Methods of Political Inquiry
POLI SCI 401

Instructor: Prof. John Ahlquist
Email: jahlquist@wisc.edu

Class meetings: TTH 11-11:50 AM
Office: 210C North Hall
TA: Bugrahan Budak
Email: budak@wisc.edu

Course description & goals
This course will introduce you to the substantive questions, modes of reasoning and research tools that define political science as a discipline. The course is designed to be the foundational research design course for political science undergraduates. This class is meant to precede and complement political science 218 (political numbers) and political science 551 (introduction to statistical inference).

The first part of the class will focus on the development of research questions in political science. The second part will focus on relatively abstract question of research design. The third section of the course will introduce qualitative and quantitative tools most commonly deployed in political science research designs.

A critical tool in social science is the statistical analysis of quantitative data. We will therefore discuss ways of using statistical tools to describe data, relationships, and make inferences about the world. But we will approach this from a risk averse perspective: I want to make you skeptical about the data and claims frequently made rather than provide a false sense of confidence in your quantitative skills.

Classes will be a combination of lecture, discussion, and group work designed to provide practice in the concepts introduced. By the end of this course you will be exposed to basic statistical computation and graphics in the open-source computing environment R.

Expectations
I expect that you will come to class ON TIME and prepared, having already read the assigned readings for that class meeting. In return, you can expect that I have selected the readings for a reason and can answer questions about them. I will come to class prepared with a clear agenda and, when appropriate, a lecture. I will also return all on-time assignments within a week, barring special circumstances. All assignments will have solutions provided so you can learn from your errors.

Course materials
Required Materials
- Various articles and book chapters on the course website
- Regular access to a computer with a copy of Microsoft Excel and the R statistical computing environment
- Lecture notes posted to the course website

All books are available at the bookstore and for purchase through the standard online retailers. All other course readings will be posted on the course website. You are responsible for accessing and reading them.
This syllabus may be modified throughout the semester.

Computing
Course sections will primarily focus on computing and working through problem set exercises, but they are also a time for you to ask clarification questions of the TA. If you have a laptop computer I strongly suggest you bring it to section meetings.

We will begin by showing you some computational tools in the Excel spreadsheet program, but we will rapidly move to a more advanced platform called R. R is a free, open source statistical computing environment. You can download and install the most recent version of R from CRAN at [http://cran.r-project.org/](http://cran.r-project.org/). While R is at the cutting edge of statistical software, it can be a little difficult to master. We will do our best to help you along. By the end of the course you will know how to load data into R and use it to produce some cool graphics and conduct simple statistical analysis. After this class you can mention on your resume that you are a user of R.

Section & the TA
The TA will hold section once per week. Section meetings will focus on math refreshers and introductions to computing, including Excel and R. Sections will also be a time for you to ask questions.

Office Hours
I will have three office hours each week. This is your opportunity to talk with me in small groups or 1-on-1. This is time I reserve for you, so please take advantage of it. If you feel like you’re falling behind or are having trouble in the course, come see me immediately! The semester moves quickly. The course TA will also conduct regular office hours.

Email & website (Learn@UW) policy
I will be using email and the course website regularly to communicate with the class. You should feel free to contact me via email. I will do my best to respond to email queries within 12 hours during the week and 24 hours on weekends. Please do NOT expect me to respond on Sundays.

If you have comments, questions, or concerns about the course that you do not feel comfortable bringing to me personally there is a link on the course Learn@UW site from which you can send me anonymous email.

The course website will contain important course information, including readings, details on assignments, and announcements.

Assumed knowledge
This course assumes no specialized knowledge.

Assignments & grading
Your score for the course will be a weighted average with weights as follows:

- 25% midterm exam
- 35% final exam
- 25% problem sets
- 15% Participation
  - 5% peer evaluation bonus
  - 5% required postings
  - 5% classroom participation
There will be approximately six problem sets during the course of the semester. The problem set with the lowest grade will be dropped.

Final grades will be assigned as follows (rounded to the nearest integer):
C: 70-77   D: 64-69   F: <64

Groups and peer evaluation
At the beginning of the semester I will divide you randomly into groups of 3-5 people. All problem sets and assignments will be completed in these groups for the duration of the semester. All members of the group will receive the same grade on each assignment.

To ensure that those putting in the work are rewarded (and those free riding on the work of others are penalized) you will provide an evaluation of the other members of your group at the end of the semester. Based on the evaluations of your peers I will award you participation credit worth up to 5% or your final grade (or the equivalent of one problem set). Your evaluation of your peers will remain confidential.

Submitting written work
All written work must be submitted electronically via the learn@UW website dropbox. Written responses should be submitted as .pdf files. Do not submit documents in proprietary software formats (e.g., Word, Pages). Any supporting computer code should be submitted as an Excel, .R or .txt file, as appropriate.

Exams, late arrival, late homework, make ups, and extra credit
You are expected to be present for all exams at the beginning of the exam period. For exams occurring during the regular semester, students will be allotted the entire class period for the exam. For final exams, students will be allotted the entire final exam period that the University has appropriated. A five-minute grace period will apply for the beginning of all exam periods. After the initial five minutes have expired, students will be penalized one point each minute late.

All late assignments will be discounted at an exponential rate: your final score = 2.2ge^{-d}
where g is the raw score you earn on the assignment, d is the number of days late your assignment is, and e is Euler’s number. Your assignment is considered 1 day late at the end of the class period in which it is due.

Make-up exams will only be given in cases of documented sickness or personal emergency. Absences or late arrivals for quizzes or exams will only be excused for participation in formally sanctioned University events, or extraordinary events if they are accompanied by sufficient (i.e. Health Services Excuse Forms) documentation within two calendar days of the absence or late arrival. The instructor reserves the right to determine what constitutes an extraordinary circumstance as well as what shall be considered “sufficient documentation.” If they have been excused for their absences, students will have five working days to make up a missed exam. If there are extraordinary circumstances which would prevent the student from making up the exam in five working days, the instructor must be informed of this fact prior to the expiration of the five day period. The instructor reserves the right to administer makeup exams in any format (multiple choice, short answer, essay), which may not necessarily correspond to the original exam’s format. If a student misses an exam and does not have an excused absence, the student will receive a zero for the exam.
There will be no early or make up final exams. There will be no extra credit offered in this course.

Grade disputes
If you believe I have made an error in grading, you may petition me to change your grade. If you choose to do so, you must write a typed memo or email no longer than 1 page describing EXACTLY what error you believe I made AND what grade you think you deserve. I will not entertain grade disputes beyond seven days from the date I initially returned the graded assignment.

Incomplete grades
No incomplete grades will be given unless there is an agreement between the instructor and the student PRIOR TO the end of the course. The instructor retains the right to determine legitimate reasons for an incomplete grade.

Academic honesty
I take academic honesty seriously and will not tolerate plagiarism or other forms of cheating or dishonesty. Students in this class have the right to expect that their fellow students are upholding the academic integrity of this University. While you will work together for homework assignments you will appropriately recognize and cite all sources of data or information you use. If you are unsure how to do this, please see me in office hours or ask in class. If you are unsure what constitutes plagiarism, please see UW’s academic honesty policy here: http://students.wisc.edu/saja/misconduct/UWS14.html.

Students with Disabilities
Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first two weeks of class. For more information about services available to students with disabilities, contact McBurney Center 702 W. Johnson St.; 608-263-2741; mcburney@studentlife.wisc.edu; http://www.mcburney.wisc.edu/

Course organization and tentative calendar
The course will be organized into 6 parts:
1. Political science as a discipline
   a. Organization of the discipline & relations to other social sciences
   b. Social science v. humanities
   c. Social science v. journalism
   d. Social science v. advocacy/activism/policy making
2. Curiosity, social puzzles, and research questions
   a. What makes a good/bad research question?
   b. Where do research questions come from?
   c. What makes a good/bad answer?
3. Answering research questions: model building
   a. What is a “theory”?
   b. Looking for implications, not assumptions
   c. Thinking formally
   d. Some basics of game theory
4. Designing a research study
   a. Counterfactuals
   b. Causality & experiments
c. Observational studies
d. The structure of a research paper

5. The data
   a. Measurement (what? How?)
   b. Data sources & collection methods
   c. Probability distributions basics
   d. Summarizing quantitative data

6. Learning from data (introduction to inference and statistical modeling)
   a. Populations and samples
   b. Statistical inference
   c. Difference in means
   d. Correlation
   e. Regression basics
<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Class</th>
<th>Readings (* denotes online)</th>
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<tbody>
<tr>
<td>1: Jan. 22</td>
<td>Tu</td>
<td>Intro/Meet-&amp;-greet</td>
<td>Syllabus (online)</td>
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<td></td>
<td>Th</td>
<td>What is “political science”?</td>
<td>K&amp;W 1.1-1.2; Clark Golder &amp; Golder p. 1-6*</td>
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<td>2: Jan. 29</td>
<td>Tu</td>
<td>Political science as puzzle solving</td>
<td>Golden (&quot;why do trade unions...&quot;)*</td>
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<td>Th</td>
<td>Asking research questions [PS1 hand out]</td>
<td>K&amp;W 1.3-1.6; 2.1-2.2</td>
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<td>3: Feb. 5</td>
<td>Tu</td>
<td>Answering research questions (theory) [PS1 Due]</td>
<td>K&amp;W 2.3-2.4; Lave &amp; March 2.1, 2.2,2.3.1*</td>
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<td>Th</td>
<td>Model building (getting hypotheses) [PS 2 hand out]</td>
<td>Lave &amp; March 2.4, 2.9*</td>
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<td>4: Feb. 12</td>
<td>Tu</td>
<td>Thinking formally [PS2 due]</td>
<td>K&amp;W 2.5-2.9</td>
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<td>Th</td>
<td>Normative political theory in political science</td>
<td>Prof. Zumbrunnen guest lecture</td>
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<td>5: Feb. 19</td>
<td>Tu</td>
<td>Introducing game theory [PS3 hand out]</td>
<td>Clark Golder &amp; Golder ch. 3*</td>
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<td>6: Feb 26</td>
<td>Tu</td>
<td>Observational studies &amp; experiments</td>
<td>K&amp;W ch.3, “Trials &amp; errors”*</td>
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<td>Th</td>
<td>Ethnography &amp; interviews</td>
<td>Walsh (&quot;Putting Inequality in its place&quot;)*</td>
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<td>7: Mar. 5</td>
<td>Tu</td>
<td>[Midterm]</td>
<td>K&amp;W pgs. 86-91; Best intro &amp; ch 1</td>
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<td>Th</td>
<td>Measurement I</td>
<td>K&amp;W pgs. 91-102; Best ch 2</td>
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<td>8: Mar. 12</td>
<td>Tu</td>
<td>Measurement II</td>
<td>Best Ch. 3; “Argentina gov’t statistics”*</td>
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<td>Th</td>
<td>Probability distributions [PS4 hand out]</td>
<td>K&amp;W pgs. 104-118; Best Ch. 4</td>
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<td>9: Mar. 19</td>
<td>Tu</td>
<td>Descriptive statistics [PS4 due]</td>
<td>K&amp;W p.120-32; Best Ch. 5</td>
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<td>10: Mar. 26</td>
<td>Tu</td>
<td><em><strong>Spring Break</strong></em></td>
<td>(finish Best)</td>
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<td>11: Apr. 2</td>
<td>Tu</td>
<td>Intro to statistical inference [PS5 hand out]</td>
<td>K&amp;W p.120-32; “The Body Counter”*</td>
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<td>Th</td>
<td>Statistical inference;</td>
<td>K&amp;W Ch 7 pgs. 134-45</td>
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<td>12: Apr. 9</td>
<td>Tu</td>
<td>Correlation</td>
<td>K&amp;W Ch 8 pgs. 150-156</td>
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<td>Th</td>
<td>Difference of Means</td>
<td>K&amp;W Ch 8 pgs. 145-150</td>
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<td>13: Apr. 16</td>
<td>Tu</td>
<td>Bivariate regression I [PS5 due]</td>
<td>K&amp;W Ch 9 pgs. 159-165</td>
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<td>Th</td>
<td>Bivariate regression II</td>
<td>K&amp;W Ch 9 pgs. 165-177</td>
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<td>14: Apr. 23</td>
<td>Tu</td>
<td>Multiple regression I [PS6 hand out]</td>
<td>K&amp;W Ch 9 pgs. 177-188</td>
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<td>Th</td>
<td>Multiple regression II</td>
<td>K&amp;W Ch9 pgs. 188-200</td>
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<td>15: Apr. 30</td>
<td>Tu</td>
<td>Cases, history and processes [PS6 Due]</td>
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<td>Multiple methods in political science</td>
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<td>16: May 7</td>
<td>Tu</td>
<td>Review</td>
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<td>Review</td>
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**Final Exam**
**May 17**