

POLS 5300 Seminar in Quantitative Research Methods I Fall 2015

Instructor: Dr. Taeko Hiroi
Office: Benedict Hall 312
Office Hours: M 4-5, W 1:30-2:30, and by appointment
Phone: 747-7983
E-mail: thiroi@utep.edu
Class Time/Location: M 6:00-8:50 pm/LART 403

Course Description

This course is a graduate-level introduction to quantitative research methods. It is designed to help students to think and do research like political scientists. Regardless of whether we are interested in discovering the causes of war, economic development, democratic stability, or voting behavior, we must know how to do research in order to arrive at the answers that are both logically and empirically valid.

The objectives of this course are twofold. First, it helps students to establish a basic foundation for conducting empirical political research. We will discuss the components of the scientific method, theory building and hypothesis testing, various research designs, and data collection methods. Second, students will learn introductory statistical techniques used in political science research. Students will be introduced to concepts such as measures of central tendency and dispersion as well as statistical techniques including the following: *t* tests, chi-square, correlation, and regression. Students will apply these concepts and techniques through a series of assignments and demonstrate proficiency in empirical research and statistical techniques in a research paper.

Course Goals

Upon the successful completion of the course, students will be able to:

- Understand the fundamentals of political science research;
- Construct and manage datasets using Excel and STATA;
- Employ various statistical techniques used in political science;
- Demonstrate an ability to analyze and interpret data relevant to political science research;
- Use STATA software at an introductory level; and
- Write a graduate-level political science research paper.

Required Text

Pollock, Philip H. 2012. *The Essentials of Political Analysis* (4th ed.). Washington, DC: CQ Press.

Pollock, Philip H. 2015. *A Stata Companion to Political Analysis* (3rd ed.). Washington, DC: CQ Press.

Brians, Craig Leonard, Lars Willnat, Jarol B. Manheim, and Richard C. Rich. 2011. *Empirical Political Analysis: Quantitative and Qualitative Research Methods* (8th ed.). Boston: Longman.

Recommended Text

Gujarati, Damodar N., and Dawn C. Porter. 2009. *Basic Econometrics* (5th ed.). New York: McGraw-Hill/Irwin.

Other Readings

Other readings are available through the library's e-journal.

Computer Software

In this course, we will use Excel and statistical analysis software called STATA. UTEP students can use STATA, free of charge, at UTEP's myApps website at <http://My.Apps.UTEP.edu> and in the computer labs.

Course Requirements

Please read carefully!

All assignments that are completed outside the classroom must be stapled, paged, and typed double-spaced using *Times New Roman* font size 12, with a standard one-inch margin on all four sides. All data and ideas that are not your own must be properly cited both in the text and bibliography. All written assignments must be proofread and properly edited before submission. Grades will be discounted for inadequately formatted and poorly written assignments.

For writing styles, follow the American Political Science Association's *The Style Manual for Political Science* available at

<http://www.apsanet.org/Portals/54/APSA%20Files/publications/APSAStyleManual2006.pdf>.

APSA's style manual is based on the *Chicago Manual of Style*. For the Chicago style, you may wish to consult http://www.chicagomanualofstyle.org/tools_citationguide.html.

All assignments are due at the beginning of the class. I will collect assignments at the start of the class. Any assignments submitted after this time will be considered late assignments. Late assignments will be accepted with a grade reduction equivalent to 10 percent of the maximum obtainable grade per day of delay, counting immediately after the assignment is due.

1. **Readings:** You are responsible for the material covered in the assigned readings. Reading assignments must be completed *before each class*. The reading schedule is found at the end of this syllabus. In addition to these readings, I may assign supplemental readings throughout the semester as appropriate. These supplemental readings do not appear on the schedule. Much of the class time will be spent on hands-on practices based on the assigned readings. The class will proceed assuming that you have read the assigned materials, so completing reading assignments before class is highly important for you to make the best use of the class time.

2. **Class Participation:** This is a graduate seminar and I expect you to contribute to our collective learning environment by coming to every class having completed assigned readings and being prepared to discuss them. You will be evaluated on both the quality and quantity of your participation.
3. **Course Exam:** The course exam is scheduled for **November 2**. We will discuss the format of the exam in the class.
4. **Critical Reviews:** You will write two critical reviews, no longer than three pages in length each, of articles from leading political science journals as specified in the course schedule. The reviews will identify at least the following: (1) the primary research question; (2) significance of the research design and/or methodologies adopted; (3) theory and/or hypotheses; (4) dependent and independent variables; (5) the unit of analysis; and (6) major findings. In addition, you need to discuss the weaknesses of the study (e.g., variable measurements and operationalization, alternative rival hypotheses, etc.) and how you would improve it. The first review is due on **September 14**, and the second, on **September 21**.
5. **Homework Assignments:** You will complete two homework assignments. These assignments will give you practical experiences in applying statistical procedures discussed in class and in the readings to analyzing data. Those assignments are due on **October 19** (#1) and **November 16** (#2). Specific instructions will be provided in class or on Blackboard for each assignment.

Choosing Your Dataset

To complete the assignments and write a research paper, you need to find a dataset of your choice Your dataset must contain cross-sectional data with at least 30 variables measured at different levels (nominal, ordinal, and interval and/or ratio) and must have at least 50 observations. I will be happy to assist you in this process. However, since finding and obtaining appropriate data is an indispensable part of social science research, finding such data on your own is an important aspect of learning. Please remember to also obtain any supplementary documents, such as a codebook, for your dataset. You will declare the dataset of your choice on **October 5** to receive feedback from the class.

6. **Research Paper:** You will complete a research paper using the dataset you obtain in the procedure discussed above. You need to demonstrate in the research paper your mastery of the methods and techniques you learn in this course.

This assignment is evaluated in two phases. The first phase involves writing a **research proposal**, which is due on **October 26** in class. The research proposal, which will be no longer than 8 pages, will include a research question, significance of the project, theory and hypotheses, research design and methodology, and expected findings. Cite all sources used in the proposal. You will present your proposal in class to receive feedback.

You will then perform an appropriate statistical analysis and present your research paper on **November 30**. **A hard copy of your research paper is due to me at this time (November 30 in class)**. Your research paper must be complete, no longer than 30 pages including notes, tables, figures, and a bibliography, and include the following sections: (1) introduction, (2)

literature review, (3) theory and hypotheses, (4) research design and methodology, (5) data analysis, and (6) conclusions. The figures and tables included in the paper should look professional.

Along the paper, please also submit all Stata outputs used in the research paper. Do not include unused outputs, such as those showing your struggle. I appreciate your effort, but I don't need to see them.

Grades

The course grade is determined using the following weights:

| Course Requirement | Weight |
|------------------------------------|------------------------------|
| Course Exam | 30% |
| Critical Reviews | 10% (5% each) |
| Homework Assignments | 20% (10% each) |
| Research Paper | 30% (proposal 5%; paper 25%) |
| Class Participation & Presentation | 10% |

| Final Grade Scale | |
|--------------------------|---|
| 90% ≤ | A |
| 80% ≤ & < 90% | B |
| 70% ≤ & < 80% | C |
| 60% ≤ & < 70% | D |
| <60% | F |

Course Policies

- Cell phones must be off during class hours. They are allowed under emergency circumstances, but please notify me ahead of time.
- No chatting, e-mailing, internet browsing, reading, napping or any activity not related to class is allowed during class hours. Those activities disturb other students who want to learn.
- Please do not be late to class so that you will not disturb other students or interrupt class discussions. Coming to class late or leaving early will affect your participation grade.
- The exam will start on time. Please do not be late; if you are late, you missed the exam. Make-up exams will be considered only for valid, documented emergencies, but not for tardiness.
- At times it may be necessary to make adjustments to reading assignments and course schedule as the semester unfolds. If necessary, I will make such announcements in class and/or Blackboard. If you miss a class when these announcements are made, you are responsible for obtaining such information.
- I may distribute handouts and make announcements on Blackboard as well as in class. Please check Blackboard on a regular basis.
- Late assignments may be accepted without penalty under valid documented emergencies. I will accept late assignments for other reasons, but they will be graded downward by one letter grade (or its equivalent) per day past the due. If you are having a difficulty in completing assignments, please come see me before, not after, they are due.
- All assignments and papers need to be professionally written and presented. This means that they must be typed with standard citation and writing styles (see APSA's style manual) and with standard margins of one inch in all four sides, and numbered all pages consecutively (except for the title page). Needless to say, you (not I) need to staple together your papers and assignments if they are more than one page. Where there is a page limit, you must follow it. Moreover, all assignments and papers must be proofread before submission. If you need assistance in writing, you may use the writing center. NEVER turn in your first draft: There is no excuse for turning in an unedited paper. Please remember that I am your professor; I am not your stapler, printer, or spell checker....

Course Materials

Course materials are intended for your personal use only. An unauthorized use, dissemination, distribution, publication, or replication of course materials is strictly prohibited. Course materials refer to those made available to you through this course. They include, but are not limited to, materials made available on Blackboard (such as power point slides, lecture outlines, and supplementary readings), study guides, and exams.

Academic Dishonesty Policy

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another person's as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be taken seriously and will be referred to the Office of Student Life for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions. Refer to <http://sa.utep.edu/osccr/academic-integrity/> for further information.

Disabilities

Reasonable accommodations will be made for students with limitations due to disabilities, including learning disabilities. Please see me personally within the first two weeks to discuss any special needs you might have. If you have a documented disability and require specific accommodations, you will need to contact the Center for Accommodations and Support Services (CASS) (formerly known as the Disabled Student Services Office) in 302 Union East within the first two weeks of classes. CASS can also be reached in the following ways:

Web: <http://sa.utep.edu/dsso/>
E-Mail: dss@utep.edu
Phone: (915) 747-5148 voice or TTY
Fax: (915) 747-8712

Course Schedule

The following is a *tentative* schedule that is subject to change at my discretion. You will be notified of any changes made to this schedule. Unless otherwise instructed, all assignments are due at the beginning of the class. They must be typed using *Times New Roman* 12 pt. font size, double-spaced, and paged with the standard one inch margins in all four sides, and all references should be appropriately cited.

*Please bring Pollock's *Stata Companion* and a USB drive to every class meeting.

| | Topics and Readings | Items Due |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| August 24 | Course Overview | |
| August 31 | Studying Politics Scientifically Reading: <ul style="list-style-type: none"> • Pollock, Introduction • Brians, Willnat, Manheim & Rich (BWMR), Ch. 1 • Robert W. Jackman, "On the Relation of Economic Development to Democratic Performance," <i>American Journal of Political Science</i>, 17, 3 (Aug. 1973): 611-621. | |
| September 7 | Labor Day —University is closed | |
| September 14 | Theory Building and Hypotheses; Literature Review Reading: <ul style="list-style-type: none"> • BWMR, Chs. 2 & 3 • Pollock Ch. 3 • Sarah Binder, "The Dynamics of Legislative Gridlock, 1947-96," <i>American Political Science Review</i>, 93, 3 (Sep. 1999): 519-533. | Critical review #1 (on Jackman article) due |
| September 21 | Research Design Reading: <ul style="list-style-type: none"> • BWMR, Chs. 4, 6, 12 • Pollock Ch. 4 | Critical review #2 (on Binder article) due |
| September 28 | Variables and Data: Levels of Measurement, Operationalization of Concepts, and Validity and Reliability Reading: <ul style="list-style-type: none"> • BWMR, Chs. 5 & 14 • Pollock Ch. 1 | |
| October 5 | Descriptive Statistics: Measures of Central Tendency and Dispersion Reading: <ul style="list-style-type: none"> • BWMR, Chs. 15 & 16 • Pollock Ch. 2 | Declare the dataset of your choice in class for feedback |

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| | <ul style="list-style-type: none"> • Pollock <i>Companion</i>, Ch. 2 | |
| October 12 | Making Comparisons <ul style="list-style-type: none"> • Pollock Ch. 5 • Pollock <i>Companion</i>, Chs. 4, 5 | |
| October 19 | Sampling, Statistical Inference, and Tests of Significance Reading: <ul style="list-style-type: none"> • BWMR, Ch. 7 • Pollock Ch. 6 • Gujarati, Introduction (recommended) | HW Assignment #1 due |
| October 26 | Presentation of Research Proposals Probability Distributions, Measures of Association, t Tests, and Chi-Square Tests Reading: <ul style="list-style-type: none"> • BWMR, Ch. 17 • Pollock Ch. 7 • Pollock <i>Companion</i>, Chs. 6, 7 | Research proposal due |
| November 2 | Exam | |
| November 9 | Correlation and Regression Analysis Reading: <ul style="list-style-type: none"> • Pollock Ch. 8 • Pollock <i>Companion</i>, Ch. 8 • Gujarati, Chs. 1-6 (recommended) | |
| November 16 | Multivariate Regression Reading: <ul style="list-style-type: none"> • BWMR, Ch. 18 • Pollock <i>Companion</i>, Ch. 9 • Gujarati, Chs. 7-9 (recommended) | HW Assignment #2 due |
| November 23 | *We will use this week's class to do one or more of the following depending on the progress of the class and students' needs. <ol style="list-style-type: none"> 1. Multivariate Regression cont'd 2. Research paper workshop 3. Introduction to Logistic Regression Reading <ul style="list-style-type: none"> • Pollock Ch. 9 • Pollock <i>Companion</i>, Ch. 10 | |
| November 30 | Presentation of Research Papers | Research Paper due |