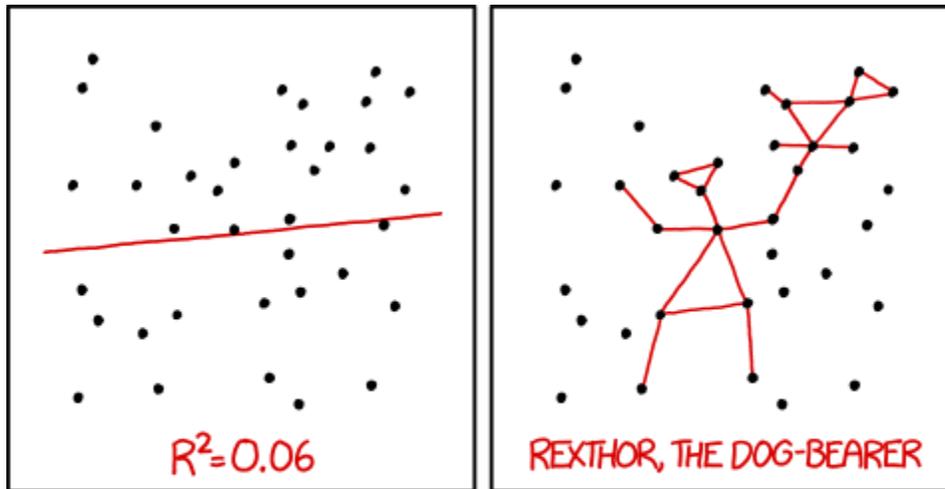

POLI 3000:0001: Analyzing Political Data

Tues & Thurs 9:30-10:45 am

474 VAN

Spring 2019



I DON'T TRUST LINEAR REGRESSIONS WHEN IT'S HARDER TO GUESS THE DIRECTION OF THE CORRELATION FROM THE SCATTER PLOT THAN TO FIND NEW CONSTELLATIONS ON IT.

Course Information

Instructor: Cody Schmidt

Office: 318 Schaeffer Hall

Office Hours: Tuesday 11 am-2pm, or by appointment

Email: cody-j-schmidt@uiowa.edu

Class Website: icon.uiowa.edu

Course Description

This course is designed to achieve three broad goals: (1) grow your understanding of statistical techniques and the role they play in helping us understand the world, (2) help you apply this enhanced understanding to answer questions that are of interest to you, and (3) to make you comfortable with the use of a statistical software (Stata), which can assist you in the research process. Throughout the course we will be discussing how social scientists use quantitative methodologies to study social phenomena. We will discuss theory building, deriving testable hypotheses from theory, designing statistical tests for evaluating hypotheses, and finally interpreting the statistical and substantive results of studies. The focus of this course will be on understanding and applying statistical techniques and as such the emphasis will not be on memorizing formulas.

Course Materials

Both required books are available at the Iowa Hawk Shop or from on-line retailers.

- Joseph F. Healey. *Essentials of Statistics* 2016. Wadsworth Publishing Company. 4th Edition. (Referred to EoS).
- Pollock. *Stata Companion to Political Analysis*. 2015. Congressional Quarterly. 3rd edition.

Any other material will be available electronically on the course ICON page or through the library's online resources.

Course Requirements and Grading

There are no prerequisites for this class, however, I will assume basic mathematical skills (mainly arithmetic). Your grade for the course will be determined by performance in four areas: class participation, homework assignments, a research paper, and exams.

Course Grade Breakdown:

- Participation: 15%
- Homework: 20%
- Research Project: 35%
- Midterm Exam: 15%
- Final Exam: 15%

Participation (15% of final grade)

Class time will be divided between lecture and in-class activities. This class will include active learning opportunities frequently. These have been proven to help students learn, but also make the course more enjoyable. Active involvement in activities is an easy way to boost your participation grade (and thus your overall grade). Participation points are assigned based upon the quantity and quality of a student's contributions to the class. Quality is weighted significantly more heavily than quantity. While attendance will not be graded directly, absences will hurt your grade as you cannot participate if you are not in class. I want to emphasize that asking questions counts as participation!!!

Homework Assignments (20% of final grade):

Homework assignments will be assigned throughout the semester. Currently there are 5 homework assignments scheduled, but this is subject to change. The assignments will be posted to ICON when we cover the first topic on the homework. Note: the entire homework will be posted so you can work ahead. I will send out reminders through ICON regarding which problems have been covered in the course. Late homework will result in a 10-point penalty (out of 100) for each day it's late. If you know that you will be unable to bring an assignment in person, you can deliver it to my office (slide it under the door if necessary) or scan your assignment and email it to cody-j-schmidt@uiowa.edu before the 5pm deadline. Late homework will no longer be accepted after the answer key is posted to ICON.

Working together on homework is not only allowed, but strongly encouraged. Working together is a great way to talk through tricky concepts and improve your understanding. The final product, however, is expected to be written and understood by the student turning in the work. These homework assignments are practice for the exam.

Your lowest homework grade will be dropped before calculating your final grade.

Exams (15% + 15% = 30% of final grade):

There will be one midterm and a final exam. Each is worth 15% of your final grade. Both exams will be closed-note, in class exams. This work must be done on your own without consulting other students. Each exam will be a combination of short answer, definitions, and computational questions—along with questions regarding Stata output. The format of each exam will be discussed more completely in class when the exam date is closer. There will be a review day prior to the exam.

You will need a calculator for the exams. You can purchase a simple one for about \$10. You may NOT use a smartphone/tablet as your calculator.

Policy on Unexcused Absences and Exams: You are required to be present for all scheduled exams. The only allowable exception to this policy is a documented emergency. If possible, you should contact the instructor before the exam to discuss the emergency, provide documentation, and schedule the make-up.

Research Paper (35% of final grade):

Over the course of the semester you will write a data analysis paper where you will utilize the statistical techniques you have learned to answer a research question. The goal is to experience the research process and produce knowledge. The topic of the study is up to you, but you are expected to get approval before you begin. The paper will be due in stages throughout the semester. The first due date asks for a research question and the dataset you expect to use. The second is a research design where you will discuss your methodological plan to evaluate the hypotheses. Towards the end of the semester a rough draft is due. I will not grade this rough draft, but instead each student will be assigned two rough drafts from their fellow students and they will be expected to write a review. Reviews will provide useful and importantly constructive feedback for the author. I will grade the reviews, so it is important to take the reviews seriously! You will also be able to get feedback in class as we will workshop the papers near the last class of the semester. The final paper will be due during finals week and you are expected to have addressed comments made by reviewers. I will post guidelines for each stage of the research paper as the semester unfolds.

Grading Scale

The grading scale for the course is as follows.

Letter Grade	Percentage
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 or below

Important Dates

- Research Question and Data due: Feb 19th
- Midterm Exam: March 7th
- Research Design: March 28th
- Paper Draft Due: April 18th
- Final Exam and paper: TBD

Expectations

Technology: Please turn your mobile phones off or to silent mode before class. On exam days your phones must be powered down and put away. Laptops are permitted for class purposes only. If you are using your laptops for notes or readings, sign out of everything else so you can focus on mastering the material at hand. There are days in which we will be using statistical software in class. I will try to always give you warning (through email) so you can know to bring your laptops those days.

Software: We will be using statistical software in this course as we learn how to implement/interpret different statistical tests. We will use Stata to execute these analyses. I will only provide technical assistance for Stata. While you may purchase a Stata License if you wish, there are free alternatives as students at Iowa. You can access Stata on your laptops through Iowa servers at <https://virtualdesktop.uiowa.edu> for students on campus. To use this, you need to be connected to Eduroam. Here are other links that may be of use: <https://its.uiowa.edu/support/article/102185> and <https://its.uiowa.edu/support/article/102187>. Remember you can always contact ITS Helpdesk. In addition, computer labs throughout campus have Stata installed and available for student use. You can check which labs have the necessary software at <https://hawktools.uiowa.edu/study-spaces>. I strongly recommend becoming familiar with and using your H drive to make accessing your files on different computers throughout campus convenient: <https://its.uiowa.edu/support/article/104047>.

Additionally, the political science department has a Technology TA who holds office hours in the Political Science Collab. The Political Science Collaboratory is in 334 Schaeffer Hall. The Technology TA, currently Ki Eun Ryu, is available to consult with students in political science courses regarding technology that may be required for their homework or research projects. This might include tips on accessing or entering data, doing basic statistic analysis, or working with computers in other ways.

I will post Ki Eun Ryu's office hours as soon as possible on the ICON website. She is available by appointment as well. Her email is kieun-ryu@uiowa.edu.

Email: Email is a useful way to ask quick questions. However, replying to long questions about the readings or lectures is highly inefficient for both you and me. If you want to talk about something you don't understand, come by office hours. In general, while I respond to student emails, I prefer to talk in person. Come see me during office hours!! In my mind one of the biggest predictors of success in college is students attending office hours!

Contesting a Grade: If a student wishes to have a grade on his/her work reconsidered, the student must submit a written statement to the instructor within 48 hours of having the graded assignment returned. The written statement must include the student's rational for why additional points should be given. The instructor will then review the written statement and the assignment. After review the instructor has the right to subtract points as well as add points if warranted.

CLAS Teaching Policies & Resources 2018-2019

Administrative Home

The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at <http://clas.uiowa.edu/students/handbook>.

Electronic Communication

University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences (Operations Manual, III.15.2, k.11).

Accommodations for Disabilities

The University of Iowa is committed to providing an educational experience that is accessible to all students. A student may request academic accommodations for a disability (which include but are not limited to mental health, attention, learning, vision, and physical or health-related conditions). A student seeking academic accommodations should first register with Student Disability Services and then meet with the course instructor privately in the instructor's office to make particular arrangements. Reasonable accommodations are established through an interactive process between the student, instructor, and SDS. See <http://sds.studentlife.uiowa.edu/> for more information.

Academic Honesty

All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies

The final examination schedule for each class is announced by the Registrar generally by the fifth week of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's website and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.

Making a Suggestion or a Complaint

Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. (Wenfang Tang, 335-2358) Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather

In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.

Course Outline: This outline is subject to change (and likely will).

January 15 (Tues): Overview and Introduction

January 17 (Thurs): Political *Science*: The Research Process

- EoS chapter 1

January 22 (Tues): Measuring concepts of interest

- EoS chapter 2
- Jacoby 1999 (ICON)
- Schedler 2012 (ICON)

January 24 (Thurs): Stata I: Introduction to Stata/Transforming Variables

- Pollock chapter 1
- Pollock chapter 3

January 29 (Tues): Central tendency and Dispersion (**Canceled due to weather**)

- EoS chapter 3
- EoS chapter 4

January 31 (Thurs): Stata II: Describing Variables (**Canceled due to weather**)

- Pollock chapter 2

February 5 (Tues): Describing Variables Review/Understanding Probability in Statistics

- HW1 due @ 5pm
- EoS chapter 5

February 7 (Thurs): Describing Variables Review/Understanding Probability in Statistics

- EoS chapter 5

February 12 (Tues): Probability worksheet/The Normal Curve

- EoS chapter 5

February 14 (Thurs): The Normal Curve Examples and Sampling

- EoS chapter 6

February 19 (Tues): Sampling Distribution/Central Limit Theorem/Estimation

- Research Question and Data due @ 5pm
- EoS chapter 6

February 21 (Thurs): One-sample hypothesis Testing

- Pollock chapter 7

- Pollock chapter 5

February 26 (Tues): Two-Sample Hypothesis Testing

- Pollock chapter 8

February 28 (Thurs): Stata Lab III

- HW 2 due @ 5pm

March 5 (Tues): Review Day

March 7 (Thurs): MIDTERM

March 12 (Tues): Chi Square

- EoS chapter 10

March 14 (Thurs): Strength of association I

- EoS chapter 11

Mar 19th and Mar 21st → SPRING BREAK: NO CLASS

Mar 26 (Tues): Strength of association II

- HW 3 due @ 5pm
- EoS chapter 11

Mar 28 (Thurs): ISA Conference: Stata Lab IV

- Research Design Due
- Pollock chapter 6
- Pollock chapter 7

April 2 (Tues): Variance, Covariance, Correlation

- EoS chapter 12

April 4 (Thurs): Variance, Covariance, Correlation II

- EoS chapter 12

April 9 (Tues): Linear Regression

- HW 4 due @ 5pm
- EoS chapter 12

April 11 (Thurs): Stata Lab V

- Pollock chapter 8

April 16 (Tues): Omitted Variable Bias: Multiple Regression

- HW 5 due @ 5pm
- EoS chapter 12

April 18 (Thurs): Categorical Independent Variables

- Paper draft due

April 23 (Tues): Categorical Dependent Variables

April 25 (Thurs): Stata Lab VI

- Feedback due
- Pollock chapter 9
- Pollock chapter 10

April 30 (Tues): Workshop Paper

May 2 (Thurs): Wrap up/Review

May 6: FINALS WEEK

- FINAL EXAM: TBD
- Final Paper: TBD