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*Office Hours:* Tues & Thurs 1-2  
*Lab Hour:* Fridays 11:30-12:20  
(COB 281)

## **POLI 175: Advanced Analysis of Political Data (Fall 2018)**

### **Course Description:**

This course will provide students with an advanced understanding of the scientific study of politics. We will review the essence of social scientific inquiry and then move on to statistical approaches to describing data, building explanatory models, and testing hypotheses. Along the way, we will spend a good deal of time discussing and analyzing real political data.

Fortunately, the days of computing statistics by hand are long gone. While I may require you to perform some unaided basic calculations, all of the more complicated statistical analyses will be performed using statistical software; Stata to be specific. By the end of the semester, you will be quite comfortable using Stata to manage and analyze data.

*Warning – This is a potentially difficult and challenging class!*

### **Intended Student Learning Outcomes (SLOs):**

At the end of this course, students should be able to:

1. Demonstrate social scientific literacy, including an understanding of quantitative approaches (corresponds to PLO 2, listed below).
2. Use contemporary social science research methods to analyze and better understand political phenomena (corresponds to PLOs 3 and 5, listed below).
3. Use Stata to manage and analyze data (corresponds to PLOs 3 and 5, listed below).

### **General Program Learning Outcomes (PLOs) for Political Science:**

1. An understanding of the processes, theories, and empirical regularities of political institutions and political behavior in the student's chosen emphasis area: American politics, comparative politics, or international relations.
2. An ability to employ critical thinking and demonstrate social scientific literacy, including basic quantitative literacy.
3. A capacity to utilize contemporary social science research methods to conduct rigorous research on political phenomena.
4. Effective written communication skills, especially the ability to convey complex concepts and information in a clear and concise manner.
5. An ability to apply abstract theory and research methods to understand contemporary political events and public policies.

**Prerequisites:**

MATH 5 (Preparatory Calculus) or equivalent.

POLI 10 (Understanding Political Controversy) or equivalent.

**Required Readings:**

Kellstedt, Paul M., and Guy D. Whitten. 2013. *The Fundamentals of Political Science Research*. 2<sup>nd</sup> Edition. Cambridge University Press

Acock, Alan C. 2018. *A Gentle Introduction to Stata*. 6<sup>th</sup> Edition. Stata Press.

**Grades:**

Your grade for the class will be allocated based on the following assignments:

Midterm Exam:	22.5%
Final Exam:	22.5%
Assignments (a total of 3):	30%
Research Paper:	25%

*Exams* – Both the midterm and the final will consist of multiple-choice and short-answer questions. Barring an emergency or documented illness, you *must* take the exams on the scheduled dates. The exams will assess your attainment of SLO 1.

*Assignments* – You will be given a total of three assignments throughout the semester, each of which will constitute 10% of your final grade. These assignments will require you to apply what you have learned to real political data. All of these assignments will require you to use Stata, which is available on the computers in the labs in which our lab sessions will be held. You will have the opportunity to work on these assignments during these lab sessions, *but you will almost certainly need additional time beyond lab section to complete these assignments*. Completed assignments are to be turned in to me on the dates indicated below. The assignments will assess all three SLOs, with a particular emphasis on SLOs 2 and 3.

*Research Paper* – You will write a 10-15 page research paper in which you will 1) identify a research question, 2) present clear hypotheses, and 3) use regression analysis to test these hypotheses. I will provide several datasets for your use, though you may seek out other data if you choose. The paper will assess all three SLOs.

*Extra Credit Presentation* – There will be an opportunity to orally present your research paper for extra credit. Details regarding this extra credit opportunity will be provided at a later date.

Your final grade for the course will be assigned in the following manner:

A	93% - 100%
A-	90% - 92%
B+	87% - 89%
B	83% - 86%
B-	80% - 86%
C+	77% - 79%
C	73% - 76%
C-	70% - 72%
D+	67% - 69%
D	63% - 66%
D-	60% - 62%
F	Below 60%

**Policies:**

*Attendance* – I do not take attendance during lecture. However, most of the material covered in lecture is *not* contained in the readings and you will be responsible for this material on the exams. I will make my lecture slides available, but be aware that they simply provide outlines of the material covered should by no means be viewed as the equivalent of the notes you should be taking in class. Thus, *I strongly recommend that you attend all classes*. If you miss a class, it is your responsibility to get the notes from a fellow student.

*Laptop computers* – I am increasingly convinced that the use of laptops during lecture is detrimental for student learning. I reserve the right to prohibit the use of laptops during lecture at any point during the semester, except for students who need laptops due to a documented disability.

*Make-up exams* – Barring an emergency or documented illness, you *must* take the exams on the scheduled dates. In cases of emergency or illness, please contact me as soon as possible so that we can arrange a time for you to take the exam.

*Academic dishonesty* – I have no tolerance for academic dishonesty. I will not hesitate to report and pursue action against anyone who plagiarizes the work of others, cheats on an exam, or otherwise engages in dishonest academic practices. Please consult the UC Merced Academic Honesty Policy.

*Late assignments* – Please hand your assignments in on time. Assignments will be penalized one letter grade per day they are late (weekends count as one day), regardless of the reason for why they are late.

## **Class Schedule:**

8/23: *Introduction to the class*

K&W, chapters 1-2

8/28: *Methods for testing hypotheses*

K&W, chapters 3-4

8/30: *Identifying causal connections*

9/4: *Introduction to Stata*

Acock, chapters 1-4

Assignment #1 will be handed out

9/6: *Data structures*

9/11: *Measurement*

K&W, pp. 92-114

9/13: *Visualizing data*

9/18: *Descriptive statistics*

K&W, pp. 114-123

Acock, chapter 5

9/20: *Sampling*

9/25: *Inference*

K&W, chapters 6-7

**Assignment #1 is due**

Assignment #2 will be handed out

9/27: *Differences of means*

Acock, chapter 7

10/2: *Research module: Experiments on acceptance of Supreme Court decisions*

10/4: *Correlation*

K&W, pp. 161-167  
Acock, section 8.5 of chapter 8

10/9: *Catch-up day*

**Assignment #2 is due**

10/11: ***Midterm exam***

10/16: *Regression, the basics*

K&W, pp. 171-178  
Acock, chapter 8  
Assignment #3 will be handed out

10/18: *Regression, interpreting results and goodness of fit*

K&W, pp. 178-189  
Acock, chapter 10

10/23: *Regression with multiple independent variables*

K&W, chapter 9

10/25: *Predicted values and residuals*

10/30: *Regression, assumptions and problems, I*

K&W, pp. 189-194

11/1: *Regression, assumptions and problems, II*

**Assignment #3 is due**

11/6: *Research module: Effect of bad weather on voter turnout*

11/8: *Regression, model specification, I*

K&W, chapter 10

11/13: *Regression, model specification, II*

11/15: *Logit and probit models*

K&W, pp. 247-255  
Acock, chapter 11

11/20: *TBA*

11/27: *Catch-up day*

11/29: *Advanced topic chosen by class*

12/4: ***Final exam***

12/6: ***Extra Credit Presentations***

TBA: **Research paper is due**