

# GOV 350K: Statistical Analysis in Political Science

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Unique: 85305  
Summer 2012, First session  
Meets M-F 10:00 - 11:30AM PHR 2.114  
Teaching Computer Lab: BUR 124 (selected Fridays)

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*Instructor:* Scott Moser, Ph.D.

*Office:* Batts Hall, 4.132

*Email:* smoser@austin.utexas.edu

*Office Hours:* M Th 11:30am-1:00pm and by appointment

In general, I have an open door policy, though I highly encourage you to set up an appointment to make sure I will be around outside of posted office hours

*Teaching Assistant:* Henry Pascoe (hbpascoe@gmail.com), will have office hours Tuesday 1:30-4:30pm in BAT 1.118.

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## Course Material:

Website: I plan to use BlackBoard for communicating information and materials to students (<http://courses.utexas.edu>) .

Text(s):

- The Essentials of Political Analysis [required] by Philip H Pollock III. CQ Press College. (ISBN-10: 1608716864) [abbreviated Poll below]
- A Stata Companion to Political Analysis [required] by Philip H Pollock III, CQ Press College (ISBN-10: 1608716716) [abbreviated PollStata below]
- Statistics Without Tears [optional, but recommended] by Derek Rowtree. Penguin (ISBN-10: 0140136320) [abbreviated Row below]

All books should be available at the co-op, among other booksellers. For those interest, student versions of Stata statistical software are available through the campus computer store for a drastically reduced price.

Computer software: STATA (available in Mezes Labs 2.104 and 2.120).

**Syllabi are important. This document is meant to serve as road map of the course, and to give students a clear idea of the expectations and policies they will be held to. Please read it carefully as it contains information vital to successful completion of the class.** While I have

done my best to outline the material and pace of the course, please be advised the this syllabus is subject to change. A current version of the the syllabus can always be found on the course homepage via BlackBoard

## Course Overview and Goals:

This course introduces basic concepts and methods of statistical inference, with a strong focus on political science. This course lays the groundwork for answering “What can we learn about political systems and political processes from the world?”

The objective of this course is to help students acquire the literacy for understanding social science research based on quantitative data and reasoning, as well as to prepare interested students for more advanced methods courses. By the end of the course I hope students will (1) be good consumers of data (whether data comes from newspapers, journal articles, debates or the popular press) and (2) be prepared for more advanced training, should they so desire.

The main activities of the class include lectures, readings and problem sets (which will include use of the statistical software Stata, see above). The material we cover will come from a variety of sources – not just the main textbook – so lecture and lecture notes are an important source of information on which you will be examined. I encourage students to ask questions whenever they are in doubt –in class, in office hours, over email, etc. – and to participate in class-room activities. Lastly, Blackboard should be checked regularly for materials posted, announcements, e-mails and discussions.

### **A note on “statistics classes:”**

Students often seem intimidated, put off by or downright fearful of statistics classes. This is a loss for everyone involved in the teaching process. This course is meant to be a very gentle introduction to quantitative reasoning and analysis. Throughout the course, we will be motivated by one question: what can we (and how do we) learn about the world from observations (data)? Statistics, the use of (and more often, the misuse of) are ubiquitous in current events, the media and government. This course will help students be mindful consumers of statistics and arguments backed up by numbers. A final note: Dont let words like multicollinearity be intimidating. It is just a word (and as well see, a big word for a simple idea).

## Assessment

Students mastery of the material will be assessed via four (4) homeworks, three (3) lab assignments, two (2) in-class examinations and a final exam. Final marks will make use of the “plus/minus” grading scheme and will be calculated as: Final exam = 30%; midterm exams = 25%; problem sets = 30%, lab assignments = 15%.

Attendance does not directly factor into grading (with the exception of exam days). While I will endeavor to make time in the class-room worthwhile, I believe that the ultimate responsibility for learning lies with the student. If you feel your time is better served in other activities, you are of course free to do so. Be aware, however, that a non-trivial part of the lecture material will not come from the text. The exams will cover both sets of material.

**Barring legitimate, sanctioned absence, I will not give make-up exams nor extend due dates.** Unexcused, missed assignments and exams will be recorded as a zero. However, university-sanctioned reasons for absence can be accommodated (see 'additional notices'), but I require notification as soon as possible in the semester (and appropriate documentation as it is available). However, the problem set portion of students' final grade (worth 30% of the final grade) will be based on the **best four** (4) problem sets. I do not plan on “curving” grades.

# Course Schedule

## **Introduction (31 May - 1 June)**

Readings: Ch. 1, Poll

Lecture 1: Course Description; Introduction; Political science as *science*

Lecture 2: Hypothesis and Explanation

## **Measure and Describe Variables (4 June - 7 June)**

Readings: Ch. 2, Poll

Themes: Defining a concept and operationalizing; variables; measuring variables; describing variables with measures of central tendency and variation; introduction to probability

8 June: Computer Lab (BUR 124), Chapters 1 and 2 of PollStata

## **Making Comparisons (11 June - 15 June)**

Readings: Ch. 3, 4, 5 Poll (pg 58-71 Poll)

Themes: Research design; sampling; comparing two means; distribution of sample statistics (I) central limit theorem

12 June: **Exam**

15 June: Computer Lab (BUR 124), Chapters 4 and 5 of PollStata

## **Testing and Inference (18 June - 22 June)**

Readings: Ch. 6 and 7 Poll

Themes: hypothesis testing; Testing Relationships between two variables

22 June: Computer Lab (BUR 124), Chapter 6 of PollStata

## **Measures of Association (25 June - 5 July)**

Readings: Ch. 7 and 8, Poll

25 June: **Exam**

Themes:  $\chi^2$  test for categorical data; correlation; multiple regression; regression to the mean dummy variables, outliers, multicollinearity

29 June: Computer Lab (BUR 124), Chapters 8 of PollStata

Final:

Friday, July 6, 9:00 -12:00 noon location TBD, check the registrar's office for more information

<http://registrar.utexas.edu/schedules/126/finals>

## Additional Notices

### **In-class and out-of-class participation**

I hope you will meet with me during the semester, especially if you have questions about the course material. I welcome questions during class: if you have a question or a comment, please let me know. I hope you will feel free to raise questions if you are confused or want me to talk more about some topic. There is a lot of material in the course – please help me teach you what you want to know!

### **Cell phones and laptops**

I understand that many of you will use a laptop to take notes during the lecture. This is fine. I am also willing to bet that many of you will check your email, the news, etc. This is **not** fine. If you use your laptop to take notes/ follow lecture you are welcome to use your laptop during class. There is no excuse for using your laptop in class to check Facebook, watch football online, e-mail, IM, etc.

I also ask that you turn off your cell phone during class. If there is an emergency and you might need to be contacted, please talk to me before class. Otherwise there should be no reason to hear a phone ring or see someone send a text.

### **Students with disabilities**

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259, <http://www.utexas.edu/diversity/ddce/ssd/>

### **University of Texas Honor Code:**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community. See the following websites for more information: <http://www.lib.utexas.edu/services/instruction/faculty/plagiarism/preventing.html> <http://www.lib.utexas.edu/services/instruction/learningmodules/plagiarism>

**Academic dishonesty is a serious matter. Cheating, plagiarism nor any form of academic dishonesty will not be tolerated. Violators will be subject to the College of Liberal Arts and the University of Texas regulations.**

### **Accommodations for Religious Holidays**

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

### **Emergency Evacuation Policy**

In the event of a fire or other emergency, it may be necessary to evacuate a building rapidly. Upon the activation of a fire alarm or the announcement of an emergency in a university building, all occupants of the building are required to evacuate and assemble outside. Once evacuated, no one may re-enter the building without instruction to do so from the Austin Fire Department, University of Texas at Austin Police Department, or Fire Prevention Services office.

Students should familiarize themselves with all the exit doors of each room and building they occupy at the university, and should remember that the nearest exit routes may not be the same as the way they

typically enter buildings.

Students requiring assistance in evacuation shall inform their instructors in writing during the first week of class. Faculty members must then provide this information to the Fire Prevention Services office by fax (512-232-2759), with "Attn. Mr. Roosevelt Easley" written in the subject line.

Information regarding emergency evacuation routes and emergency procedures can be found at <http://www.utexas.edu>.

Exceptions can be made in extreme circumstance at the discretion of the instructor, subject to College of Liberal Arts and University regulations.