Introduction
This course provides an introduction to the tools of political inquiry, including research design, causal inference, and basic statistical methods. Understanding research design and causal inference are essential for assessing the validity of research and for constructing your own investigations. In addition, while political science has traditionally relied upon largely non-quantitative work, several factors have led to a dramatic increase in the use of experiments and statistics to study political phenomenon. Increasing availability of high-quality data allow scholars to test hypotheses that they previously could not. Advances in computing have made quantitative methods relatively easy and accessible. Quantitative methods have proven to be extremely powerful and flexible tools for social scientists.

Course Objectives
We have three basic goals in the course. First, after this course, you will have a strong intuitive understanding of research design, hypothesis testing, and theory building. Second, you will be capable and critical consumers of quantitative research, in political research and other areas of scientific inquiry. Finally, you should be capable of answering your own political science questions using quantitative data.

Practically, this means that by the end of this course, you will be equipped to critically analyze others’ work, including their sample framework, measurement, design,
methods, and analysis. You will be able to create and explain a variety of statistics, both graphical and numerical. You will also learn how to use a statistical software program, SPSS. These skills will be useful in reading, understanding, and conducting research in political science, as well as in many other disciplines.

**Reasons to take this course**

1. To understand research in political science, you need to understand quantitative methods. Open any one of the top political science journals where the best scholarship is published and you will see that almost every article uses quantitative methods.

2. The skills you will learn in this course are valuable. Many of you will go on to run government agencies, administer nonprofit organizations, or have your own businesses or law practices. Statistics provide a powerful set of tools for understanding problems and making decisions. If you master the material in this course, you will have an additional set of resources for your future career. If you do not, you will always be at the mercy of those that are literate in statistics.

3. The material is challenging, but many students enjoy it. Statistics can be abused, but it has an underlying logic and objectivity that many students find appealing after some less-empirically oriented courses.

4. And of course, the best reason to take this course: you have to.

**Preparation**

Whatever your background, you can do this if you are willing to work at it. This course is heavy on intuition and logic, and only requires modest math and statistical skills. You may have some basic calculations to perform, but we will minimize the math and focus on the intuition. This course will lay the groundwork for additional training in statistics and research design, though most advanced applications you might want to pursue will require a solid foundation in calculus and linear algebra.

**Study Methods**

You should stay on top of the material and not leave anything until the last minute. The material covered in this course is inherently cumulative. If you do not keep up, you will quickly find yourself too far behind to catch up. Hence you should not expect to be able to blow off this class until the week before the final, unless you are trying to fail. Further, a great deal of your grade comes from the homework assignments. Take them very seriously and do not wait until the day before to start!

I believe that anyone can get any grade they want in this course. I will work with you to achieve your goals and encourage you to contact me with any questions.
Evaluation

• Final Exam
  There will be a cumulative final exam as per the official Schedule of Classes. It will be worth forty percent of your grade.

• Homework
  There will be four homework assignments, worth a total of fifty percent of your grade. Homework will cover most of the core material on the final examination, but it is not just an exam preparation tool. An important component of the homework will be your conducting independent and original research, using the datasets provided in class, or even some other dataset should you so desire. Some problems will come straight from the text, others from the workbook, and others from me.
  Your lowest-scoring homework will be weighted downward, so that the final formula for your homework score will be:

  \[ \text{HW Score} = \left( \frac{7}{8} \times \text{Average of Three Best Scores} \right) + \left( \frac{1}{8} \times \text{Lowest Homework Scores} \right) \]

• Quizzes/Participation
  Five percent of your grade will reflect unscheduled quiz scores and your participation in section and lecture.

• Data of the Day
  Five percent of your grade will be assigned from a “Data of the Day” task. An important part of this course is learning to analyze the strengths and weaknesses in others use of information. This assignment will involve fiding and criticizing a published representation of data. You can use a newspaper or magazine, or a research journal. You will write a summary of your observations in one page or less, and present your results to the class. More details will be provided on the first day of class.

Note: unless otherwise announced, all assignments should be submitted physically, not electronically, i.e., no email submission of assignments.

Grades

Your performance on the above projects will be weighted according to the following table:
<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Homework</td>
<td>50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
</tr>
<tr>
<td>Quizzes and Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Data of the Day</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

I may provide several opportunities for extra credit. These will be announced in lecture and on the course website.

**Evaluation Policy**

Late assignments will not be accepted and will receive a failing grade, in accordance with University regulations. Final examinations cannot be rescheduled; please plan your travel and other obligations accordingly.

**Policy on Academic Integrity**

Students are expected to maintain the highest standards of academic integrity. Cheating, plagiarism and other forms of academic dishonesty will not be tolerated and will be subject to disciplinary action consistent with University rules and regulations. Students are expected to familiarize themselves with University regulations regarding plagiarism and academic dishonesty.

**Syllabus**

The syllabus and course outline is intended to provide an overview of the course. You cannot claim any rights from it. In particular, scheduling and dates may change. Although the syllabus should be a fairly reliable guide for the course, official announcements are always those made in class or as per the official university academic calendar.

**Other: Nametags**

All students are required to have on their desk at each lecture a large label card with your name in large print so I can call on you and learn your names. I recommend folding an 8.5 X 11 piece of paper lengthwise.

**Communications**

We will use the university’s online classroom system, at https://ted.ucsd.edu. A link to the course website will be on my homepage at http://swd.ucsd.edu. Assignments, updates, and other information will be posted there during the quarter. Please login regularly for updates. Please also post general questions there so that all students can see your question and the teaching staff’s response. Any issues or questions that you wish to raise privately should be sent to a member of the teaching staff via email or raised
in office hours as appropriate. Limit your use of online class resources to appropriate academic activities.

**Textbooks**

The following are required and may be purchased online or ordered at any decent bookstore:


There is also an optional text: *Intro Stats*, any edition, currently available as cheap as $5 online.

The course also

The optional generic stats textbook is not required. The Pollock series is very intuitive, but will short-change you on true understanding of methods. Consequently, we will go beyond the text and learn some basic statistics, with formulas and basic calculations. This is not a math course, and the calculations will not be sophisticated. But this part of the course will be challenging for those of you with a math phobia. You may wish to purchase a basic statistics textbook to use in that part of the course.

There will be some supplemental readings. I am trying to make all supplemental readings available online, so you do not need to purchase a reader. For most, you will need to be on campus to access the readings. If you try to access them from off-campus, you may need to establish a campus connection first, see ACS for details on virtual private networks.

**Computer Labs and Software** If you do not buy the SPSS software, there are computer labs on campus where you can complete your assignments. To find a lab with SPSS installed, go to the website of Academic Computing Services, http://acs.ucsd.edu. One advantage of the computer labs is that their version of SPSS is more capable than that included in the textbook bundle.

**Assignments and Lectures**

All reading should be completed before class. I may call on individual students to participate in discussions. I reserve the right to adjust the lecture and reading schedule as needed. A tentative list of weekly topics, readings, and exam dates are listed below.
August 6, 2013
Introduction to the Course

Operationalizing Concepts and Measuring Variables
Pollock, Essentials, Ch. 1-2A (P1-32)

Describing Variables Numerically
Pollock, Essentials, Ch. 2B (P32-44)
Pollock, SPSS, Ch1 & 2. P1-14, 17-29.

Describing Variables Graphically
Optional: Intro Stats, sections on histograms, scatterplots, bar plots.

August 8, 2013
Theories, Hypotheses, and the Scientific Method
Pollock, Essentials, Ch. 3A (P48-58)

Making Simple Comparisons
Pollock, Essentials, Ch. 3B (P 58-71)
Pollock, SPSS, Ch4 P61-74. Optional P41-58.

August 13, 2013
The Fundamental Problem of Causal Inference
Experiments and Observational Studies
Pollock, *Essentials*, Ch. 4 (P78-97)

August 15, 2013
Controlled comparisons
Pollock, *Essentials*, Ch. 5 (P102-118)
Pollock, *SPSS*, Ch. 5 (P93-109)

Collecting Data / Surveys and Sampling

August 20, 2013
Sampling and Confidence intervals
Pollock, *Essentials*, Ch. 6B P(122-135)

The Central Limit Theorem and Friends
Pollock, *Essentials*, Ch. 6C (P 135-144)
Recommended: *Intro Stats*

August 22, 2013

Confidence Intervals: One and two sample proportion; One sample mean
Introduction to Hypothesis Testing
Pollock, *Essentials*, Ch. 7A (P 144-152)
Pollock, *SPSS Companion*, Ch. 6 (P 121-131)
Recommended: *Intro Stats*
August 27, 2013
Hypothesis Testing and Statistical Significance: One and Two-Sample Proportion Tests.
Pollock, Essentials, Ch. 7A (P 155-164)
Recommended: Intro Stats

Hypothesis Testing and Statistical Significance: Difference of Means and Chi-Square
Pollock, Essentials, Ch. 7A (P 164-169)
Pollock, SPSS Companion, P137-146
Recommended: Intro Stats

August 29, 2013
Correlation and Regression
Pollock, Essentials, Ch. 8A (182-192)
Pollock, SPSS, Ch8 P159-173
Recommended: Intro Stats

Regression
Pollock, Essentials, Ch. 8B (P192-207)
Pollock, SPSS, Ch8 TBD
Recommended: Intro Stats

September 3, 2013 Labor Day Holiday, no class

September 5, 2013
Regression and Hypothesis Testing
Pollock, SPSS Companion TBD
Recommended: Intro Stats

Logistic Regression
Pollock, Essentials, Ch. 9 (P 212-234)

New Directions and Review

September 7, 2013
Final Examination 11:30-2:29. (See official University schedule to confirm date, time, and location)