SOCI/SRAM 465/865: Survey Design and Analysis (3 credit hours)

Dr. Kristen Olson

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TA Office hours: W 1:00 - 3:00 pm

A. Course Overview

This is a three-credit course designed to provide an overview of the fundamental aspects of survey methodology. In this class, we will cover basic aspects of survey design, including data collection modes, sampling, coverage errors, nonresponse, interviewer effects, questionnaire design, disclosure limitation, and ethics related to survey research. As a 400/800 course, this class is targeted to advanced undergraduates who have taken a research methods course, but want to learn more about survey methodology, and to graduate students who want to learn more about survey research. This class also provides an important introduction to the science of survey methodology for working professionals.

This is an asynchronous online course. The class week runs from Monday through Sunday; that is, we will start a new topic and discussion board each Monday. All discussion and assignments for the week will be completed by the following Monday. A detailed course schedule is in a separate document.

As with in person courses, online courses require considerable time commitments. You should set aside time each week to watch the weekly lecture videos, do the reading, actively participate in the discussion board, and do the homework assignments. Additionally, graduate students should spend time throughout the semester working on their final project.

B. Course Goals and Objectives

The primary goal of this course is for you to understand the basic components of survey design, including errors that may occur during survey development, fielding, and post-survey processing. A second, but important, goal is for you to be able to apply the principles you learn to real-life problems that occur. The goal of this course is not to make you an 'expert' in any of these areas, but to identify the decisions that are made in survey development that may increase or reduce survey errors. In particular, when you have completed this class, you should be able to:

1. Describe the major data collection modes, including common survey errors associated with each mode
2. Identify various sample designs and use simple estimators
3. Compare and contrast methods for measuring and accounting for survey nonresponse
4. Develop and test survey questions to measure a construct of interest
5. Describe the roles that interviewers play in sample surveys, and how they may affect a survey estimate of interest

6. Evaluate how different design decisions may affect a survey estimate of interest
7. Develop an implementation plan for a survey on a topic of your choosing, and report on how your decisions may affect the quality of your final data

C. Instructor's Role in the Course

My role in the class discussions is as a guide and a moderator. The TA and I will comment on posts to help identify important themes in the class readings, answer questions, and correct inaccuracies, but I will not reply to every post as this can become quickly unmanageable. The TA and I will read your posts at least twice during the week. If you have questions that need to be answered immediately, please email me at kolson5@unl.edu or the teaching assistant, Nuttirudee Charoenruk, at nuttirudee5685@huskers.unl.edu, with the subject SRAM 465/865: Question about [fill in your question]. I will respond to your email during normal business hours on weekdays, generally within 24 hours.

D. Required Texts and Materials

This course has three required textbooks, and a number of required articles. The required textbooks are:

> Biemer, Paul P. and Lars E. Lyberg. 2003. *Introduction to Survey Quality.* Hoboken, NJ: John Wiley and Sons.
>
> Groves, Robert M., Floyd J. Fowler Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, and Roger Tourangeau. 2009. *Survey Methodology*. New York: John Wiley and Sons.
>
> Tourangeau, Roger, Conrad, Fred G., & Couper, Mick. (2013). *The Science of Web Surveys*. New York, NY: Oxford University Press.

The required journal articles are listed in the schedule of classes. The readings are divided into required readings for the students enrolled in SRAM 465, and additional required readings for students enrolled in SRAM 865. Students enrolled in SRAM 465 who want more information on a topic are recommended to review these additional materials.

As an asynchronous online course, you must have sufficient computer technology to complete the course requirements. This includes a computer with high speed internet access, an email account, a supported web browser, a word processor, Adobe Reader to view PDF files, and a media player.

E. Discussion posts

A key part of the course will be discussing the assigned readings with your classmates. Because this is an asynchronous online course, class discussion will take place on the course discussion board. You will be required to make one independent post each week, starting a new thread on the discussion board.

Your independent post must contain (1) one idea, concept, theory, or finding that you learned this week from the readings and (2) two questions about the readings.

Both your independent thread and your replies will be graded together. Below is a rubric for grading your discussion posts. To earn full credit, students should meet all of the criteria listed under the Excellent category. Note that use of any of the criteria under 0 (Poor) will yield a grade of 0 for that posting. The independent post must be made by Friday at noon (12:00 PM) (Central time) of the week. You will also be required to reply to two other students in the class by Monday at noon (12:00 PM) (Central time). Your independent thread must be created before you reply to other students in the class.

Note that an Excellent post will require forethought and planning. You may want to compose your post in a word processing program, and then paste it into the Discussion Board in Blackboard to provide enough time for thoughtful reflection on the class material for the week.

0 (Poor)	1 (Average)	2 (Excellent)
Did not make post. Did not include both one item learned and two questions. Did not respond to at least two other students. Used vulgarities or offensive comments. Disrespectful of fellow students Did not submit post by deadline. Unprofessional writing style.	For initial: Made post. Included both one item learned and two questions. Cites either no class readings, or cites only lecture materials. Writing style, grammar, and/or spelling could be improved. For response: Responded to at least two other students. Response was minimal in content. Did not cite readings and/or lecture in at least one response. Did not elaborate or advance conversation.	For initial: Made post. Included both one item learned and two questions. Appropriate citations from multiple class readings and lecture. Synthesizes across multiple readings and/or lecture material. Uses excellent grammar, spelling, and writing style. For response: Responded to at least two other students. Integrated appropriate readings and/or lecture in at least one response. Elaborated or advanced conversation.

F. Homework Assignments

Homework will be assigned every week, and is due by 12:00 PM (noon, Central) on Mondays. Homework should be handed in through Blackboard. Homework that is handed in within 24 hours of the due date will have one letter grade deduction. Homework that is handed in more than 24 hours after the due date will not be graded.

Homework that is part of your final project will be handed in through a separate assignment link on Blackboard for each part of the final project. Final project assignments will count toward the final project grade.

G. Midterm Exam

The midterm exam will be an exam administered through Blackboard. Students will have three hours to complete the exam, completed in one sitting. Students may not sign out of the exam and sign back in. The exam is open-notes and open-book. All students must complete the exam independently. Any evidence of cheating, plagiarism, or copying answers from another student will result in immediate failure of the class. Students must complete the exam by 5:00 PM Central time on Friday of the Midterm exam week.

H. Final Project

All students will be required to complete a final project. This final project will require students to identify a survey topic of interest to them, and apply each of the concepts we discuss in the class to their topic. These projects will be presented to the class during the last week of classes. More details about the final project will be distributed over the course of the semester.

I. Grades

Grades will consist of discussion board postings, homework assignments, exam and a final project. Course grades will not be curved. Grades will be weighted as follows:

	Percentage
Discussion Board	25%
Homework	25%
Midterm	15%
Final presentation	10%
Final project	25%
Total	100%

Final grades will be assigned as (Weighted Points Earned) / (Weighted Points Available).

Grade	Weighted Percentage	Grade	Weighted Percentage
A+	99-100	C	76.9-73
A	98.9-93	C-	72.9-70
A-	92.9-90	D+	69.9-67
B+	89.9-87	D	66.9-63
B	86.9-83	D-	62.9-60
B-	82.9-80	F	0.0-59.9
C+	79.9-77		

Students may take the course pass/no pass. If taking the class pass/no pass, 465 students must earn a C or better grade to get a "pass." Students in 865 must earn a B or better to get a "pass." No incompletes will be given in the course.

J. Technical Problems

If you have any technical problems, you should contact the UNL Help Center. Information about the Help Center can be found at http://its.unl.edu/helpcenter. You can also call the Help center at 402-472-3970 in Lincoln or (866) 472-3970 toll free in the U.S. or email mysupport@unl.edu.

You can also post technical questions in the Technical Questions forum of the class Discussion Board.

K. Accommodations for students with disabilities

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY. If you have a documented disability that is impacting your academic progress, please call SSD at 472-3787 and schedule an appointment with the Director, Veva Cheney, or the Assistant Director, Barbara Woodhead.

L. Students' rights/responsibilities

The class schedule is subject to change. Changes will be announced on the class web page. Not knowing about syllabus changes, including changes in assignments, because of not checking the class Blackboard website is not a legitimate excuse for failure to complete the course requirements.

Academic honesty is a vital element for preserving the integrity of all academic institutions and it is the responsibility of each one of us to maintain this integrity. *Any academic dishonesty, such as cheating or plagiarism hurts us all and will result in an automatic failure in the class, and can mean dismissal from the university.* Certain procedural rights are guaranteed to all students charged with academic dishonesty who are subject to disciplinary action; they are outlined in the Regent's Bylaws and the Undergraduate Bulletin and Graduate Bulletin.

Any student who believes that he or she has been graded unfairly may appeal that grade with the following procedures: The student must provide a written explanation to the instructor identifying the assignment or exam in question, the grade assigned by the instructor, and a detailed discussion of what content in the assignment or exam was overlooked or graded unfairly. The instructor will review the information, and may choose to regrade the assignment or exam. Students with regraded assignments/exam may have their grade go up or go down for that assignment/exam. Students who wish to further appeal their grade may contact the Undergraduate Chair in Sociology (465 students) or the Graduate Chair in Sociology and/or SRAM (865 students), and provide a detailed written explanation of their appeal.

It is expected that you have read and understand your rights and responsibilities as a University of Nebraska-Lincoln student. These are available in the Undergraduate and Graduate Bulletins.

Assigned readings

*As listed in the course schedule, readings required of all students are marked with a *; readings only required for graduate students are marked with **.*

Week	Topics and Readings
1	**Module 1: Course overview and an introduction to survey methodology**
	Readings
*	Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). An introduction to survey Methodology. *Survey methodology* (Chapter 1, pp. 1-34). New York, NY: John Wiley and Sons.
*	Biemer, P.P. & Lyberg, L.E. (2003). The evolution of survey process quality. *Introduction to survey quality* (Chapter 1, pp. 1-25). New York: Wiley.
**	Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). Sample Surveys in Our Electronic World. *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (Chapter 1, pp. 1-18). Hoboken, NJ: John Wiley & Sons, Inc.
**	Schober, M. F. & Conrad, F. G. (2008). Survey interviews and new communication technologies. *Envisioning the survey interview of the future* (Chapter 1, pp. 1-30). Hoboken, NJ: John Wiley & Sons, Inc.
2	**Module 2: Inference and error in surveys**
	Readings
*	Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Inference and error in surveys. *Survey methodology* (Chapter 2, pp. 39-64). New York, NY: John Wiley and Sons.
*	Biemer, P.P., & Lyberg, L.E. (2003). The survey process and data quality. *Introduction to survey quality* (Chapter 2, pp. 26-62). New York: Wiley.
**	Fowler, F. (2009). *Survey research methods* (Chapter 1-2, pp. 1-17). Thousand Oaks, CA: Sage Publications.
**	Groves, R. M. & Lyberg, L. E. (2010). Total Survey Error: Past, Present, and Future. *Public Opinion Quarterly, 74*(5), 849-879.

3 Module 3: Target populations, frames, and coverage error

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Target populations, sampling frame, and coverage error. *Survey methodology* (Chapter 3, pp. 69-94). New York, NY: John Wiley and Sons.

* Blumberg, S. J. & Luke, J. V. (2014). Wireless Substitution: Early Release of estimates from the National Health Interview Survey National Center for Health Statistics. Available from http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201412.pdf

** Eckman, S. (2013). Paradata for Coverage Research. *Improving Surveys with Paradata: Analytic Uses of Process Information* (Chapter 5, pp. 97-120). Hoboken, NJ: John Wiley & Sons, Inc.

** Iannacchione, V. G. (2011). The changing role of address-based sampling in survey research. *Public Opinion Quarterly, 75*(3), 556-575.

** Kish, L. (1949). A procedure for objective respondent selection within the household. *Journal of the American Statistical Association, 44*, 380-387.

4 Module 4: Sampling design and sampling error

Readings

* Biemer, P.P. and Lyberg, L.E. (2003). Sampling Error. (Chapter 9). *Introduction to Survey Quality.* Hoboken: John Wiley and Sons.

* Piazza, T. (2010). Fundamentals of Applied Sampling. *Handbook of Survey Research, Second Edition.* P.V. Marsden and J.D. Wright, eds. Bingley, UK. Emerald Group Publishing Limited. Pp. 139-168.

** Tourangeau, R., Conrad, F. G., & Couper, M. (2013). Sampling and coverage issues for Web surveys. *The science of web survey* (Chapter 2, pp. 11-35). New York, NY: Oxford University Press.

** Brick, M. (2011) The future of survey sampling. *Public Opinion Quarterly, 75*(5), 872-888.

** Yeager, D.S., Krosnick, J.A., Chang, L., Javitz, H.S., Levendusky, M.S., Simpser, A. and Wang, R. (2011). "Comparing the Accuracy of RDD Telephone Surveys and Internet Surveys Conducted with Probability and Non-Probability Samples." *Public Opinion Quarterly.* 75(4): 709-747.

5 Module 5: Mode and Methods of data collection I: Single and multiple modes of data collection

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Methods of data collection. *Survey methodology* (Chapter 5, pp. 149-159). New York, NY: John Wiley and Sons.

* Couper, M. (2005). Technology trends in survey data collection. *Social Science Computer Review, 23*(4), 486-501.

** Carley-Baxter, L.R., Peytchev, A. and Black, M.C. (2010). Comparison of Cell Phone and Landline Surveys: A Design Perspective. *Field Methods.* 22(1): 3-15.

** Link, M., Murphy, J., Schober, M.F., Buskirk, T.D., Childs, J.H., & Tesfaye, C.L. (2014). *Mobile Technologies for Conducting, Augmenting and Potentially Replacing Surveys: Report of the AAPOR Task Force on Emerging Technologies in Public Opinion Research.* Retrieved from http://www.aapor.org/AAPORKentico/AAPOR_Main/media/MainSiteFiles/REVISED_Mobile_Technology_Report_Final_revised10June14.pdf

** Buskirk, T., & Andres, C. (2013). Smart Surveys for Smart Phones: Exploring Various Approaches for Conducting Online Mobile Surveys via Smartphones. *Survey Practice, 5*(1). Retrieved from http://surveypractice.org/index.php/SurveyPractice/article/view/63.

6 Module 6: Mode and Methods of data collection II: Effects of different data collection methods on survey errors

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Methods of data collection. *Survey methodology* (Chapter 5, pp. 160-178). New York, NY: John Wiley and Sons.

* Tourangeau, R., Conrad, F. G., & Couper, M. (2013). *The science of web surveys* (Chapter 4, pp. 57-76). New York, NY: Oxford University Press.

** Bowling, A. (2005). Mode of questionnaire administration can have serious effects on data quality. *Journal of Public Health, 27*(3), 281-291.

** De Leeuw, E. D. (2005). To mix or not to mix data collection modes in surveys. *Journal of Official Statistics, 21*(2), 233-255.

** Smyth, J.D., Olson, K., & Millar, M. (2014). Identifying predictors of survey mode preference. *Social Science Research.* 48: 135-144.

7 Module 7: Nonresponse in sample surveys and nonresponse error I: Nonresponse, unit nonresponse, and response rate

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Nonresponse in sample surveys. *Survey methodology* (Chapter 6). New York, NY: John Wiley and Sons.

* Tourangeau, R., Conrad, F. G., & Couper, M. (2013). Nonresponse in Web surveys. *The science of web surveys* (Chapter 3, pp. 36-56). New York, NY: Oxford University Press.

** AAPOR, The American Association for Public Opinion Research. 2011. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. Revised 2011. Lenexa, Kansas: AAPOR.

** Brick, M., & Williams, D. (2013). Explaining rising nonresponse rates in cross-sectional surveys. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 36-59.

** Groves, R. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*, 646-675.

8 Module 8: Nonresponse in sample surveys and nonresponse error II: Nonresponse error, item nonresponse, nonresponse reduction

Readings

* Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). Reducing People's Reluctance to Respond to Surveys. *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (Chapter 2, pp. 19-55). Hoboken, NJ: John Wiley & Sons, Inc.

* De Leeuw, E.D., Hox, J., & Huisman, M. (2003). Prevention and Treatment of Item Nonresponse. *Journal of Official Statistics.* 19(2), 153-1176.

** Peytchev, A. (2013). Consequences of survey nonresponse. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 88-111.

** AAPOR Refusal Task Force (2014). Who Refuses? And Refusal Aversion. Pp. 33-66 in *Current Knowledge and Considerations Regarding Survey Refusals.* Retrieved from http://www.aapor.org/AAPORKentico/AAPOR_Main/media/MainSiteFiles/RefusalTF_FINAL090814.pdf

** Singer, E., & Ye, C. (2013). The use and effects of incentives in surveys. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 112-141.

9 Midterm exam

10 Module 9: Questions and answers in surveys: Survey question and cognitive process in answering questions

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Questions and answers in surveys, *Survey methodology* (Chapter 7, pp. 217-254). New York, NY: John Wiley and Sons.

* Tourangeau, R., Conrad, F. G., & Couper, M. (2013). *The science of web surveys* (Chapter 5, pp. 77-98). New York, NY: Oxford University Press.

** Bradburn, N. M., Sudman, S., & Wansink, B. (2004). Organizing and designing questionnaires. *Asking questions: The definitive guide to questionnaire design* (Chapter 10, pp. 283-314). San Francisco: Jossey-Bass.

** Christian, L. M., Dillman, D. A. & Smyth, J. D. (2007). Helping respondents get it right the first time: The relative influence of words, symbols, and graphics in web and telephone surveys. *Public Opinion Quarterly*, *71*(1), 113-125.

** Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). The Fundamentals of Writing Questions. *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (Chapter 4, pp. 94-126). Hoboken, NJ: John Wiley & Sons, Inc.

11 Spring break

12 Module 10: Evaluating survey questions

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Evaluating Survey Questions, *Survey methodology* (Chapter 8, pp. 259-287). New York, NY: John Wiley and Sons.

* Tourangeau, R., Conrad, F. G., & Couper, M. (2013). *The science of web surveys* (Chapter 6-7, pp. 99-150). New York, NY: Oxford University Press.

** Heerwegh, D. (2011). Internet Survey Paradata. *Social and Behavioral Research and the Internet* (Chapter 13. Pp. 325-348). M. Das, P. Ester, and L. Kaczmirek, eds. Taylor and Francis Group, LLC.

** Krosnick, J.A. (2011). Experiments for Evaluating Survey Questions. *Question Evaluation Methods: Contributing to the Science of Data Quality* (Chapter 14, pp. 215-238). J. Madans, K. Miller, A. Maitland, and G. Willis, eds. Wiley.

** Willis, G. B. (2004). Cognitive Interviewing Revisited: A Useful Technique, in Theory? *Methods for Testing and Evaluating Survey Questionnaires* (Chapter 2, pp. 23-43). S. Presser, J.M. Rothgeb, M.P. Couper, J.T. Lessler, E. Martin, J. Martin, and E. Singer, eds. Wiley.

13 Module 11: Interviewer, survey interviewing, and interviewer effects

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Survey interviewing, *Survey methodology* (Chapter 9, pp. 291-324). New York, NY: John Wiley and Sons.

* Biemer, P. P. & Lyberg, L. (2003). Errors due to interviewers and interviewing, *Introduction to survey quality* (Chapter 5, pp. 149-187). New York, NY: John Wiley and Sons.

** Schaeffer, N.C., Dykema, J. and Maynard, D. (2010). Interviewers and Interviewing. Chapter 13. *Handbook of survey research, second edition.* P.V. Marsden and J.D. Wright, eds. Bingley, UK. Emerald Group Publishing Limited. Pp. 437-470.

** Japec, L. (2008). Interviewer error and interviewer burden. In J. M. Lepkowski, C. Tucker, J. M. Brick, E. D. de Leeuw, L. Japec, P. J. Lavrakas, M. W. Link, & R. L. Sangster (Eds.), *Advances in telephone survey methodology* (Chapter 9, pp. 187-211). New York: Wiley.

** Olson, K., & Peytchev, A. (2007). Effect of interviewer experience on interview pace and interviewer attitudes. *Public Opinion Quarterly, 71*, 273-286.

14 Module 12: Postcollection processing of survey data and processing errors

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Postcollection processing of survey data and processing errors, *Survey Methodology* (Chapter 10, pp. 329-366). New York, NY: John Wiley and Sons.

* Biemer, P. P. & Lyberg, L. (2003). Data processing: Errors and their control, *Introduction to survey quality* (Chapter 7, pp. 215-257). New York, NY: John Wiley and Sons.

** Biemer, P, & Christ, S. L. (2008). Weighting survey data. In E. D. de Leeuw, J. J. Hox, & D. A. Dillman (Eds.), *International handbook of survey methodology* (Chapter 17, pp. 317-341). New York/London: Lawrence Erlbaum Associates/Taylor & Francis Group.

** Fowler, F. (2009). Preparing survey data for analysis. *Survey research methods* (4th edition, Chapter 9, pp. 145-153). Thousand Oaks, CA: Sage Publications.

15 Module 13: Principles and practices related to ethical research

Readings

* Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2009). Principles and practices related to ethical research, *Survey methodology* (pp. 371-400). New York, NY: John Wiley and Sons.

* Fowler, F. (2009). Ethical issues in survey research. *Survey research methods* (Chapter 11, pp. 163-169). Thousand Oaks, CA: Sage Publications.

** AAPOR code of professional ethics and practices. Retrieved from http://www.aapor.org/AAPORKentico/Standards-Ethics/AAPOR-Code-of-Ethics.aspx

** Singer, E. (2008). Ethical issues in surveys. In E. D. de Leeuw, J. J. Hox, & D. A. Dillman (Eds.), *International handbook of survey methodology* (Chapter 5, pp. 78-96). New York/London: Lawrence Erlbaum Associates/Taylor & Francis Group.

16 Student Presentations

17 FINALS WEEK - Final project due