RESEARCH SEMINAR IN QUANTITATIVE METHODS

POLS 6610-001 (22602)
Mondays 6:30pm – 9:00pm
Oak Hall 308

Professor: Dr. David L. Richards
Office: Oak Hall 448
Office Hours: Tuesdays/Thursdays: 1:00pm – 2:30pm: Appointments are available in 15-minute increments and are to be made in advance via ADVAPP (http://www.advapp.uconn.edu/).
Email: david.richards@uconn.edu

BOOKS:

The editions for the books listed below are specific, so make sure the Co-op (or wherever you get the books from) gives you the right edition. The Gujarati text is only recommended, but if you plan to do quantitative work in your career it is a classic to have on your shelf. I'll be making some use of it in class, as it's still my go-to econometrics guide for the basics. The later editions of the book aren't so good; he hit his peak of explanatory clarity in this edition.

A STATA Companion to Political Analysis
2nd edition
Philip H. Pollock III
CQ Press
9781608716715
Required

Regression Models for Categorical Dependent Variables Using Stata
J. Scott Long & Jeremy Freese
2nd Edition
Stata Press
9781597180115
Required

Basic Econometrics
3rd edition (published 1994)
Damodar N. Gujarati
McGraw-Hill
9780070252141
Recommended

GRADED COMPONENTS:

MIDTERM and FINAL EXAMS (33% each):
You will be given two exams that will test your knowledge of, and ability to use, class materials. Each exam will be part paper-based and part Stata-based.

RESEARCH PAPER (34%)
You will write an 18-page[1] quantitative research paper that utilizes one or more of the statistical techniques covered in the course.

The paper will be due, in paper copy, by **6pm on Monday, May 5th**. Along with the paper copy of the paper itself, you will turn in (via email):
1. A final copy of your Stata data file, with all variables and values (as appropriate) labeled.
2. A Stata .do file that reproduces all the statistical results (including figures, maps, tables, etc.) reported in the paper.

Below, I set out what the paper will look like, and set some deadlines to help force you not to leave it all for the last minute and get a poor grade as a result. Failure to meet any of these deadlines, or failure to satisfy the minimum of competence in their execution, will negatively impact your overall paper grade.

Paper Organization
Your paper will be organized as follows:

   I.   Title Page
   II. Text
         a. Introduction
         b. Literature Review
         c. Hypotheses
         d. Data and Methods
         e. Findings
         f. Discussion
   III. Appendices (if necessary)
   IV. Endnotes
   V.   References
   VI. Tables
   VII. Figures

Given that this is a course in statistical research methods, the "Data and Methods", "Findings", "Discussion", "Tables" and "Figures" sections will be of utmost importance in this paper and, as

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[1] The paper is to be 18 pages of text. That is, title/cover pages, figures, tables, and the bibliography do not count towards the 18-page minimum.

such, the most-determinative of your final paper grade. The Introduction, Literature Review, and Hypotheses need be simply competent enough to set up the empirical sections that follow.

Topic

You are to meet with me *by **e.o.b. Friday, February 7th*** to discuss the possibilities for your paper topic. To do so, schedule a half-hour appointment with me (two 15-minute blocs from ADVAPP). I am not a big believer in busywork, so if you can tie this paper to your dissertation or an article you are writing, that would be ideal. Once I approve your paper topic, you can (and should) immediately begin gathering data. Thus, the earlier you meet with me and get approval to move forward, all the better.

Data

1. The first-draft dataset you will be compiling for your statistical analyses is due to me, in Stata format, *by **6pm on March 10th***.
   - Finding useful data often requires great tenacity: *do not leave this go until the week before it is due*. Make sure to use the professors with expertise in your topic-area as a resource. You don't want to waste time collecting data that are unreliable, biased, or otherwise not useful.
2. Along with your data, also on ***March 10th*** you will turn in a key-sheet describing the contents of the data file, as well as a bibliography of sources that will allow me to understand which data came from where.
3. Data sources get a *full, formal bibliographic citation* both in this preliminary bibliography, and in the final paper's "References" section. It is inappropriate to relegate a dataset citation to a footnote. Every data source will give you the information you need for a formal citation.
4. "Data" is a *plural* word. "Datum" is the singular form. Thus, for example, "The data are…" and "The datum is…".

Style

1. The paper will be written in APSA style. The APSA style guidelines can be found here: http://www.apsanet.org/media/PDFs/Publications/APSAStyleManual2006.pdf
2. You will be using endnotes, not footnotes. Keep notes to a minimum.

CLASS SCHEDULE:

One thing I've learned from teaching research methods for a good while now is that, more so than for any other topic, these courses work best (i.e., promote true learning) when they are paced to some extent at the speed of the class' abilities. This is why there are very few dates in the outline below. I will be moving through the topics below in an orderly fashion and at a speed influenced by my assessment of the class members' comprehension of the material; I will not be moving on (to new material) simply for the sake of moving on.

Link to Readings on Google Drive (such readings are listed as **[GD]** below):
http://tinyurl.com/quant2class

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Welcome / Introduction to using Stata

Readings:
Pollock: Ch. 1
Long & Freese: Ch. 2

PRE-MIDTERM COURSE CONTENT

I. Measurement Theory
- Latent Concepts / Conceptualization
- Operationalization
  - Levels of Measurement
- Reliability
- Validity

Readings:
- Adcock, Robert, and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *The American Political Science Review* 95(3): 529-546. [GD]
- Clark, Ann Marie, and Kathryn Sikkink. 2013. "Information Effects and Human Rights Data: Is the Good News about Increased Human Rights Information Bad News for Human Rights Measures?" *Human Rights Quarterly* 35(3): 539-568. [GD]
- Schedler, Andreas. 2012. "The Measurer's Dilemma: Coordination Failures in Cross-National Political Data Collection." *Comparative Political Studies* 45(2): 237-266. [GD]
- Stevens, S.S. 1946. "On the Theory of Scales of Measurement" *Science* 103(2684): 677-680. [GD]

II. Multiple Regression
- CLRM Assumptions
- Specifics of Multiple Regression
- Diagnostics and Transformations for Model Assumption Violations
  - Heteroskedasticity
  - Fixed / Random Effects
  - Multicollinearity
  - Outliers / Influential Cases
  - Distribution
- Model Specification
  - Interaction
  - Categorical Xs

Readings:
- Pollock: Chs. 8, 9
- Gujarati: Chs. 3, 4, 7, 8, 10, 11, 12
- Wilson, Sven E. and Daniel M. Butler. 2007. "A Lot More To Do: The Sensitivity of Time-Series Cross-Section Analyses to Simple Alternative Specifications." *Political Analysis* 15(2): 101-123. [GD]

3/10
MIDTERM EXAM

3/17
SPRING BREAK

POST-MIDTERM COURSE CONTENT

I. Regression for Binary Outcomes and Counts
- Logit
    - Likelihood Ratio
    - Odds ratios
    - Predicted Probabilities
- Poisson
- Negative Binomial

Readings:
- Pollock: Ch. 10
- Long & Freese: Chs. 4, 8[2]

II. Regression for Ordinal Outcomes
- Ordered Logit
    - Stereotype

Readings:
- Long & Freese: Ch. 5

III. Dimensional Analysis
    - Probabilistic Scaling
    - Factor Analysis

Readings
- Van Schuur, Wijbrandt H. 2003. "Mokken Scale Analysis: Between the Guttman Scale and Parametric Item Response Theory." *Political Analysis* 11:139-163. [GD]
- Cingranelli, David L. and David L. Richards. 1999. "Measuring the Level, Pattern, and Sequence of Government Respect for Human Rights." *International Studies Quarterly* 43(2): 407-417. [GD]

5/5
FINAL EXAM

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[2] Chapter 3 in Long & Freese is a glossary of Stata syntax for techniques used throughout the remainder of the book. I will be covering these commands in class, so I've not added Chpt 3 to the reading. However, if you like, feel free to peruse the chapter at your interest.

CLASS RULES:

Lateness
Habitual lateness to class is ***tremendously rude***; it is unprofessional and disrespectful of other students and of the professor. Habitual lateness to class is disruptive.

Phones / Other Electronic Devices:
- You do not have permission to record ANY sounds or images from/during class.
- 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 during lectures
    - If the professor feels too much laptop activity is being devoted to non-course activities (e.g., texting, Facebook, Youtube, etc), permission to use laptops will be revoked.
- Use of earbuds/earphones is prohibited.
- <u>NO personal electronic devices of any kind are to be powered up or on during an exam/quiz</u>. Violation of this rule will result in a zero on the exam/quiz.
- <u>NO personal electronic devices of any kind are to be visible during an exam/quiz</u>. Violation of this rule will result in a zero on the exam/quiz.
- <u>NO electronic communications software of any kind is to be used during an exam/quiz</u>. Violation of this rule will result in a zero on the exam/quiz.
- If you are caught using *any* kind of personal electronic device during an exam, you will automatically receive a zero on the exam.

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

Communicating With & Making Appointments With Me
E-mail is the single-best way to reach me. Also, because of my schedule's complexity, if something doesn't exist on my Outlook/iPhone calendar, it doesn't exist. Make sure to use ADVAPP to make appointments.

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.

Assignment Lateness and Incompletes:
Assignments are due at the beginning of the assigned class period. The **ONLY** exception is for those with a documented medical excuse or documented direct family member's death. University-sanctioned events and activities are planned in advance and, accordingly, do not qualify as valid justifications for

late work. For example, excuses such as "I couldn't get my file off the library computer", "I overslept," "The printer broke," "I ran out of toner," "The computer crashed", or any other, will not be accepted. Late penalties begin accruing immediately after I have collected papers from all those in attendance at the beginning of class, rounded up to the hour, at a penalty of 2 points per hour. Assignments more than 24 hours late will not be accepted for credit.

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
Students who think that they may need accommodations because of a disability are encouraged to meet with me privately early in the semester. Students should also contact the Center for Students with Disabilities as soon as possible to verify their eligibility for reasonable accommodations. For more information, please go to http://www.csd.uconn.edu/.

GRADE CALCULATION:
Your final grade will be calculated using the following formula:

FINAL GRADE = [.33 (Midterm Exam) + .33 (Final Exam) + .34 (Paper)]

Final class grades will be assigned as such:
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   60-66
F   59 or below