

Quantitative Methods of Political Science I

POLS 5605

W 4:00pm – 6:30pm

OAK 438

COVID POLICY:

Per UConn policy: **Regardless of vaccination status, all persons must wear an appropriate face mask appropriately (e.g., fully covering the nose) inside offices and buildings and classrooms.** For everyone's mutual safety, this policy will be strictly enforced. Visit <https://covid.uconn.edu/> for full and up-to-date information.

Professor:

Dr. David L. Richards (david.richards@uconn.edu)

Office:

Zoom (link automatically provided upon scheduling)

Office Hours:

Mondays 9:00am-10:30am

Fridays 9:00am-10:30am

Appts are scheduled via Nexus in 20-minute increments and must be made in advance at https://nexus.uconn.edu/secure_per/schedule1.php?stser=2257



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This course introduces the foundational concepts and tools necessary for becoming a basic practitioner and consumer of quantitative political analysis. Upon successfully completing this applied methods course, students will be able to choose data and perform and interpret statistical analyses appropriate for addressing a variety of research questions. As well, students will be able to read and comprehend quantitative research published by others. No prior knowledge of statistics or statistical software is necessary to succeed.

Books (Required):

The Essentials of Political Analysis, 6th Ed.

Philip H. Pollock III , Barry C. Edwards

ISBN: 9781506379616

A Stata® Companion to Political Analysis, 4th Ed.

Philip H. Pollock III , Barry C. Edwards

ISBN: 9781506379708

Calculator (Required):

You'll need a calculator for exams.¹ Also, a pocket calculator makes things a *lot* easier for the many hand calculations we'll be doing. Something like a \$9 [Texas Instruments TI-30XA Student Scientific Calculator](#) is perfect.

Software (Required):

(A) Stata

You will be taught how to use Stata 17 to perform statistical analyses and create simple graphics. UConn provides you this software at <https://software.uconn.edu/software/stata/> While Stata can be run using "UConn AnyWare" it is *STRONGLY* urged that you instead download a copy of Stata and install it on your laptop. Please try installing it before our first class session. Note that Stata will require a serial number, code, and authorization to be entered once it is opened. You will find that information here on the download page:

STATA Licensing Agreement

[You're all set to download Stata 17 for Windows!](#)

 For technical support concerning the installation of this software please contact the UConn Software Support team.

Instructions

Please review the instructions for your preferred download.

Stata/SE

- Stata for large datasets.
- Stata/SE can analyze up to 2 billion observations.

[Stata/SE for Windows License and Activation Key .pdf](#)
[Stata Installation Instructions](#)

Download

[Download Stata 17 for Windows](#) 

If you have previously installed Stata installed using a UConn-based download, you'll have to enter a new serial number, code, and authorization, as they expire each year on December 31st.

When Stata prompts you to check for updates upon first using the program, please do so. Then, have it run any updates it wishes.

¹ Laptops, mobile devices, will not be permitted for the hand calculation portions of exams.

(B) Excel

We will be doing some data maintenance and assembly in Excel. You can access Excel via UConn at <https://email.uconn.edu/office-365/>. Here again, it's best to download a copy of Excel instead of running it off the Cloud. For our purposes, Google Sheets, etc. will not suffice. Please set up Excel on your laptop prior to our first meeting.

Graded Components:

Two Exams (25% @): You will take two in-class exams. A hand calculator will be required for the hand calculation portions of the exams.² The exams will be closed-book, but you will be given all relevant formulas and tables necessary to complete the work. That is, I'd rather you be able to use formulas and tables than memorize them.

Homework (20%): Most weeks you will have homework assignments consisting of exercises from the Stata Companion book and/or from the professor. All homeworks are due by the start of class (4:00pmEST) on their due date. All homeworks are to be submitted via email to david.richards@uconn.edu. *Make sure to include your last name as part of any filename.* Homeworks from the Stata Companion workbook are listed in the class schedule later in this syllabus. For those that have no date listed, the instructor will provide you with due dates as we move through the material. For planning purposes, just assume you have homework each week.

Research Paper (30%)³: You will produce an original research paper using the concepts, techniques, and tools covered in this course. This is a full-scale research project, from problem identification through design, analysis, and conclusion. Two pieces of advice: (1) Ask a question that, while significant, is one that you are capable of answering in a semester and with the tools of this course; (2) Start *now* surveying as much of the substantive, empirical literature that you can possibly find about the topic in which you are interested. The question asked must take an empirical, cause and effect form.

You are to use the following outline to organize your paper:

1. Title Page: Title, Name, Date, Style, Abstract (150 words, maximum, single spaced: a very brief encapsulation of your paper)
2. Introduction: In two or three paragraphs, state the research question to be addressed and indicate its significance. That is, briefly explain what you are studying, how you'll be studying it, and why the reader should care.
3. Literature Review: In about three-to-five pages (this can vary by topic and writing style), state your research question and survey the literature relevant to your research question. Here, you are addressing "What is it that we already know from previous research?" This is extremely important because it is impossible to convince readers what needs to be understood without setting out what has already been discovered. At the end of the literature review, state the testable hypothesis/hypotheses you've derived.
4. Data / Methods: Here, you describe the data you have gathered and the methods you will be employing to use those data to test your hypothesis/hypothesis.

² Laptops, mobile devices, will not be permitted for the hand calculation portions of exams.

³ With apologies to the original language of [M. D. McDonald](#).

- a. What are the characteristics of your sample? That is: What is the unit of analysis? What is your N? Is it a temporal cross-section or time series? What is the geographical coverage? How do all these characteristics render your sample useful for the hypothesis testing you will be doing?
- b. For each indicator (variables) you will be using, be sure to discuss:
 - i. Where it is from (e.g., what data set, data project, replication set, etc.). Be sure to properly cite all data sources in text and include proper entries in your references section. Almost all data sources these days provide the information necessary to do this. If you created an indicator on your own (that is, actually created the raw data, not transformed existing indicators), make sure to say so, as well.
 - ii. How it is conceptualized and why this conceptualization is valid for your purposes (i.e., the empirical research for this paper).
 - iii. How it is operationalized and why this operationalization is valid for your purposes (i.e., the empirical research for this paper).
 - iv. If applicable, in the above sections where appropriate please comment on why this indicator was chosen over possible alternatives. For example, was it available for more countries and/or more years? Was it the most conceptually compatible for your needs?
- c. What statistical techniques will you be applying to your data to test your hypothesis/hypotheses? Why?

5. **Findings:** This is a presentation and interpretation of the results of your analysis.

6. **Conclusion:** Here, you discuss the significance of your findings within the context of the literature with which your research engages.

7. **References:** See “Style” instructions below.

8. **Data:** You will send the instructor a copy of your Stata data file: it must be exactly identical to the one used for your analyses.

9. **.do File:** You will send the instructor a copy of your Stata .do file that includes your code for all analyses and graphs presented in the paper.

STYLE: You may use any of the following formatting (style) guidelines. I’ve chosen these because they are quite detailed (that is, they offer much guidance). On your paper’s title page, please indicate which journal’s system it is that you used.

- [American Journal of Political Science](#)
- [American Political Science Review](#)
- [Journal of Peace Research](#)
- [The Journal of Politics](#)

Note: Ignore dictates in the above guides that address: anonymity, posting replication data online, word counts, or supplementary online materials.

SEMESTER SCHEDULE

PTB = Pollock Textbook

SCPA = Stata Companion to Political Analysis Workbook

1/19 – 2/23:

This first section of the course, which will constitute the material for exam #1, will consist of the following substantive topics, in this order:

- 1) Logic of Causal Inquiry / Research Design / Hypothesis Writing
 - PTB: Chpts. 3 (pp. 72-85), 10
 - SCPA: Chpts. 1, 11
- 2) Measurement
 - PTB: Chpts. 1, 2
 - SCPA: Chpt 2; Exercises: 1, 4
- 3) Measures of Central Tendency
 - PTB: Chpts. 3 (pp. 85-98)
 - SCPA: Chpt 4; Exercises: 3, 9
- 4) The Normal Distribution
 - PTB: Chpts. 5, 6
 - SCPA: Chpt 5; Exercise: 2

I've refrained from putting a strict timetable (other than a beginning and end) on the constituent elements of this first section for reasons both old and new. First (new), we will be meeting remotely the first two weeks (at least) and that will be an impediment to some unknown degree. Second (old), from having taught this course over the years, I know it is this section wherein the greatest variance is seen among students in terms of skills mastery. Certainly, one reason for this is that students in this course come in with great differences among them regarding experience with quantitative methods. Fear not if this is all new to you: I teach this course "from the ground up". That is, I assume no prior experience with course topics or tools. If it happens you do already have some experience with statistics up through regression, my goal is that, through our pen & paper calculation work, we can sharpen your understanding of the logical/mathematical foundations of these techniques in a way that will enhance your ability to fully understand the more-advanced techniques introduced in Quant II and beyond.

3/2: Exam #1 (In-Class)

3/9: Differences of Means

- PTB: Chpt. 7 (pp. 208-215)
- SCPA: Chpt 6; Exercises: 3, 4

3/16: SPRING BREAK**3/23: Association #1**

- PTB: Chpt. 7 (pp. 215-234)
- SCPA: Chpt 7; Exercises: 2, 3

3/30: Association #2

- PTB: Chpt. 8 (pp. 239-244)
- SCPA: Chpt 8; Exercise: 1

4/6: Regression #1

- PTB: Chpt. 8 (pp. 244-257)
- SCPA: Chpt 8; Exercise: 2

4/13: Regression #2

- Continue work from 4/6

4/20: Placeholder

This placeholder exists in case of a snow/illness/etc.-related cancellation or a slower-paced progression through topics, such that we may be a week behind. If we hit this week and are on schedule, I'll give the class the choice to either move into some more-advanced material or use the week as an exam review and research paper workshop.

4/27: Exam #2 (In-Class)**5/4: Paper & Accompanying Files Due by 4:00pm.**

CLASS RULES:

Notes/Photos/Videos/Sound Recording, Etc.

You do not have permission to record any sounds or images from or during class. *Capturing images of PowerPoint slides is expressly prohibited.* You do not have permission to make publicly available any class notes or materials – complete, partial, or summarized -- for paid or unpaid access by any other persons via any forum and/or via any medium. Any violations will be reported to the Dean of Students Office.

Lateness

Habitual lateness to class is unprofessional and disrespectful to other students and to the professor. Habitual lateness to class is disruptive and will be handled as such.

Phones / Other Electronic Devices:

- Turn off the ringer of your phone/electronic devices BEFORE class begins. You will not be in trouble for a single accident of forgetting to turn off your phone and having it ring in class -- once in a while, everyone (*including the professor*) forgets to turn off his/her phone. So, if your phone rings in class, *please have the decency to turn it off and not let it ring* and ring until the caller hangs up or voicemail kicks in.
- Chronic cases of disruption via electronic devices will be referred to the Office of Student Services & Advocacy.
- You MAY use a laptop/tablet, etc during lectures.
 - If the professor sees that too much laptop activity is being devoted to non-course activities (e.g., social media, etc), permission to use laptops/tablets/etc. will be revoked.
- Use of earbuds/earphones is strictly prohibited.
- NO electronic devices of any kind are to be powered up or on during an exam/quiz. Violation of this rule will result in a zero on the exam/quiz.
- NO electronic devices of any kind are to be visible during an exam/quiz. Violation of this rule will result in a zero on the exam/quiz.
- If you are caught using *any* kind of electronic device during an exam, you will automatically receive a zero on the exam.

E-Mail:

You are responsible for checking your UCONN-registered e-mail every day, especially before classes and exams. Notices, important dates, reading changes, and the like will be announced via e-mail.

Makeup Exams:

Makeup exams present severe equity problems for everyone involved in the course. Makeup exams will ONLY be scheduled for those with DOCUMENTED medical, University-sanctioned activity, or direct family member's death-associated excuses. ***There are NO exceptions to the makeup exam rule.*** For example, exams missed because of vacation, weddings, oversleeping, sickness not bad enough to get a doctor's excuse, etc., cannot be made up.

Excused Absences:

Excused absences are limited to absences where there is a documented medical excuse for that/those date(s) missed, a University-sanctioned event directly affecting the student, or the documented death of an immediate family member. Examples of things that do not count as excused are job interviews, weddings, work-related conflicts, and vacations.

Late Penalty

Late penalties begin accruing immediately after I have collected work from all those in attendance at the beginning of class, rounded up to the hour, at a penalty of 2 points per hour.

Academic Integrity

In this course we aim to conduct ourselves as a community of scholars, recognizing that academic study is both an intellectual and ethical enterprise. You are encouraged to build on the ideas and texts of others; that is a vital part of academic life. You are also obligated to document every occasion when you use another's ideas, language, or syntax. You are encouraged to study together, discuss readings outside of class, share your drafts during peer review and outside of class, and go to the Writing Center with your drafts. In this course, those activities are well within the bounds of academic honesty. However, when you use another's ideas or language—whether through direct quotation, summary, or paraphrase—you must formally acknowledge that debt by signaling it with a standard form of academic citation. Even one occasion of academic dishonesty, large or small, on *any* assignment, large or small, will result in failure for the entire course and referral to Student Judicial Affairs. For University policies on academic honesty, please see UConn's *Responsibilities of Community Life: The Student Code* and the Office of Community Standards: <http://www.community.uconn.edu>

Students With Disabilities

Please contact me during office hours to discuss academic accommodations that may be needed during the semester due to a documented disability. The Center for Students with Disabilities (CSD) engages in an interactive process with each student and reviews requests for accommodations on an individualized, case-by-case basis. Depending on the nature and functional limitations of a student's documented disability, he/she may be eligible for academic accommodations. CSD collaborates with students and their faculty to coordinate approved accommodations and services for qualified students with disabilities. If you have a documented disability for which you wish to request academic accommodations and have not contacted the CSD, please do so as soon as possible. The CSD is located in Wilbur Cross, Room 204 and can be reached at (860) 486-2020 or at csd@uconn.edu . Detailed information regarding the process to request accommodations is available on the CSD website at www.csd.uconn.edu.

Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships

The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate Romantic relationships can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate Romantic relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University.

More information is available at <http://policy.uconn.edu/?p=2884> .

Sexual Assault Reporting Policy

To protect the campus community, all non-confidential University employees (including faculty) are required to report assaults they witness or are told about to the Office of Diversity & Equity under the Sexual Assault Response Policy. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with University officials who can help. More information is available at <http://sexualviolence.uconn.edu/> .