic details of the research project are as follows:

- The map project should include one main map displaying political information in a visually-appealing and understandable way. It is expected that the student will identify both one more shapefiles and join political data with the geographic information included in the shapefile for display. Most excellent maps will include multiple map layers. Students can use vector or raster data.
- The project should also include a figure of small multiples: miniature maps displaying variation (over time or additional variables) over the same geographic space as the primary map.
- The project should include a descriptive title and caption, so that the entire graphic is self-contained and interpretable by the reader without additional information.
- On the last day of class, students will present their maps in a short, 8-minute presentation. The presentation should describe the data displayed in the map and walk through stylistic decisions made by the student.
- Due: October 15th, submitted on Canvas before class. It is very likely that class will extend into the assigned 4th-hour, extended time block, so make necessary arrangements now to stay until 5:30 or so on Tuesday, Oct. 15th.

Participation

In addition to the map project, students are asked to engage in class activities, complete the required readings listed on the syllabus, and contribute to class discussion.

Map Exhibits

Each Friday, two students will share one or two maps they have found with classmates. Students may bring a hard copy or share the map digitally. Student should discuss what makes the map display effective, what interesting design elements were used, and how the map shows interesting, politically-relevant information. Further, the students should also critique the map, where appropriate. What isn't effective? Does the map mislead the viewer in any way? Are there better ways of displaying the relevant information?

Practice Map

Students will submit one practice map, illustrating the location of the American South. As we will discuss in class, where and what the South is depends on measurement decisions. Due: Friday, September 20th.

Grading

The following tables denotes the weight of each course component toward the final grade and grade ranges used.

Assignment	% of Final Grade	Due
Participation	30	Variable
In class	25	
Map exhibit	5	
Practice Map	20	9/20
Map Project	50	10/15
Project	40	
Presentation	10	

Table 1: Grading Weights

A	A-	B+	B	B-	C+	C	C-	D+	D	F
100–93	92–90	89–87	86–83	82–80	79–77	76–73	72–70	69–67	66–60	59–0

Table 2: Grading Scale

Course Policies

Attendance

This course will adhere to TCNJ's attendance policy [<https://policies.tcnj.edu/?p=77>]. Participation in discussion is an important component to the course.

Late Work

Unless accommodations have been worked out in advance with me, each calendar day a paper is late will receive a 1/3 of a grade deduction (an A paper due on the 13th but turned in on the 14th will receive an A-; the same paper turned in on the 15th will receive a B+, etc). However, I often grant extensions. If you need more time to finish your work, talk to me *before* the assignment is due.

Absences

No make-up tests or extensions on assignments due to an absence will be given unless you speak to me *before* you miss class, or you miss class due to an illness or family emergency.

Academic Integrity

This course will adhere to TCNJ's academic integrity policy [<https://policies.tcnj.edu/?p=130>]. Cheating is bad; don't do it. The work you hand in should be your own.

Americans with Disabilities Act (ADA)

This course will also adhere to TCNJ's Americans with Disabilities Act policy [<https://policies.tcnj.edu/?p=145>]. If you need accommodations due to a disability, please see the instructor in the first week of class.

Disclaimer

The instructor reserves the right to make changes to this syllabus.

Class Schedule

1. Aug. 27 (no class on Aug. 30): Introductions, QGIS, and Shapefiles
 - (a) [Tufte 2001](#), pp 13-43
 - (b) [Tufte 1997](#), pp. 27-37
 - (c) [Monmonier 2018](#), Introduction and Ch. 1 (pp. 1-26)
 - (d) Install QGIS on personal computer (if available)
2. Sep. 6 (no class on Sep. 3): Vector Data, Geographic Coordinate Systems, and Projection Coordinate Systems
 - (a) Melanie Springer. Measuring the South (unpublished). (*Tentative*)
3. Sep. 10, 13: Joins and Spatial Representation of Information
 - (a) [Trounstine 2018](#), Ch. 3 (pp. 46-72)
 - (b) [Monmonier 2018](#), Ch. 5 (pp. 60-71)
4. Sep. 17, 20: Geoprocessing
 - (a) [Enos 2017](#), Ch. 1-2. (pp. 1-50)
5. Sep. 24, 27: Spatial Statistics
 - (a) [Rodden 2019](#), Ch. 2-3 (pp.39-99)
6. Oct. 1, 4: Raster Data
 - (a) [Detges \(2017\)](#)
7. Oct. 8 (Fall Break), 11: Designing Beautiful Maps

8. Oct. 15 Final Map Presentations (extended class period)

References

- Detges, Adrien. 2017. "Droughts, state-citizen relations and support for political violence in Sub-Saharan Africa: A micro-level analysis." *Political Geography* 61:88–98.
- Enos, Ryan. 2017. *The Space Between Us*. Cambridge University Press.
- Monmonier, Mark. 2018. *How to Lie with Maps*. University of Chicago Press.
- Rodden, Jonathan A. 2019. *Why Cities Lose*. Basic Books.
- Trounstine, Jessica. 2018. *Segregation by Design: Local Politics and Inequality in American Cities*. Cambridge University Press.
- Tufte, Edward R. 1997. *Visual Explanation*. Graphics Press.
- Tufte, Edward R. 2001. *The Visual Display of Quantitative Information*. Second ed. Graphics Press.