

PLSC 3302.794: Statistics for Political Science

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Semester: Spring B 2020
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Course Description

Political Science 3302 (PLSC 3302): Statistics for Political Science is a required course for political science majors. It is the second of a two-course methods sequence for those receiving a Bachelor of Arts in Political Science. It has the following prerequisites: successful completion of PLSC 2305, 2306 and 3301 or instructor permission. Additionally, some of the concepts covered in this course should have been covered in a scientific research methods course. The University of Texas of the Permian Basin's undergraduate catalog describes the course as,

“Focus on conducting political analyses. The course includes basic components of correlation and linear regression, the basic components of multiple regression, and instruction in writing empirical research.”

Also, students should have an openness to basic mathematical concepts. Additionally, students should expect to spend roughly 10 hours a week on the course. This is just an estimate as some students may complete the work in less or more time; it depends on the student.

Required Course Materials

1. Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 5th Edition. Cengage. 978-1-305-27010-7

Course Requirements

Students will be evaluated on the following assessments:

- 6 Free Response Quizzes (40% of the final course grade).
 - The course has 6 quizzes. Each occurs at the end of each week. However, I will only count your four highest scores (meaning you can drop 2).
- 2 Objective Examinations (40% of the final course grade)
 - Midterm Exam is an objective exam comprising 20% of the final course grade which must be completed by Wednesday, April 18th, 11:59 P.M. It covers Section 1: The Fundamentals of Ordinary Least Squares
 - Final Exam is a free-response exam comprising 20% of the final course grade which must be completed by Friday, May 1st that covers Section 2: Maximum Likelihood Estimation.
- 2 Discussion Assignments (20%) of the course grade
 - How Not to Lie with Statistics Discussion Assignment which must be completed by Sunday, March 29th (10% of final course grade).
 - Maximum Likelihood Estimation in Political Science which must be completed by Friday, May 1st (10% of final course grade), 11:59 P.M.
- Letter Grade Assignment
 - A: 89.5-100
 - B 79.5-89.4 – C 69.5-79.4
 - D 59.5-69.4
 - F 59.4 or lower
- Student Authentication
 - Additionally, students must satisfy a secondary authentication method as required by the University of Texas of the Permian Basin policy:

- * The University of Texas of the Permian Basin (UTPB) maintains policies and procedures to ensure that each student who registers for a distance or correspondence course is the same student who participates in, completes and receives credit for the course. UTPB's Distance Education Policy requires faculty members to authenticate student identity by employing at least two methods of verification. To access online courses students must log in to the Canvas learning management system to establish their identity by using their unique personal identifying username login and a secure password. UTPB's Distance Education Policy allows faculty multiple options for satisfying the second method of validating student identity. This course satisfies the second method of student verification by requiring the following (non-graded but mandatory):
 - A clear image of yourself
 - * In color
 - * Well lit, and no shadows on your face or your ID that can obscure your image
 - * Must be taken on the day you submit the photo to reflect your current appearance
 - * Taken in full-face view directly facing the camera
 - * With a neutral facial expression and both eyes open
- Then a picture of your ID (can be a UTPB ID or government-issued ID) with only your name and picture showing (Picture ID card in which the ID number has been covered (tape over any numbers)).
- Make sure to attach both image files in either JPEG or PNG format to the assignment BEFORE you submit it.

Course Objectives

At the completion of this course, students will be able to:

1. Explain and indicate the basic data structures prevalent in political science
2. Recognize both simple and multiple linear regression models and their components.

3. Interpret the findings of Ordinary Least Squares (OLS) regression models and their applicability in political science.
4. Estimate parameters for OLS regressions and explain the significance of these estimated parameters.
5. Understand the importance of classical hypothesis testing in political science research
6. Calculate, explain and understand the tests of statistical significance and confidence intervals in political science
7. Understand and explain the limitations of OLS regressions in political science.
8. Explain why political scientists often Maximum Likelihood Estimation rather than OLS.

University Policies

1. Students with Disabilities
 - (a) Americans with Disabilities Act: Students with disabilities that are admitted to The University of Texas of the Permian Basin may request reasonable accommodations and classroom modifications as addressed under Section 504/ADA regulations. The definition of a disability for purposes of ADA is that she or he (1) has a physical or mental impairment that substantively limits a major life activity, (2) has a record of such an impairment or, (3) is regarded as having such an impairment.
 - (b) Students who have provided all documentation and are eligible for services will be advised of their rights regarding academic accommodations and responsibilities. The University is not obligated to pay for diagnosis or evaluations nor is it obligated to pay for personal services or auxiliary aids. Students needing assistance because of a disability must contact the Testing Services & Academic Accommodations Department.
2. Office of the Registrar (Course Incomplete/Withdrawal/Grade Appeal)
 - (a) All students are required to complete the course within the semester they are signed up. Incomplete grades for the course are rarely given, will only

be granted if the student provides a valid, documented excuse for not being able to complete the course on time, and has contacted the instructor prior to the scheduled last class to request an extension. The student signs a contract that includes incomplete course activities and the new due dates.

- (b) Find information and dates regarding drops and withdrawals at
 - i. <http://www.utpb.edu/services/academic-affairs/office-of-the-registrar/adds-drops>
- (c) For grade appeal process go to
 - i. <http://www.utpb.edu/campus-life/dean-of-students/grievances>

Course and Instructor Policies

1. Professionalism

- (a) This is an upper-division course in political science, as such professionalism is required. This includes completing all work by the due date. If you do not, a score of 0 will be given for the requirement.

2. Etiquette Expectations

- (a) This course will require discourse between students and the instructor. As the course deals with multiple competing views of how empirical research is conducted, spirited disagreements may persist. These are naturally welcome and expected, however, make sure to be civil and criticize the weaknesses in argument, not the other person.

3. Technical Skills Required

- (a) I do not require any technical skills in the course. However, you must have a computer, a connection to the internet, Adobe Reader.

4. Complete Honesty in Assessment

- (a) Because this is an upper-division course, I will give you an honest assessment of your performance. When I say honest, I mean I am not

going to sugarcoat it for you. As a result, I don't say things like, "well, at least you gave it your best shot." It is nothing against you as a person, it comes from my (and our department's) desire to train majors and minors to the utmost quality so that you are prepared for whatever profession you may choose.

5. Writing Aids in the Course

- (a) Write well. This is not a suggestion, but a rule. If you are uncomfortable with your writing abilities, you have several options.
 - i. First, you may go see the University Writing Center. However, they are normally holding an English background, which does not lend itself to technical and specific writing. But, if you are having fundamental writing problems, this is not a bad place to start.
 - ii. Second, you may allow a student to read your paper and ask for comments. Now, this doesn't mean they can crib your arguments and use them as their own. This is by far the most successful way to get better. Academics and other non-fiction writers who write for a living often ask their friends and colleagues to read what they write. For example, before I submit a paper, I normally ask former colleagues from graduate school to read my papers to see if they make sense. They see things that you will not pick up and see large holes in your logic that you may not see.
 - iii. Third, you may submit work to me a week before the due date and I will read it for you. I will give you comments and you may resubmit. However, you must submit 1 week before the due date.

6. Communications Plan

- (a) Office Hours
 - i. Per university requirements, I hold regular office hours and normally, I keep my door open. This is your chance to ask more specific questions regarding material or to visit. Feel free to stop by. Even if you don't have course-related concerns, this is a good time to come by and chat about topics that may interest you. If for some reason, you are not available during my office hours, feel free

to send me an email. I can work around your schedule if we need to meet.

(b) Email

- i. Email is the best method for contacting me. My email is mcmichael_t@utpb.edu. I respond to all emails within 48 hours excepting weekends and university holidays.

(c) Phone

- i. You may call my office. My office phone number is (432) 552 2340. I will get back to you as soon as possible.

7. Academic Dishonesty

- (a) Academic Dishonesty is not permitted in this course. According to the Handbook of Student Conduct:

- i. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student such as, but not limited to, submission of essentially the same written assignment for two courses (without the prior permission of the instructor) or the attempt to commit such acts.”
- ii. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. For complete information on UTPB student conduct and discipline procedures consult the university’s handbook at <http://ss.utpb.edu/dean-ofstudents/scholastic-dishonesty/>
- iii. Any student suspected of academic dishonesty will receive notification through secure communication either verbally or via email. The student may exercise the right to explain themselves or explain how the instructor made an error in judgment regarding the suspicion. If I agree, I will acknowledge it and no sanctions will be assessed. However, if not, I will file a disposition of academic

dishonesty and depending on the severity I will assess one of the following sanctions:

- A. Official Written Warning
- B. No credit is given on the assignment
- C. Penalty on the final letter grade
- D. Automatic F for the course

8. Extra Credit

- (a) There is no extra credit in this course for any reason.
 - i. This is very important. If I grant extra credit to a student, I must extend that offer to all students. As a result, this requires substantially more work and effort on my part and cheapens the work done by other students who completed the assigned work at a high level.

9. Late Work

- (a) I do not accept late work.
 - i. I give an 8 hour grace period from the due date (normally 11:59 P.M. on the day a unit is due) to allow for slowness in internet connections or submission issues. If you are having trouble submitting an assignment, send me an email with the material so that I know the materials were completed on time.
 - ii. Additionally, I may allow an extension on an assignment if you explain why you cannot complete the unit or assignment at least 24 prior to the due date.

10. Feedback

- (a) I provide extensive feedback when I return written work. Many students that have taken my upper-level classes before know this, but it bears repeating. I will usually write a couple of paragraphs about your work. To do this, I have to read very carefully, so be aware that I read pretty carefully. Usually, the turnaround is about 1 week. However, as this is a 7 week and 5 days course, I am going to try to grade them as quickly as

humanly possible. I am shooting for the Wednesday after a Sunday submission.

(b) During the discussions, I participate after the due date. This is a technical course so any comment I make biases the remainder of that discussion. As I want you to focus on expressing yourself rather than worrying about the technicalities, this is extremely wasteful in my opinion. I usually respond about 3-4 days after the due date of discussions. Here's what it usually looks like from (Spring A 2018 in PLSC 3301):

- i. I must confess that it had been a while since I read the infamous La-cour and Green (2014). The authors make some remarkable claims regarding the influence of treatment effects on voter views/perceptions. The authors argue that if you send homosexual canvassers to advocate for same-sex marriage, respondents respond more positively than heterosexual canvassers. Moreover, there is a long-run treatment effect.

As a political scientist, I never believed these claims. I was already on the faculty here, but I had numerous friends that work in political behavior and one that specializes in these types of experimental research designs. They were ecstatic because this finding stands in the face of years of work on campaigns and political behavior literature. Most political behavior scholars acknowledge that treatment effects like this seldom have this impact on voters. I mean, most political scientists weren't even sure aggregate television ad buys and candidate appearances influenced Presidential vote choice until 1999 (Shaw, 1999).

And with those, you have a high salience election with strong party labels and a bimodal distribution of self-identified party identification. So, my first inclination was to say, I doubt this experiment and find it has much external validity (the concept that our results in our sample closely resemble the population).

Luckily for me, Broockman is not interested in my line of work. His typescript is one of the more complete destructions of a paper I can remember. He not only figured out that Lacour and Green (2014) faked their data, but also what data they used to produce the results. Broockman, Kalla, and Aronow (2015) show that the data collected

was not the same as reported in the article. More specifically, they used a semi-available dataset. That dataset doesn't contain the sexual orientation of the canvassers, so it is impossible that they could reach this conclusion.

This is an issue in political science. Others should be able to replicate the findings of our research. One reason is that it would likely catch any discrepancies or mistakes and the other is that it helps political science make progress in understanding political phenomena. I get the question pretty regularly: what happened to Mike Lacour and Donald Green? At the time it went down, Mike Lacour was a graduate student at UCLA and Donald Green was a Professor of Political Science at Columbia University. Prior to Broockman's piece, Princeton University had offered Lacour a position in the Department of Politics. However, that offer was rescinded and he doesn't work in political science. However, he does hold an M.S. in Statistics so he is probably working in the data science industry. Donald Green really faced little to no consequences. Before this, he was a well-respected American politics and experimental design scholar. He was given an endowed chair as The John William Burgess Professor of Political Science at Columbia University.

11. Evaluations

- (a) At the end of the semester, you will be given an opportunity to evaluate both me and the course. Now the evaluation is not mandatory or required and I will not know what you write, but it will help make the course better in the future.

12. Attendance and Class Participation

- (a) Regular and active participation is an essential, unmistakably important aspect of this online course. All students are expected to do the work assigned, notify the instructor when emergencies arise.

13. Tracking

- (a) The learning management system contains tracking features. Statistics are collected that quantify how often and when students are active in the

course and provide information if the student has accessed different pages of the course.

14. Absenteeism

- (a) All the course activities have set dates to be completed and submitted. After the due dates, the activities will not be available for the students. Not logging into an online course is considered absenteeism. Contact the instructor immediately in case of an emergency medical situation.

University Services

The university provides a number of services to students. Make sure you take advantage of these services:

1. ADA Accommodation/Support: (432) 552 2630
2. Advising UTPB E-Advisor
3. Bookstore: (432) 552-0220
4. Email, Outlook 365, my.utpb.edu Information Resources Service
5. Financial Aid and Scholarship (432) 552-2620
6. Library (432) 552-2370
7. Registrar: (432) 552-2635
8. Student Services
9. Technical Support Canvas 1-866-437-0867
10. Tutoring & Learning Resources If you are taking courses through UTPB the following links provide services: Smarthinking Online Tutoring (provides

tutoring services), SmarterMeasure (measures learner readiness for online course).¹

Technical Requirements

1. Technical Requirements as stipulated by REACH:
 - (a) <http://www.utpb.edu/online/reach/technical-requirements>
2. Students can use the cloud version of Word, PowerPoint and other Microsoft products through the use of their UTPB Outlook 365 and UTPB email address. For more information refer to Student Services below or visit:
 - (a) <http://www.utpb.edu/services/ird/information-on-computer-accounts-e-mail/office-365>
3. To obtain software licensing and media for selected Microsoft titles at very lowcost through a software agreement visit:
 - (a) <http://www.utpb.edu/services/ird/information-for-students/software-distribution/microsoft-select>

Preparation for Emergencies

1. Computer Crash:
 - (a) Not having a working computer or a crashed computer during the semester will NOT be considered as an acceptable reason for not completing course activities at a scheduled time. NOTE: Identify a second computer before the semester begins, that you can use when/if your personal computer crashes.
2. Complete Loss of Contact:

¹ This source will not help you in any way shape or form with this course. It is only in the syllabus at REACH's behest.

- (a) If you lose contact with course connectivity completely (i.e. you can not contact me via Canvas or email), you need to call the instructor and leave a message regarding connectivity loss and contact information.
3. Lost/Corrupt/Missing Files:
 - (a) You must keep/save a copy of every project/assignment on an external drive, UTPB Outlook 365 OneDrive, or personal computer. In the event of any kind of failure (e.g. virus infection, student's own computer crashes, loss of files in cyberspace, etc) or any contradictions/problems, you may be required to resubmit the files.

End-of-Course Evaluation & Instructor Evaluation

1. Every student is encouraged to complete an end-of-course evaluation/survey provided by UTPB. During the last few weeks of class, you will receive an announcement through email notifying you that the Course/Instructor Survey is available. You may follow the link in the email to complete the survey using the same credentials to access your courses here. When entering the emailed Survey link you will see a list of surveys for you to complete.
2. The survey is anonymous and your responses are confidential. Your feedback is critical to us and to your instructor as we strive to improve our offerings, and our support of you, the students.

Important Academic Dates

1. UTPB Academic Calendar: <http://www.utpb.edu/services/academic-affairs/office-of-the-registrar/academic-calendar>

Disclaimer & Rights

1. Information contained in this syllabus was to the best knowledge of the instructor considered correct and complete when distributed for use in the beginning of the semester. However, the instructor reserves the right, acting within the policies and procedures of UTPB to make changes in the course content or instructional techniques without notice or obligation. The students will be informed about the changes if any.

Tentative Course Schedule

Week 1: March 9-15: Introduction to Empirical Modeling

1. Lectures
 - (a) Lecture 1: Introduction to Empirical Modeling
2. Readings
 - (a) Read Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 6th Edition. Cengage. Chapter 1.
3. Coursework
 - (a) **Quiz 1: Introduction to Empirical Modeling due Sunday, March 15th, 11:59 P.M.**

Week 2: March 16-22 The Simple Linear Regression Model

1. Lectures
 - (a) Lecture 02: The Simple Linear Regression Model
2. Readings
 - (a) Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 6th Edition. Cengage. Chapter 2.
3. Coursework
 - (a) **Quiz 2: The Simple Linear Regression Model due March 22st, 11:59 P.M.**

Week 3: March 23-29: The Multiple Linear Regression Model

1. Lectures
 - (a) Lecture 03: Multiple Regression Using Ordinary Least Squares
2. Readings

- (a) Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 6th Edition. Cengage. Chapter 3.

3. Coursework

- (a) **Quiz 3: Multiple Regression Using Ordinary Least Squares due Sunday, March 29th, 11:59 P.M.**
- (b) **Complete the How Not To Lie With Statistics Discussion by Sunday, March 29th, 11:59 P.M.**

Week 4: March 30-April 5: Statistical Inference Using Ordinary Least Squares

1. Lectures

- (a) Lecture 04: Parametric Statistical Inference and Other Topics

2. Readings

- (a) Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 6th Edition. Cengage. Pages 121-140.

3. Coursework

- (a) **Quiz4: Statistical Inference Using Ordinary Least Squares due Sunday, April 5th, 11:59 P.M.**
- (b) **Midterm Exam is due Wednesday, April 8th, 11:59 P.M.**

Week 5: April 6-April 12: Maximum Likelihood Estimation

1. Lectures

- (a) Lecture 05: Maximum Likelihood Estimation and Binary Dependent Variable Models (only to Section 5.2)

2. Readings

- (a) Read Wooldridge, Jeffrey. 2016. Introductory Econometrics: A Modern Approach 6th Edition. Cengage. Pages 249-257.

3. Coursework

- (a) **Quiz 5: Maximum Likelihood Estimation due April 12th, 11:59 P.M.**

Week 6: April 13-19: Maximum Likelihood Estimation

1. Lectures

- (a) Lecture 05: Maximum Likelihood Estimation and Binary Dependent Variable Models (the rest)

2. Readings

- (a) Read Wooldridge, Jeffrey. 2016. *Introductory Econometrics: A Modern Approach* 6th Edition. Cengage. Pages 583-588.

3. Coursework

- (a) **Quiz 6: Binary Dependent Variable Models due Sunday, April 19th, 11:59 P.M.**

Week 7 and 8: April 20- May 1: Complete the Remainder of the Course

1. Coursework

- (a) **Maximum Likelihood Estimation in Political Science Discussion Assignment due Friday, May 1th 11:59 P.M.**
- (b) **Final Exam is due Friday, May 1th 11:59 P.M.**