survey design and analysis

PSCI 7108.002  
SPRING 2016  
THURSDAYS, 3:30 - 6 PM  
MUENZINGER E114

JENNIFER WOLAK  
242 KETCHUM  
wolakj@colorado.edu  
OFFICE HOURS: Wednesdays, 11 A.M. – 12 P.M., 1-2 P.M.

This course focuses on the design and analysis of surveys. We will explore the construction and implementation of surveys, including the design of survey questionnaires, sample selection, choice of survey mode, and survey administration. We will also consider a variety of analytical tools useful to survey analysis (and applications beyond survey data), including multiple imputation, selection models, and seemingly unrelated regression. We will explore matters of measurement, including evaluations of the validity and reliability, the construction of scales, factor analysis, and item response theory. We will also study mediation as a tool to investigate the mechanisms by which factors influence political outcomes.

Our course will not be mathematics-intensive, but you should have a basic familiarity with probability, statistics, and the classic linear regression model. If you have successfully completed PSCI 7085 and PSCI 7095, you should have sufficient background for the topics covered in this course.

reading assignments

Readings for the course will be drawn from several texts as well as journal articles. Journal articles are accessible through the library’s website, while book chapters can be found on the course website. In addition, you should acquire the following required texts. The recommended texts are also excellent references that will be useful additions to your bookshelf.

required texts


recommended texts


culearn is your friend

This syllabus, assignments, data sets, and other exciting material can be accessed on the class website on culearn.colorado.edu.

requirements

survey topic presentation and memo (15% of your final grade)

You will be asked to give a ten minute presentation on a specialized topic in survey design and implementation, as described in a separate memo. You will also prepare a short memo to accompany the presentation and share with the class.

homework and participation (45% of your final grade)

You are expected to attend and actively participate in class.

It is recommended that you complete each week’s readings before that week’s class session.

Most weeks, you will also be responsible for a homework assignment designed to help you practice the skills learned in class. Some of these assignments will be written memos while others will be designed as problem sets. While you are welcome to consult with your classmates on the homework assignments, the final work that you turn in must be your own. Late homework assignments will not be accepted.

research paper (40% of your final grade)

You will also develop a research paper that incorporates one of the methods discussed in class. In style, this paper should resemble the journal articles you have read in your classes. The research paper will be due the last week of the class. Additional guidelines are detailed in a separate handout.

special accommodations

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. You can contact the Disability Services office for more information at www.colorado.edu/disabilityservices.

some important comments on academic integrity

Plagiarism and other academic dishonesty will not be tolerated. If you are not familiar with the rules of citing sources in written work or what constitutes plagiarism, you should contact me or refer to the University Honor Code at honorcode.colorado.edu. Academic dishonesty will result in an F in the course and referral to the Honor Court for additional non-academic sanctions.

All papers are expected to be original work, not previously or simultaneously handed in for credit in another course (unless prior approval of all instructors involved is obtained).
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COURSE SCHEDULE

1. introduction to the course
   Thursday, January 14

2. why we use surveys. the psychology of survey response
   Thursday, January 21
   - Weisberg, Chapters 1 and 2.

3. questionnaire design
   Thursday, January 28
   - Weisberg, Chapters 5 and 6.
   - presentations: Open-ended questions; Asking about facts; Evaluation of survey questions

4. sampling and survey mode
   Thursday, February 4
   - Weisberg, Chapters 3, 9, 10, and 12.
   - presentations: Quota-controlled sampling; Mail surveys; Cell phone samples; Internet surveys; Interviewer effects
5. sampling error and response rates

Thursday, February 11

- Weisberg, Chapter 8.
- presentations: The history of election polling; Accuracy of polling; House effects; Big Data and polling

6. sample selection bias and sidebar on selection models

Thursday, February 18


7. nonresponse and sidebar on multiple imputation

Thursday, February 25

- Weisberg, Chapter 7.

8. survey administration

Thursday, March 3

- Weisberg, Chapters 4 and 13.
- presentations: Rolling cross-sectional surveys; Survey research in developing countries; Cross-national equivalence of surveys; Surveys in conflict zones; Surveys on sensitive topics

9. measurement, reliability and validity

Thursday, March 10

- DeVellis, Chapters 1-4.

10. item scaling

Thursday, March 17

- DeVellis, Chapter 5.
spring break
Thursday, March 24

11. factor analysis
Thursday, March 31
- DeVellis, Chapter 6.

12. item response theory
Thursday, April 7
- DeVellis, Chapter 7.

13. mediation and path analysis
Thursday, April 14

14. mediation through the lens of causal inference
Thursday, April 21

15. seemingly unrelated regression
Thursday, April 28