

Syllabus

Political Science 219A - FALL 2019

Course Code 67810

Tuesday, 6.00 pm -8.50p, SST630

I. Instructor

Instructor: Bernard Grofman (bgrofman@uci.edu), Social Sciences Plaza B 2291,

Office Hours: 4 p.m. – 5.20 p.m. Tues and Thurs, and by appointment

I. Overview

This is a computer-lab-based introduction to statistics intended primarily for graduate students in political science, but appropriate for graduate students in any of the social sciences. It is the equivalent of undergraduate level statistics and will be taught in a relatively non-technical fashion; in particular, it does not require knowledge of calculus nor does it require matrix algebra.

It is intended to be a stand alone elementary introduction to statistics that covers much of what is covered in an introductory year long undergraduate stats class, but it is also intended to prepare students for more advanced courses in statistics or in research design. In particular it is intended to prepare students for the more advanced statistics courses that will be taught by Prof. Ines Levin in Winter and Spring. DO NOT BE CONFUSED! EVEN THOUGH THIS CLASS HAS A GRADUATE NUMBER, IT STILL ONLY COVERS WHAT WOULD NORMALLY BE CONSIDERED UNDERGRADUATE LEVEL STATISTICS. The difference is that I will cover most of a year's worth of undergrad stats in one quarter, by relying on a more intuitive approach to the material, and one that uses elementary probability theory to structure the course and to present diverse techniques in a unified manner that reveals the basic similarities among them.

Moreover, this class also differs from more traditional introductory statistics courses in several important ways.

First, it emphasizes statistical tools for both quantitative and qualitative variables.

Second, this class is very much hands-on, in that students will be working with data, in most cases drawn from real world data sets¹. In particular, this quarter we will be taking advantage of using data on presidential elections, and also U.S. Senate election .

¹In addition to aggregate election data at the county level for US presidential elections, and census data for these counties, we will be making use of data such as (a) heights and weights (broken down by gender) of students who have taken introductory statistics at UCI, (b) ADA scores and DW-NOMINATE scores (roll-call voting indices that measures political ideology on a liberal versus conservative dimension) for members of the U.S. House of Representatives (broken down by party affiliation of the member, with additional information about the demographic characteristics of each congressional district), (c) GPA scores of UCI freshmen broken down by departmental major/School, (d) data about student and faculty characteristics and admissions policies at 90 colleges and universities. In addition, I may be making some suggestions of work to do using the National Elections Studies presidential elections data base, and from the National Opinion Research Council General Social Survey. These data sets are available on-line via the World-Wide Web.

State (linked to summaries below)	Incumbent			Results	Candidates
	Senator	Party	Electoral history		
Arizona	Jeff Flake	Republican	2012	Incumbent retiring. New senator to be elected.	Deedra Abboud (Democratic) ^[23] Eve Reyes Aguirre (Green) ^[23] Joe Arpaio (Republican) ^[23] Doug Marks (Libertarian) ^[23] Martha McSally (Republican) ^[23] Kyrsten Sinema (Democratic) ^[23] Kelli Ward (Republican) ^[23]
California	Dianne Feinstein	Democratic	1992 (Special) 1994 2000 2006 2012	Incumbent renominated.	Kevin de León (Democratic) ^[24] Dianne Feinstein (Democratic) ^[24]
Connecticut	Chris Murphy	Democratic	2012	Incumbent running. ^[25]	Ann-Marie Adams (Democratic) ^[26] Matthew Corey (Republican) ^[27] Chris Murphy (Democratic) ^[25] Dominic Rapini (Republican) ^[28]
Delaware	Tom Carper	Democratic	2000 2006 2012	Incumbent running. ^[29]	Robert Arlett (Republican) ^[30] Tom Carper (Democratic) ^[29] Kerri Evelyn Harris (Democratic) ^[31] Gene Truono (Republican)
Florida	Bill Nelson	Democratic	2000 2006 2012	Incumbent running.	Rocky De La Fuente (Republican) ^[32] Bill Nelson (Democratic) ^[32] Rick Scott (Republican) ^[32]
Hawaii	Mazie Hirono	Democratic	2012	Incumbent running.	Mazie Hirono (Democratic) ^[33] Thomas White (Republican) ^[33]
Indiana	Joe Donnelly	Democratic	2012	Incumbent renominated.	Lucy Brenton (Libertarian) ^[34] Mike Braun (Republican) ^[34] Joe Donnelly (Democratic) ^[34]
Maine	Angus King	Independent	2012	Incumbent running.	Eric Brakey (Republican) ^[35] Angus King (Independent) ^[36] Zak Ringelstein (Democratic) ^[35]
Maryland	Ben Cardin	Democratic	2006 2012	Incumbent renominated.	Tony Campbell (Republican) ^[37] Ben Cardin (Democratic) ^[37] Neal Simon (Independent) ^[38] Edward Shlikas (Independent) ^[39] Arvin Vohra (Libertarian)

Massachusetts	Elizabeth Warren	Democratic	2012	Incumbent running.	Shiva Ayyadurai (Independent) ^[40] Geoff Diehl (Republican) ^[41] John Kingston (Republican) ^[41] Beth Lindstrom (Republican) ^[41] Elizabeth Warren (Democratic) ^[42]
Michigan	Debbie Stabenow	Democratic	2000 2006 2012	Incumbent running.	John James (Republican) ^[43] Sandy Pensler (Republican) ^[43] Marcia Squier (Independent) ^{[44][45]} Debbie Stabenow (Democratic) ^[43]
Minnesota	Amy Klobuchar	Democratic	2006 2012	Incumbent running.	Merrill Anderson (Republican) ^[21] Rae Hart Anderson (Republican) ^[21] Steve Carlson (Democratic) ^[21] Stephen Emery (Democratic) ^[21] David Groves (Democratic) ^[21] Amy Klobuchar (Democratic) ^[21] Jim Newberger (Republican) ^[21] Leonard Richards (Democratic) ^[21]
Mississippi	Roger Wicker	Republican	2007 (Appointed) 2008 (Special) 2012	Incumbent renominated.	David Baria (Democratic) ^[22] Danny Bedwell (Libertarian) ^[22] Shawn O'Hara (Reform) Roger Wicker (Republican)
Missouri	Claire McCaskill	Democratic	2006 2012	Incumbent running.	Jerome Bauer (Green) ^[46] Japheth Campbell (Libertarian) ^[46] Jo Crain (Green) ^[46] Angelica Earl (Democratic) ^[46] David Faust (Democratic) ^[46] Travis Gonzalez (Democratic) ^[46] Brian Hagg (Republican) ^[46] Josh Hawley (Republican) ^[46] John Hogan (Democratic) ^[46] Bradley Krembs (Republican) ^[46] Craig O'Dear (Independent) ^[47] Claire McCaskill (Democratic) ^[46] Tony Monetti (Republican) ^[46] Kristi Nichols (Republican) ^[46] Ken Patterson (Republican) ^[46] Austin Petersen (Republican) ^[46] Peter Pfeifer (Republican) ^[46] Fred Ryman (Republican) ^[46] Christina Smith (Republican) ^[46] Courtland Sykes (Republican) ^[46] Leonard Steinman (Democratic) ^[46] Carla Wright (Democratic) ^[46]
Montana	Jon Tester	Democratic	2006 2012	Incumbent renominated.	Rick Breckenridge (Libertarian) ^[48] Matthew Rosendale (Republican) ^[48] Jon Tester (Democratic) ^[48]

Nebraska	Deb Fischer	Republican	2012	Incumbent renominated.	Deb Fischer (Republican) ^[49] Jane Raybould (Democratic) ^[49] Jim Schultz (Libertarian) ^[49]
Nevada	Dean Heller	Republican	2011 (Appointed) 2012	Incumbent renominated.	Kamau Bakari (Independent American) ^[50] Tim Hagan (Libertarian) ^[50] Dean Heller (Republican) ^[50] Barry Michaels (Independent) ^[50] Jacky Rosen (Democratic) ^[50]
New Jersey	Bob Menendez	Democratic	2006 (Appointed) 2006 2012	Incumbent renominated.	Bob Hugin (Republican) ^[51] Bob Menendez (Democratic) ^[51] Murray Sabrin (Libertarian) ^[52]
New Mexico	Martin Heinrich	Democratic	2012	Incumbent renominated.	Aubrey Dunn Jr. (Libertarian) ^[53] Martin Heinrich (Democratic) ^[53] Mick Rich (Republican) ^[53]
New York	Kirsten Gillibrand	Democratic	2009 (Appointed) 2010 (Special) 2012	Incumbent renominated.	Chele Chiavacci Farley (Republican) ^[54] Kirsten Gillibrand (Democratic) ^[54]
North Dakota	Heidi Heitkamp	Democratic	2012	Incumbent renominated.	Kevin Cramer (Republican) ^[55] Heidi Heitkamp (Democratic) ^[55]
Ohio	Sherrod Brown	Democratic	2006 2012	Incumbent renominated.	Sherrod Brown (Democratic) ^[56] Philena Irene Farley (Green, write-in) ^[57] Jim Renacci (Republican) ^[56]
Pennsylvania	Bob Casey Jr.	Democratic	2006 2012	Incumbent renominated.	Lou Barletta (Republican) ^[58] Bob Casey Jr. (Democratic) ^[58]
Rhode Island	Sheldon Whitehouse	Democratic	2006 2012	Incumbent running. ^[59]	Robert Flanders (Republican) ^[60] Sheldon Whitehouse (Democratic) ^[59]
Tennessee	Bob Corker	Republican	2006 2012	Incumbent retiring. New senator to be elected.	Phil Bredesen (Democratic) ^[61] Marsha Blackburn (Republican) ^[61] Gary Davis (Democratic) ^[61] Aaron Pettigrew (Republican) ^[61] John Wolfe (Democratic) ^[61]
Texas	Ted Cruz	Republican	2012	Incumbent renominated.	Carl Bible (Independent) ^[62] Ted Cruz (Republican) ^[63] Neal Dikeman (Libertarian) ^{[64][65]} Jonathan Jenkins (Independent) Bob McNeil (Independent) ^[67] Beto O'Rourke (Democratic) ^[66]
Utah	Orrin Hatch	Republican	1976 1982 1988 1994 2000 2006 2012	Incumbent retiring. New senator to be elected.	Tim Aalders (Constitution) ^[69] Craig Bowden (Libertarian) ^[69] Ryan Daniel Jackson (Write-in) ^[69] Reed McCandless (Independent American) ^[69] Caleb Dan Reeve (Write-in) ^[69] Mitt Romney (Republican) ^[69] Jenny Wilson (Democratic) ^[69]
Vermont	Bernie Sanders	Independent	2006 2012	Incumbent running.	Folasade Adeluola (Democratic) ^[70] Brooke Paige (Republican) ^[70] Jasdeep Pannu (Republican) ^[70] Bernie Sanders (Democratic) ^[70] Lawrence Zupan (Republican) ^[70]
					Tim Keane (Democratic) ^[71]

					Lawrence Zupan (Republican) ^[74]
Virginia	Tim Kaine	Democratic	2012	Incumbent renominated.	Tim Kaine (Democratic) ^[71] Corey Stewart (Republican) ^[71] Matt Waters (Libertarian) ^[72]
Washington	Maria Cantwell	Democratic	2000 2006 2012	Incumbent running.	GoodSpaceGuy (Republican) ^[73] Thor Amundson (Independent) ^[73] Dave Bryant (Republican) ^[73] Jon Butler (Independent) ^[73] Maria Cantwell (Democratic) ^[73] Brad Chase (FDFR) ^[73] Art Coday (Republican) ^[73] Jimmie Deal (Green) ^[73] Jennifer Ferguson (Independent) ^[73] Rocky De La Fuente (Republican) ^[73] Joey Gibson (Republican) ^[73] Matt Hawkins (Republican) ^[73] Matthew Heines (Republican) ^[73] Steve Hoffman (FreedomSocialist) ^[73] Susan Hutchison (Republican) ^[73] Charlie Jackson (Independent) ^[73] George Kalberer (Democratic) ^[73] Mike Luke (Libertarian) ^[73] John Orlinski (Republican) ^[73] Tim Owen (Republican) ^[73] Don Rivers (Democratic) ^[73] Mohammad Said (Democratic) ^[73] RC Smith (Republican) ^[73] Glen Stockwell (Republican) ^[73] Dave Strider (Independent) ^[73] Keith Swank (Republican) ^[73] Clint Tannehill (Democratic) ^[73] Alex Tsimerman (StandupAmerica) ^[73] Sam Wright (The Human Rights) ^[73]
West Virginia	Joe Manchin	Democratic	2010 (Special) 2012	Incumbent renominated.	Joe Manchin (Democratic) ^[74] Patrick Morrissey (Republican) ^[74]
Wisconsin	Tammy Baldwin	Democratic	2012	Incumbent running.	Tammy Baldwin (Democratic) ^[75] Charles Barman (Republican) ^[75] Griffin Jones (Republican) ^[75] George Lucia (Republican) ^[75] Kevin Nicholson (Republican) ^[75] Leah Vukmir (Republican) ^[75]
Wyoming	John Barrasso	Republican	2007 (Appointed) 2008 (Special) 2012	Incumbent running.	John Barrasso (Republican) ^[76] Dave Dodson (Independent) ^[76] Charlie Hardy (Republican) ^[76] John Holtz (Republican) ^[76] Anthony Risseghem (Republican) ^[76] Gary Trauner (Democratic) ^[76]

One way in which I will tie the course to the past election is to assign each student one state, where the data will be collected at the level of counties. The data from that state will be used to

answer some of the homework questions.² Above are the states with U.S. Senate elections in 2018. To find the state to which you are assigned, find a state –other than California--that contains the second and third letters of your last name in the list of states above. If there is more than one you can pick the one you prefer. If there is none, look for any two of the second, third, and fourth letters of your last name. When you find your state send me an e-mail at BGTravel@uci.edu identifying that state. If there is still none that fits the rule for choosing a state described above and e-mail me and I will assign you a state.

HOMEWORK ASSIGNMENT FOR WEEK 1. For the next class, find the state county level data for the 2012 and 2016 presidential elections for the state for which you are responsible, as well as the 2018 U.S. Senate results for that state. Enter the data for the two major party candidates and any other parties or candidates who received at least 5% of the voter. Enter this data on an EXCEL Spread Sheet (including raw votes) and bring it with you to class next week on a USB stick (and do so every week thereafter, until told otherwise by the instructor). Also find the county populations for the state and add that in as a column. This data will be used as the basis for many future homework assignments.

Third, as the class progresses, to complement the discussion of particular techniques, we will sometimes be reading work by social scientists that uses the statistical tools taught, or closely related statistical tools.

Fourth, we will take full advantage of meeting in a computer lab. Having a computer to help you takes a lot of the drudgery out of statistical calculations! Having a computer means that we can focus on learning by doing, rather than on memorizing formulas or wasting hours performing mindless calculations by hand or with a pocket calculator. While I will briefly introduce statistical packages such as SPSS for more advanced parts of the course, because EXCEL allows us to stay “close to the data,” we will begin with EXCEL to give students a better sense of how particular statistical tools actually work, e.g., how calculations are performed and how change in particular parameters affects the end result. Keeping close to the data will help you understand what you are doing when you learn to code in R in Prof. Levin’s class.

Fifth, the course will include, to the extent that time permits, a discussion of statistical intuitions critical to citizen literacy in statistical reasoning, e.g., the practical skills people need in reading a newspaper and making sense of the many charts, graphs, numbers, polls and projections that are

² Later in the course I may add an additional one or two states to each student’s domain of responsibility. It will also be one in which there is a November 2018 U.S. Senate election.

thrown their way, with a particular focus on common statistical fallacies, elementary probability theory, and on the construction and measurement of variables.

Finally, we will proceed in a way that repeatedly introduces students to the same basic ideas from different and often more sophisticated perspectives. We will begin with the description and display of (distributions of) variables one at a time, then move to comparisons of (distributions of) two variables and the consideration of possible relationships between one variable and a second variable, and then consider variables taken three at a time (usually with one “dependent” and two “independent” variables) , with a discussion of causal linkages to be begun this quarter and continued in the second quarter of the two quarter statistics sequence in the spring that will be taught by Professor Ines Levin. At the beginning of the course, we will also emphasize treatment of dichotomous variables, since these can be regarded as either qualitative or quantitative in nature.

Exams, Homework and Grading

Because this is a graduate course I am not going to give conventional exams, rather I will use the take home homeworks, the in-class exercises (ICEs), and in-class participation as the bases of your grade. But even the homeworks will normally be not be graded except to note whether or not they have been turned in, since if you can figure out how to do them, it’s an “odds on bet” the meaning of this term will be discussed when we consider probability) that you will end up doing them correctly -- though I may well ask somebody (at random) to work one of the problems for the class just to make sure that students are doing their own work. Also, I have a method to deter such cheating, namely to give what are identical problems that have different answers – this method works e because usually no two students will be working the problem on the same data set. There is also a special kind of take home homework called a THEM (take home exercise to mail). The THEMs are more difficult and sometimes have a trick/twist to them. All such material gets dropped off at the Homework, ICR and THEM dropboxes on the EEE website.

Required Readings

GROFMAN, B. AND A. CRIDER-*Statistics Made Simple: As Easy as One, Two, Three* –posted on the EEE Website

Other Lecture Notes (Ls)and Special Lecture Notes (SLNs) and in-class exercises (ICEs) posted each week by the instructor on the class website (Powerpoint, WORD, and EXCEL documents)

Optional Reading

Levin, Jack and James Alan Fox. *Elementary Statistics in Social Research*, 9th edition, or 10th edition or 11th Edition. Allyn and Bacon, 2007 (hardcover). — available via order from Amazon (used).

BUT YOU CAN ALSO PICK UP ANY COMPARABLE INTRO STATS TEXT. I ALSO HAVE SOME OLDER ONES THAT I WILL GIVE YOU FOR FREE.

THE ONLY REAL REASON FOR YOU TO LOOK AT A MAINSTREAM TEXT IS JUST FOR YOU TO BE ABLE TO SEE HOW STANDARD UNDERGRAD STATS IS TAUGHT, AND WHAT IS COVERED IN AS TEXTBOOK INTENDED FOR A YEAR LONG COURSE. A GENERAL RULE IS THAT “WHEN YOU HAVE SEEN ONE UNDERGRAD STATS TEXT, YOU HAVE PRETTY MUCH SEEN THEM ALL” – AT LEAST AS FAR AS TOPIC COVERAGE IN CONCERNED.

Computer Use

ALWAYS BRING A USB STICK WITH YOU TO CLASS! If you have EXCEL for Windows or EXCEL for the MAC loaded on your home computer you will be able to work at home for much of the homework, although it will help to have a connection or VPN connection to UCI because you will need to download files to EEE.