# **OBJECTIVES**

This course is intended as a hands-on introduction to vector GIS using ArcView 10 software. Vector GIS data are appropriate for modeling geographic objects, such as bounded areas (census tracts or service districts), specific locations (buildings or events such as crimes), and networks (streets). Students will develop skills necessary for carrying out basic GIS projects and for advanced GIS coursework. We will focus on ways that GIS is and could be applied to urban history, health, criminology and social services. The class also aims to help students develop an understanding of what is spatial, when GIS is appropriate for answering question, and to develop an awareness of the power issues involved in map-making. By the end of this course, you should be familiar enough with ArcGIS 10 to find, map, and analyze data using basic GIS tools and be able to teach yourself additional GIS skills using the help files, online materials, and software manuals.

## **GRADING**

Over the course of the semester, you must complete 8 out of the weekly homework assignments or 5 weekly homework assignments and a final project. Your final course grade will be based on class participation (20%), homework assignments (10% each), and a final project (30%).

A+ Exceptional A Outstanding A- Excellent B+ Very good B Good B- Competent C+ Fair C- Marginal

If you meet the basic expectations for an assignment, you can expect to receive a **B+** (very good). Grades within the A range will be awarded only for work that exceeds the basic expectations as described in the homework/final project assignment.

## **ELECTRONIC DEVICES**

Please show consideration for the instructor and your classmates by not using cell phones (including text-messaging) at all during class and using laptop or desktop computers for class-related activities, only. I particularly value paying full attention to classmates during the discussion portion of class.

### ATTENDANCE POLICY

Attendance at all classes is expected and will be factored into the class participation portion of your final grade. Because we will cover new conceptual and technical material every week, it is difficult to make up a missed class. If an emergency arises and you must miss class, please contact the instructor in advance.

## **CODE OF ACADEMIC INTEGRITY**

All students are expected to abide by the University of Pennsylvania's established Code of Academic Integrity
<a href="http://www.upenn.edu/academicintegrity/ai\_codeofacademicintegrity.html">http://www.upenn.edu/academicintegrity/ai\_codeofacademicintegrity.html</a> This code explicitly prohibits cheating, plagiarism, fabrication, multiple submissions, misrepresentation of academic record, facilitating academic dishonesty, and unfair advantage.

## **COURSE MATERIALS**

A manual for working with ArcGIS 10 is available on Canvass (under "GIS Materials") as well as series of instructional videos and practice data. You are not required to watch the videos and complete the practice exercises; use them as resources as you need them. All of the data for the course is available on the course canvas site. You will also receive a free one-year student edition of ArcView GIS 10 software.

#### **WEEKLY READINGS**

Short readings for each class have been posted to Canvas. You are asked to read these prior to coming to class in order to participate in class discussions. Each student will be required to sign up to lead discussion during two class sessions.

DATE	READINGS	GIS LAB TOPICS	ASSIGMENT DUE (BY SAT 12AM)
Jan 17 <b>1</b>	<ul> <li>Maps as propositions/Queering the Map</li> <li>Krygier &amp; Wood, "Ce n'est pas le monde," Propositions for Mapmakers, 2009.</li> <li>Dashka Slater, "Fire on the 57 Bus," <i>The New York Times</i> 29 January 2015.</li> </ul>	Introduction to ArcMap Panning/Zooming, Layering maps Identifying attributes	N/A
Jan 24 <b>2</b>	<ul> <li>Social Survey Movement and Public Sociology</li> <li>Mary Jo Deegan, "WEB Du Bois and the Women of Hull House," American Sociologist 1988</li> <li>Selections from The Philadelphia Negro</li> <li>A Legacy of Courage: WEB Du Bois and The Philadelphia Negro (19-minute documentary)</li> </ul>	Map symbology, Thematic maps	Install ArcGIS; review introductory ArcGIS lab materials from first class
Jan 31	<ul> <li>"Slow Violence" and Environmental Justice</li> <li>Rob Nixon, "Slow Violence," Chronicle of Higher Education 26         June 2011</li> <li>Fisher, Kelly &amp; Romm (2006). Scales of environmental justice:         Combining GIS and spatial analysis for air toxics in West         Oakland, California. Health &amp; Place 12(4): 701-714.</li> </ul>	Joining attribute tables, Calculating attribute values	Thematic mapping (1)
Feb 7 <b>4</b>	<ul> <li>Historical and Contemporary Mortgage Redlining</li> <li>Glanz and Martinez (2018). "Keep Out: For people of color, banks are shutting the door to homeownership," Reveal: The Center for Investigative Reporting, 15 February.</li> </ul>	Layouts and Labeling, Georeferencing historical maps	Joining Tables (2)

	<ul> <li>Hillier (2003). Redlining and the Home Owners Loan Corporation, Journal of Urban History 29(4): 394-420</li> </ul>		
Feb 14	Contemporary Carceral Geographies  ■ Spatial Information Design Lab, "Architecture and	Mapping census data Managing projections	Layouts (3)
	<ul> <li>Justice (Million Dollar Blocks)," Columbia University</li> <li>Dominique Moran, "Geographies of Carceral Systems," Chapter 6 in Carceral Geography 2015.</li> </ul>		
Feb 21	Geographies of Re-entry	Mapping census data	Georeferencing (4)
6	<ul> <li>Abrams &amp; Snyder, "Youth offender reentry: Models for intervention and directions for future inquiry," <i>Children and Youth Services Review</i> 2010.</li> <li>Venkatesh &amp; Kim, "A Research Note: The Socio-Spatial Consequences of Inmate Release in New York City," Center for Urban Research and Policy, 2007.</li> </ul>	Managing projections	
Feb 28	Food Shopping and Food Access	Review of first half of	Mapping Census Data (5)
7	Hillier & Chrisinger, "The Reality of Urban Food Deserts and	the course	
	What Low-Income Food Shoppers Need," in John Jackson, Jr.,		
	editor, Social Policy and Social Justice 2016.		
	NO CLASS ON MARCH 7 <sup>th</sup>	SPRING BREAK	
Mar 14	Measuring and Mapping Fear & Safety	Geocoding addresses	
8	South, Kondo, Cheney, Branas, "Neighborhood Blight, Stress,	Spatial joins	
O	and Health: A Walking Trial of Urban Greening and Ambulatory	(aggregation)	
	Heart Rate," American Journal of Public Health 2015.		
	Wiebe, Guo, Allison, Anderson, Richmond, Branas, "Fears of		
	Violence During Morning Travel to School," <i>Journal of Adolescent Medicine</i> 2013.		
	Boschmann & Cubbon, "Sketch Maps and Qualitative GIS ::		
	Using Cartographies of Individual Spatial Narratives in		
	Geographic Research," <i>The Professional Geographer</i> 2013.		
Mar 21	Measuring and Mapping Fear & Safety—Feminist Perspective	Attribute and location	Geocoding (6)
9	Kwan, "Affecting Geospatial Technologies: Toward a Feminist	queries	
9	Politics of Emotion," <i>Professional Geographer</i> , 2007.		
	Kwan, "From oral histories to visual narratives: re-presenting		
	the post-September 11 experiences of the Muslim women in		
	the USA," Social & Cultural Geography, 2008.		

Mar 28	Geographies of Sexual Violence Legislation	Buffers and Euclidean	Queries (7)
10	<ul> <li>Calkins, Jeglic, Beattey, Zeidman, Perillo, "Sexual Violence Legislation: A Review of Case Law and Empirical Research," <i>Psychology, Public Policy and Law</i>, 2014.</li> <li>Grubesic, Mack and Murray, "Geographic Exclusion: Spatial Analysis for Evaluating the Implications of Megan's Law," <i>Social Science Computer Review</i> 2007.</li> </ul>	distances, network distances	Queries (7)
Apr 4	Disrupting Heteronormativity and Queering the Map	GPS and animation	Distances (8)
11	<ul> <li>Brown &amp; Knopp, "Queering the Map: The Productive Tensions of Colliding Epistemologies" Annals of the Association of American Geographers 2008.</li> <li>Ferreira &amp; Salvador, "Lesbian collaborative web mapping:</li> </ul>		
	disrupting heteronormativity in Portugal," <i>Gender, Place and Culture</i> , 2015		
Apr 11 <b>12</b>	<ul> <li>Queer Bodies, Queer Spaces</li> <li>Geisking, "Crossing over into neighbourhoods of the body: urban territories, borders and lesbian-queer bodies in New York City," AREA 2016.</li> <li>Boschmann &amp; Cubbon, "Sketch Maps and Qualitative GIS: Using Cartographies of Individual Spatial Narratives in Geographic Research," The Professional Geographer 2013.</li> </ul>	Density maps 3D maps	GPS (9) and Animation (10)
Apr 18 <b>13</b>	<ul> <li>Ethics, Privacy and Spatial Data</li> <li>Valentin-DeVries, Singer, Keller &amp; Krolik (2018). Your Apps Know Where You Were Last Night, and They're Not Keeping It Secret. The New York Times 10 December.</li> <li>Laura Kurgan, "Representation and Necessity of Interpretation" chapter in Close Up at a Distance (2013).</li> </ul>	Cartograms Online interactive maps	Density & 3D (11)
April 25	Tobacco Advertising	Review of second half of	Cartogram (12)
14	<ul> <li>Hillier, Cole, Smith, Yancey, Williams, Grier, McCarthy,         "Clustering of Unhealthy Ads Around Child-serving         Institutions," Health &amp; Place, 2009</li> <li>Hillier, Chilton, Zhao, Szymkowiak, Coffman, Mallya,         "Concentration of Tobacco Advertisements at SNAP and WIC         Stores", Philadelphia, Pennsylvania, 2012," Preventing Chronic         Disease, February 2015.</li> </ul>	the semester	Final Project due by May 3rd