

SURV 400: Fundamentals of Survey Methodology

Spring Term, 2012

Thursdays, 12:00 to 2:45 p.m.

1208 LeFrak Hall

Instructors

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Grader

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Prerequisites: Graduate student status, advanced special student status, or permission of instructor is required in order to register. In addition, students in this course are expected to have taken STAT 100 or equivalent coursework (or obtain permission of instructor).

This course does not fulfill any requirements of the MS or PhD degree in survey methodology. The course is a component of the JPSM Citation in Introductory Survey Methodology and the UMD Graduate Certificate in Intermediate Survey Methodology (see www.jpsm.umd.edu for details).

1. Overview of the Course

The field of survey methodology draws on theories and practices developed in several academic disciplines — mathematics, statistics, psychology, sociology, computer science, and economics. To become an accomplished professional in the survey research field requires a mastery of research literatures as well as experience designing, conducting, and analyzing surveys.

This course introduces the student to a set of principles of survey design that are the basis of standard practices in the field. The course exposes the student to research literatures that use both observational and experimental methods to test key hypotheses about the nature of human behavior that affect the quality of survey data. It will also present important statistical concepts and techniques in sample design, execution, and estimation, as well as models of behavior describing errors in responding to survey questions. Thus, both social science and statistical concepts will be presented. The course uses the concept of total survey error as a framework to discuss coverage properties of sampling frames, alternative sample designs and their impacts on standard errors of survey statistics, alternative modes of data collection, field administration operations, the role of the survey interviewer, impacts of nonresponse on

survey statistics, the effect of question structure, wording and context on respondent behavior, models of measurement error, post-survey processing, and estimation in surveys.

The course is intended as an introduction to the field, taught at a graduate level. Lectures and course readings assume that students understand basic statistical concepts (at the level of an undergraduate course) and have exposure to elements of social science perspectives on human behavior. For those lacking such a background, supplementary readings are recommended.

2. Format of the Course

The course has five main components:

1. Lectures. These will be formal introductions of the material to students, presented by experts in each of the areas of the field.
2. Readings. These are companions to the lectures that give the student a fuller discussion of key concepts and research findings. Except for the first class, readings should be completed prior to the lecture covering their material.
3. Exercises. Each component of the course will have a short exercise that each student will complete in order to develop further integration of the knowledge presented in lectures and readings.
4. Mid-term Examination. The mid-term examination will cover the first half of the term and be administered in class on March 15.
5. Final Examination. The final examination will be an in-class examination covering the second half of the term.

3. Grading

Grading will be based on evaluation of exercises, the mid-term examination, and the final examination, using the following weighting: 33% exercise grades, 33% mid-term examination grade, and 33% final examination grade. For students whose average grade is on the boundary of two grades, class participation will be used to set the final grade.

4. Readings

The readings for this course will be available in two forms – two books for purchase in the bookstore and several articles that will be available electronically.

Textbooks: There are two required texts for the course:

Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., and Tourangeau, R. (2004), *Survey Methodology*, Wiley.

Converse, J. and Presser, S., *Survey Questions: Handcrafting the Standardized Questionnaire*, Newbury Park: Sage Publications, 1986.

5. Course website

Students are responsible for regularly checking the course website. Additional readings (articles or book chapters), assignments, lecture notes, and other reference material will be made available at: www.jpsm.umd.edu/surv400. Students are responsible for downloading the lecture notes prior to each week's class.

Students are also responsible for downloading weekly exercises from the website. Exercises will be posted by the end of the class period each week. Note that there is an exercise due every week, except for the weeks of the midterm and final exams. All exercises are to be submitted electronically via email to the instructor and teaching assistant. The exercises are due by 5pm the Monday after they are assigned; we will provide feedback regarding the graded assignments at the start of the next class meeting.

6. Class Schedule

Week 1: January 26 – Overview (Brenner)

Lecture: Moving concepts to measures in survey design
Steps of the process of a survey
Key concepts and principles of survey quality
Readings: Survey Methodology, Chapters 1 and 2
Exercise: Exercise 1 due Monday, January 30

Week 2: February 2 – Sampling I (Morganstein)

Lecture: Probability sampling
Simple random sampling
Systematic sampling
Stratification
Readings: Survey Methodology, Chapter 3
Exercise: Exercise 2 due Monday, February 6

Week 3: February 9 – Sampling II (Montaquila)

Lecture: Cluster and multistage sampling
Other probability designs

Sampling frames
Readings: Survey Methodology, Chapter 4 (4.1—4.6)
Exercise: Exercise 3 due Monday, February 13

Week 4: February 16 – Mode of data collection (Brenner)

Lecture: Face to face
Telephone
Self-administered
Administrative records
Impact of computer assistance
Reading: Survey Methodology, Chapter 5
Exercise: Exercise 4 due Monday, February 20

Week 5: February 23 – Sampling III (Montaquila)

Lecture: Selection weights
Computing sampling errors
Examples of sample designs
Reading: Survey Methodology, Chapter 4 (4.7—4.9)
Exercise: Exercise 5 due Monday, February 27

Week 6: March 1 – Computer-Assisted Data Collection (Brenner)

Lecture: Various means of computer assisted data collection;
impact on data quality
Reading: Couper, M.P. and Nicholls, W.L. (1998)
Exercise: Exercise 6 due Monday, March 5

Week 7: March 8 – Questions and Answers in Surveys (Conrad)

Lecture: Overview of response behavior
Comprehension memory search judgment
Delivery of response
Reading: Survey Methodology, Chapter 7
Bradburn, Rips and Shevell (1987)
Exercise: Exercise 7 due Monday, March 12

Week 8: March 15 – Midterm Exam

This is an in-class examination, open-book, open-notes, covering the material through the lecture on March 8. The examination is designed to be completed in 1 hour, but you will be given the entire period 12:00 – 2:45 PM to complete it.

Week 9: March 22 – Spring Break

Week 10: March 29 – Questionnaire Development (Conrad)

Lecture: Research findings on question wording, structure, and context
Reading: Survey Questions
Exercise: Exercise 8 due Monday, April 2

Week 11: April 5 – Interviewing (Conrad)

- Lecture: Recruiting and hiring of interviewers Interviewer training
Evaluation of interviewing performance
- Reading: Survey Methodology, Chapter 9
- Exercise: Exercise 9 posted on web site – due Monday, April 9

Week 12: April 12 – Pretesting (Brenner)

- Lecture: Focus groups
Cognitive interviews
Expert review
Pretests
Pilot tests
- Reading: Survey Methodology, Chapter 8
- Exercise: Exercise 10 due Monday, April 16

Week 13: April 19 – Data collection and Nonresponse (Brenner)

- Lecture: Contacting sample units
Gaining the cooperation of sample units
Monitoring the progress of data collection
- Reading: AAPOR Standard Definitions
Survey Methodology, Chapter 6
- Exercise: Exercise 11 due Monday, April 23

Week 14: April 26 – Post-Survey Processing; Estimation (Montaquila)

- Lecture: Editing data
Imputation
Construction of unit weights
Variance estimation
- Reading: Survey Methodology, Chapter 10
- Exercise: Exercise 12 due Monday, April 30

Week 15: May 3 – Survey Management (Maffeo)

- Lecture: Survey organizations
Management of data collection effort costs
Management tools
- Reading: Weinberg (1983)
Survey Methodology, Chapter 12
- Exercise: None.

Week 16: May 10 – In-class examination

This will be an in-class examination covering material presented after the first examination. It is designed to be completed in 1 hour but you will be given the entire time from 12:00 – 2:45 PM to complete the examination.