COURSE DESCRIPTION
This is an advanced political methodology course for Ph.D. students. The course is sort of a hybrid that covers two classes of models for longitudinal data: (1) models for time-series cross-sectional (TSCS) and panel data; and (2) event history (aka, duration, survival, hazard) modeling. Students are expected to have had courses in intro statistics and linear regression. It would be beneficial, but not essential, to have taken a maximum likelihood course.

First, for TSCS and panel data, we will examine data that consist of subjects (e.g., countries or individuals) tracked over a number of years. While panel and TSCS data possess the same inherent structure, we will review the subtle differences between the two and the different methodological considerations at play. We will discuss the many approaches for analyzing these data that exist in political science and beyond. We will hone in on topics such as pooling, unobserved heterogeneity, causal heterogeneity, fixed effects, random effects, random coefficient models, and so forth. The course has a slight bias toward TSCS data over panel data because of the prevalence of debates in comparative politics and international relations about how to model TSCS data.

Event history data is longitudinal in the sense that one examines factors that influence the amount of time it takes for an event to occur. Event history modeling is concerned with explaining the timing of events—when events will occur. Some of the issues relevant in panel and TSCS data are also relevant for event history analysis. We will discuss issues such as parametric versus semi-parametric models, discrete-time versus continuous-time models, proportional hazards, duration dependence, unobserved heterogeneity, competing risks, and repeated events.

REQUIRED TEXT

RECOMMENDED TEXTS


SOFTWARE
We will rely primarily on Stata. We can also draw comparisons with other software if there is demand. But Stata can handle all of the models we will discuss during the semester.
LEARNING OUTCOMES:
As a result of completing this course, students will:
1. Possess a comprehensive understanding of the methodological issues surrounding panel, TSCS, and event history data.
2. Be prudent methodological consumers and practitioners when it comes to interpreting and applying these types of models.
3. Be able to write a paper—using the methods discussed in class—capable of being published in a professional journal.
4. Be able to write a dissertation chapter using the methods discussed in class.

GRADING
1. Class attendance and participation (50 points): Students are expected to complete all of the assigned readings and to have thought about those readings, to attend each class, and to participate in class sessions. For each week, there are “application articles,” which will serve as the basis of class discussion for a portion of the class.

2. Problem sets (50 points each; 250 points total): There will be five problem sets assigned throughout the semester. Each problem set will require you to demonstrate your understanding of the material and the ability to make appropriate interpretations.

   Problem Set 1: Wednesday, Sept. 23
   Problem Set 2: Wednesday, Oct. 7
   Problem Set 3: Wednesday, Oct. 21
   Problem Set 4: Wednesday, Nov. 11
   Problem Set 5: Wednesday, Dec. 9 (email this one to me)

Two important notes on problem sets:
- All problem sets will be due at the beginning of class on the day they are due. I will not accept late problem sets. I strongly suggest working on the assignments progressively as we get through the relevant material.
- Feel free to work with your classmates on the problem sets. Collaboration can be beneficial for mastering the material. However, you must do your own work. That is, while you can work together, the final product that you hand in must be your own work.

3. Final Paper (100 points): Due Thursday, Dec. 17 at 5:00pm. For the final paper, you will use the skills you have learned throughout the class to analyze and write up results from an empirical analysis using your own data. Importantly, the paper project is also intended to give you practice toward mastering the art of writing a research paper (in particular, discussing results and how they relate back to the substantive research question(s), the theory, and hypotheses). The paper should be roughly 12-15 pages (double-spaced) and it should resemble the second half of a journal article. The paper will be written as if the intro, literature assessment, and theory sections have already been written. Use a small amount of space to give me a rough outline of the research question, literature assessment, and the theory. List the hypotheses to be tested, and then write up the data and results section as you
would do for a journal article. I strongly encourage you to think about your research question very early in the semester and to make progress on the paper gradually throughout the semester. Students should touch base with me about their papers—particularly regarding the data they are interested in analyzing—sometime before the middle of the semester.

CLASS POLICIES

University Policy on Religious Holidays:
1. Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance;
2. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations;
3. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities

ACADEMIC INTEGRITY
I personally support the GW Code of Academic Integrity. It states: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” For the remainder of the code, see: http://www.gwu.edu/~ntegrity/code.html

SUPPORT FOR STUDENTS OUTSIDE THE CLASSROOM

DISABILITY SUPPORT SERVICES (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC)  202-994-5300
The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:
- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals
http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices

SECURITY
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

COURSE SCHEDULE (Subject to change)

Part 1: Panel and TSCS Data
1. Sept. 2: Introduction to the Analysis of Longitudinal Data
2. **Sept. 9: The Original Beck and Katz Approach to TSCS Data**


*Application articles:*


3. **Sept. 16: The Fixed Effects Approach**


*Application articles:*


4. **Sept. 23**: *The Random Effects Approach; Fixed versus Random Effects*

**Problem Set 1 Due**


*Application articles:*


5. **Sept. 30**: *Modeling Dynamics in Panel and TSCS Data*


Review Wilson and Butler (2007)

*Application articles:*


6. **Oct. 7: Additional Model Specifications**

**Problem Set 2 Due**


**Part II: Event History Modeling**

8. **Oct. 21: The Nuts and Bolts of Event History Analysis**

**Problem Set 3 Due**

Box-Steinensmeier and Jones, Chapters 1-2


Box-Steinensmeier and Jones, Chapter 3
Application articles:


10. **Nov. 4:** The Semi-Parametric Approach: The Cox Model

Box-Steinensmeier and Jones, Chapter 4

Application articles:


11. **Nov. 11:** Discrete-Time versus Continuous-Time Models

**Problem Set 4 due**

Box-Steinensmeier and Jones, Chapters 5-6


12. **Nov. 18:** Time-Varying Covariates, Model Selection, Diagnostics

Box-Steinensmeier and Jones, Chapters 7-8

13. **Nov. 25: Heterogeneity**

Box-Steffensmeier and Jones, Chapters 9


*Application articles:*


14. **Dec. 2: Multiple Events and Competing Risks**

Box-Steffensmeier and Jones, Chapter 10


*Application articles:*


**Problem Set 5 due Wednesday, Dec. 9**

**Final Paper due Thursday, Dec. 17**
ADDITIONAL RECOMMENDED READINGS

Models for Panel and TSCS Data


Event History Modeling


