

## **POLS 5300 Seminar in Quantitative Research Methods I Fall 2018**

Instructor: Dr. Joseph Yingnan Zhou  
Office: Benedict Hall 305  
Office Hours: Tuesdays, 1:30 to 3:30 pm, or by appointment  
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Class Time/Location: Thursdays 6:00-8:50 pm/LART 403

### **Course Description**

In this graduate seminar, you will learn how to do political science research. Many of you entered this graduate program with research interests, and you hope to develop into research papers, grant proposals, or publications. But for these to happen, you need a solid foundation of research methods. You need to be a political scientist who asks important questions, knows the literature well, builds good theories and tests them with creative research designs.

This course has two objectives. First, it aims to familiarize you with the steps you need to take in turning an idea into a well-crafted research paper. Second, it aims to equip you with important techniques along these steps, with an emphasis on statistical techniques. The assignments, exams, and research paper will facilitate the achievement of these objectives.

### **Course Goals**

Students who successfully complete this course will be able to:

- understand the fundamentals of political science research;
- construct and manage datasets using R;
- conduct basic statistical analyses;
- write a graduate-level research paper.

### **Required Text**

Kellstedt, Paul M and Guy D. Whitten. 2013. *The Fundamentals of Political Science Research* (2<sup>nd</sup> ed.). New York, NY: Cambridge University Press.

Field, Andy, Jeremy Miles, and Zoë Field. 2012. *Discovering Statistics Using R*. Thousand Oaks, CA: SAGE.

### **Recommended Text**

Field, Andy, Jeremy Miles, and Zoë Field. 2012. *Discovering Statistics Using R*. Thousand Oaks, CA: SAGE.

King, Gary, Robert Keohane, and Sidney Verba. 1994. *Designing Social Inquiry*. Princeton, NJ: Princeton University Press

## Computer Software

In this course, we will use R in combination with RStudio. R is a programming language highly popular among statisticians and social scientists. Its biggest advantages are being free and flexibility. Traditionally, the biggest complaint about R is that it is user-unfriendly, but thanks to RStudio, this is no longer true.

You need to install **both** R and RStudio Desktop (preferably the latest versions) on your computer. R can be downloaded at <https://cran.r-project.org/src/base/R-3/>. RStudio Desktop can be downloaded at <https://www.rstudio.com/products/rstudio/download/#download>.

## Course Requirements

### *Please read carefully!*

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

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>.

Software such as EndNote (available at <http://libguides.utep.edu/endnoteweb>) makes it easier to add in-text citations and bibliography.

All assignments must be submitted on Blackboard by the deadlines. Late assignments will be accepted with a grade reduction of 10 percent per day of delay, counting immediately after the assignment is due.

1. **Readings:** You must complete the readings *before each class* (reading schedule can be found at the end of this syllabus) **because I will teach the class assuming that you have done the readings.** I may assign supplemental readings throughout the semester as appropriate. Supplemental readings may not appear on the schedule but I will announce them in advance.

3

2. **Class Participation:** This is a graduate seminar so your active in-class participation is expected. You will be evaluated on both the quality and quantity of your participation.

3. **Course Exams:** There will be a midterm exam on **October 25** and a final exam on **December 13**.

4. **Critical Review:** You will write one critical reviews on an articles that can be found in the reading schedule. The review should be no longer than three pages and should identify at least the following: (1) the primary research question and its significance; (2) theory and/or hypotheses; (3) dependent and independent variables; (4) research methods; (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.

5. **Homework Assignments:** There are four homework assignments for you to practice statistical techniques. Specific instructions will be available on Blackboard.

6. **Research Paper:** You will complete a research paper with a dataset of your own choosing. Your dataset must contain cross-sectional data with at least 30 variables and must have at least 50 observations. Finding data on your own is an important aspect of learning, yet I will be happy to assist you in this process. Please remember to obtain any supplementary documents for your dataset (e.g. questionnaire, codebook). You will declare your dataset and some thoughts on how to use it on **October 11.**

This research paper is evaluated in two phases. The first involves writing a **research proposal**, which is due on **November 8.** 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 and receive feedback.

You will then perform a statistical analysis and present your research paper on **December 6.** **Your paper is due by midnight November 6.** 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 in your paper should look like the ones in academic journals.

Along with the paper, please also submit your R script used in the research paper. In your script, please indicate the codes for specific tables and figures in your paper. **Do not** include unused codes such as those showing your struggle.

## Grades

The course grade is determined using the following weights:

Course Requirement	Weight
Midterm Exam	15%
Final Exam (cumulative)	15%
Critical Reviews	10% (5% each)
Homework Assignments	20% (5% 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

- Laptop computers and tablets are allowed only for class purposes, such as note taking or in-class assignments. However, cellphones are not allowed.
- Please come to class on time and do not leave early. Such acts are disruptive and disrespectful for classmates and the instructor.

### Course Materials

Course materials (e.g. power point slides, lecture outlines, and supplementary readings) are for your personal use only. **Unauthorized use, dissemination, distribution, publication, or replication of course materials is strictly prohibited.**

### 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 <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html> 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: <https://www.utep.edu/student-affairs/cass/>

E-Mail: [cass@utep.edu](mailto:cass@utep.edu)

Phone: (915) 747-5148 voice or TTY

Fax: (915) 747-8712

## Course Schedule

Date	Topics and Readings	Note
<b>August 30</b>	<b>Course Overview</b>	
<b>September 6</b>	<b>The Scientific Study of Politics</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 1</li> </ul>	
<b>September 13</b>	<b>The Art of Theory Building</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 2</li> <li>• Lipset, Seymour Martin. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." <i>American Political Science Review</i> 53 (1):69-105.</li> </ul>	
<b>September 20</b>	<b>Causal Relationships</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 3</li> <li>• Kellstedt, Paul M. 2000. "Media Framing and the Dynamics of Racial Policy Preferences." <i>American Journal of Political Science</i> 44 (2):245-260.</li> </ul>	Critical review on Lipset (1959) <b>due at 5 pm Sep. 20</b>
<b>September 27</b>	<b>Research Design</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 4</li> </ul>	Critical review on Kellstedt (2000) <b>due at 5 pm Sep. 27</b>
<b>October 4</b>	<b>Introduction to R</b> Readings: <ul style="list-style-type: none"> <li>• Field et al. Ch. 3</li> <li>• Install R (<a href="#">link</a>) and RStudio (<a href="#">link</a>) on your computer</li> <li>• Follow the website below to explore R: <a href="https://stats.idre.ucla.edu/stat/data/intro_r/intro_r_flat.html">https://stats.idre.ucla.edu/stat/data/intro_r/intro_r_flat.html</a></li> </ul>	Homework #1 assigned, <b>due midnight Oct. 12</b>
<b>October 11</b>	<b>Declare Your Dataset in Class.</b>  <b>Evaluating Measurement and Variations</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 5</li> <li>• Field et al. Ch. 4 (4.1-4.8)</li> </ul>	
<b>October 18</b>	<b>Probability and Statistical Inference</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 6</li> <li>• Field et al. Ch. 4 (4.9)</li> </ul>	Homework #2 assigned, <b>due midnight Nov. 2</b>

<b>October 25</b>	<b>Midterm Exam during Class</b>	
<b>November 1</b>	<b>Bivariate Hypothesis Testing</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 7</li> <li>• Field et al. Ch. 6 &amp; 9</li> </ul>	
<b>November 8</b>	<b>Presentation of Research Proposal</b>  <b>Bivariate Regression Models</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 8</li> <li>• Field et al. Ch. 7 (7.1-7.5)</li> </ul>	Research proposal <b>due at 5 pm Nov. 8</b>  Homework #3 assigned, <b>due midnight Nov. 16</b>
<b>November 15</b>	<b>Multiple Regression I</b> Readings: <ul style="list-style-type: none"> <li>• Kellstedt and Whitten Ch. 9</li> <li>• Field et al. Ch. 7 (7.6, 7.8, 7.11)</li> </ul>	Homework #4 assigned, <b>due midnight Nov. 30</b>
<b>November 22</b>	<b>No Class, Happy Thanksgiving!</b>	
<b>November 29</b>	<b>Multiple Regression II</b> Readings: <ul style="list-style-type: none"> <li>• Field et al. Ch. 7 (7.9)</li> </ul>	
<b>December 6</b>	<b>Paper Presentation and Review</b>	Research paper <b>due at 5 pm Dec 6</b>
<b>December 13</b>	<b>Final Exam during Class</b>	

### Important Dates

Sep 20	Thursday	5:00 PM	Lipset (1959) review due
Sep 27	Thursday	5:00 PM	Kellstedt (2000) review due
Oct 11	Thursday	in class	Declare your dataset
Oct 12	Friday	midnight	Homework #1 due
Oct 25	Thursday	in class	Midterm exam
Nov 2	Friday	midnight	Homework #2 due
Nov 8	Thursday	5:00 PM	Research proposal due
Nov 16	Friday	midnight	Homework #3 due
Nov 30	Friday	midnight	Homework #4 due
Dec 6	Thursday	5:00 PM	Research paper due
Dec 13	Thursday	in class	Final exam