

University of Toronto
Geography & Planning
PLA 1105 Planning Decision Methods II
Winter 2017
Mondays, 10 am - 1 pm, SSH 2125
Lab on Tuesdays, 9 - 11 am, SSH 561

Instructor:

Professor Anna Kramer
Sidney Smith Hall room 5063
Email: anna.kramer@utoronto.ca
Office hours: Mondays 2-4pm and Tuesdays 3-4 pm

Teaching Assistant:

Austin Zwick, PhD student
SSH room 5005
Email: austin.zwick@mail.utoronto.ca

Course Description:

Quantitative methods are an important part of the skills available to planners. Although applying quantitative methods can be illuminating, useful and contribute to evidence-based policy, they can also be used to mislead or intimidate by lending a veneer of neutrality and opacity to planning decisions. It is therefore very important for planners to be familiar with quantitative methods in order to use them well *and* to prevent and critique their misuse. This class will introduce you to quantitative methods and give you the opportunity to develop and practice the skills needed to understand these methods, with a focus on how to apply quantitative methods responsibly. We will cover methods including data management, descriptive statistics and data visualization, forecasting, economic analysis, inferential statistics, mapping and spatial analysis. Although this is an ambitious set of topics, this class is only an introduction to each. Elective courses are available to explore specific methods, such as statistics and GIS, in greater depth.

Parameters:

The class time will be used to introduce specific quantitative methods, discuss the applications of these methods, hear from guest experts in the subject area, and demonstrate the skills related to performing these methods. Each lecture or set of lectures are associated with an assignment where you will develop the skills to practice the method.

The lab will be an important part of this course and will complement the class time. You will be working on assignments and in most cases should be able to complete assignments during lab hours. While you may ask for help from instructors and your classmates when you are stuck, **please do the work yourself**. It is important that you gain the experience of actually doing the assignment. If not, it will be considered plagiarism and will be addressed according to University of Toronto policies (see the Code of Behaviour on Academic Matters). Where you don't complete the assignments within the lab, you have until the Friday of the same week to hand in the assignment. Late assignments will not be accepted. Please

submit all assignments in PDF form through Blackboard. We will be limiting software to using Excel and ArcGIS, as these are most likely to be available to you in the workplace and are free for students. You will need to provide a memory stick to store your data and work.

In addition to the common assignments, you will design and develop an independent project. Identify a particular question and area of interest and use available data and an appropriate selection of quantitative methods from the class to explore this question. It need not be particularly complex or difficult – it should allow you to demonstrate your independent facility applying methods learned in class to explore a particular issue. Most of the challenge should be in matching the data set and method appropriately to the question or issue you choose. Your project proposal outlines the question, the data and the methods you propose to use. The project itself should take the form of a written document (with data visualization and analysis included as appropriate). You will present your resulting analysis and insights in a ‘lightning’ seven minute presentation during the last week of class.

Email should be used for questions requiring simple, short answers. Office or lab hours are better for answering anything in greater depth.

Assignments

Details of each assignment will be distributed in class before each lab.

Schedule

Date	Class subject	Lab skills	Assignment marks
Jan 9 & 10	Storytelling with numbers: the challenges of evidence-based planning	Importing and organizing data; metadata and methods log	
Jan 16 & 17	Data management	pivot tables and other excel functions	5
	Bryman, A., Bell, E. & J. Teevan. Chapter 15: Breaking down the quantitative/quantitative divide. In <i>Social Research Methods, 3rd Canadian edition</i> . Don Mills: Oxford University Press. p 272-290. Wyly, E. (2011) Positively Radical. <i>International Journal of Urban and Regional Research</i> , 35.5, 889-912.		
Jan 23 & 24	Descriptive statistics & data visualization	charts and graphs	5
	Miller, D. (1991) Review of The visual display of quantitative information. <i>The Public Historian</i> , 13:3, 153-154. Tufte, E. (1983) Selection from Chapter 1: Graphical excellence, in <i>The visual display of quantitative information</i> . Cheshire, Graphics Press. p 13-24, 40-41.		
Jan 30 & 31	Descriptive statistics & data visualization	map making	10
	https://www.gislounge.com/ten-things-to-consider-when-making-a-map/ Rankin, B. Cartography and the Reality of Boundaries. <i>The Real Perspecta</i> 42, p 42-45.		

Feb 6 & 7	Economic analysis <i>Metrolinx guest lecture</i>	cost benefit analysis	
	Williams, B. (2008) Methods explained: Cost benefit analysis. <i>Economic & Labour Market Review</i> , 212, 67-70.		
Feb 13 & 14	Economic analysis	business cases	15
	Flyvbjerg, B, Holm, M & Buhl, S. (2002) Underestimating costs in public works projects: Error or Lie? <i>JAPA</i> , 68(3), 279-295. Wachs, M. (1989) When Planners Lie with Numbers. <i>JAPA</i> 55:4, 476-479.		
Feb 20 & 21	Independent project proposal due Friday Feb. 24		5
Feb 27 & 28	Forecasting & analysis	population projections; location quotients	10
	Tuftte, E. (1974) Chapter 2: Predictions and Projections: Some issues of research design, introduction. In <i>Data Analysis for Politics and Policy</i> . Englewood Cliffs: Prentice-Hall. p 31-35. Other reading TBD.		
Mar 6 & 7	Inferential statistics	sampling, hypotheses, and tests	5
	Meijer, K., Brudney, J. & J. Bohte. (2015) The advantages of a statistical approach. In <i>Applied Statistics for Public and Nonprofit Administration, 9th Edition</i> . Centage Learning. p 3-7. Other reading TBD.		
Mar 13 & 14	Inferential statistics	correlation and regression	10
	Readings TBD.		
Mar 20 & 21	Spatial analysis <i>Environics guest lecture</i>	geodemography & generalization	10
	Thatcher et al. (2016) Revisiting critical GIS. <i>Environment and Planning A</i> , 48(5), 815-824.		
Mar 27 & 28	Spatial analysis	select GIS functions	10
	O'Sullivan, D. (2006) Geographical information science: critical GIS. <i>Progress in Human Geography</i> , 30(6), 783-791.		
April 3 & 4	Independent project lightning presentations	Individual project	15

Reference texts and resources:

Rogerson, P. (2015) *Statistical Methods for Geography: A student's guide*. Fourth edition: 2015. London: Sage Publications.

Khan Academy (online statistics resource).

Steven Farber's Youtube channel: <https://www.youtube.com/user/sfarber111/videos>