A. Overview of Course

There are five main sources of error that all survey estimates may encounter: **Coverage error**, **Nonresponse error**, **Sampling error**, **Measurement error**, and **Processing and estimation error**.

Various features of a survey design can affect the size of these errors (e.g., interviewer training and monitoring, sample design and size, effort at persuading sample persons to cooperate, edit and imputation procedures). Each feature has cost implications for the survey and thus limits on error are sometimes budget-driven. Further, several of these errors can be linked to one another in practice – attempting to decrease one may merely increase or decrease another (e.g., decreasing nonresponse errors through persuasive efforts may increase or decrease measurement errors in reported answers).

Because students will cover sampling error in greater detail in other courses, sampling error will be deemphasized in this course.

B. Goals of the Course

The course assumes that students know and understand basic implications of sample design and data collection methods, but lack some knowledge of other aspects of surveys. This course covers research that seeks to understand the causes of survey errors. As such, this course presents material on how design decisions affect survey errors. From this course, students will learn principles that should apply to many types of surveys. The class will focus on empirical research on household surveys. However, the constructs can be applied to surveys of establishments and of special populations.

Survey methodology literature is often separated into social science and statistical science approaches. These two literatures often overlap, but provide very different information about how we think about and understand surveys. Both literatures examine approaches to reducing and to measuring error sources. Both literatures may posit causes for an error source. However, the two sides rarely talk to each other.

We will examine research in both the statistical and social science approaches to survey methodology in this course. We also will investigate how design decisions may affect the tradeoff between costs and errors in survey designs.

In particular, this course has five main goals.

1. Develop a common language of survey errors across disciplines.
2. Examine each error source individually. For each error source, the following three questions will be addressed:
   a. What is the cause of the error?
   b. What techniques are used to reduce the error in practice?
c. What statistical models exist to measure the error, and what designs are needed to make the models estimable?

3. Explore, to the extent possible, the implications of design decisions on survey costs.
4. Investigate how decisions to reduce or measure one error source may affect other error sources.
5. Develop skills for communicating and critiquing scientific research ideas using standard literary forms for the discipline.

This course is not a “hands on” course for doing surveys or a “hands on” statistical analysis course. However, the course will examine in detail how survey practice and survey estimates are affected by survey errors.

C. Format of the Course

The course will be run as an advanced graduate level seminar. As such, the reading load may be heavier than in other courses. Students will need to develop skills of quickly reading and absorbing material from the texts. The course will consist primarily of discussion of the readings. The instructor will supplement the more difficult readings with lectures, as necessary.

Students are expected to have read all of the required readings before each class. Recommended readings are provided for those who are interested in further background knowledge. The required readings will be both fundamental readings for the field and recent research on each error source. Changes in readings and assignments will be announced in class and/or on Blackboard. Failure to attend class is not a valid reason for not knowing about changes in readings and assignments.

D. Attendance and Participation

Attendance is mandatory. Reasonable reasons for absence (family emergency, illness) will be accepted. All planned absences must be approved by the instructor at least one week before the absence to be considered excused. Late arrivals are disruptive to class discussion. All late arrivals not approved before the class meeting time by the instructor will result in a lowered participation grade.

Attendance alone is not sufficient for a full participation grade. Given the nature of the class, participation in every class discussion and in critiques of each other’s mini-proposals is necessary for full participation grades.

All students are expected to participate in every class discussion. Failure to participate in every class period will result in a reduced participation grade. For example, students who make meaningful contributions in roughly 50% of the class periods should expect a 50 point participation grade. To ensure that everyone participates, the instructor will call on people occasionally. However, students who repeatedly fail to participate on their own accord and only participate when called on by the instructor will receive a reduced participation grade. Additionally, students are expected to bring ALL reading materials to class every week. Failure to bring materials to class will result in a reduction of 5 points for each class without materials from the total participation grade.

Students may earn up to 100 points for attendance and participation.

E. Discussion Board Postings

Every student must post (1) one thing you learned from the readings (with appropriate citations) and (2) two questions that you have from each week’s readings on Blackboard by 6:00 PM on the day before
class (Monday evening, 6:00 PM). (These can be posted earlier; Monday at 6:00 PM is simply the latest by which they can be posted). The discussion must be about the assigned readings for the week and empirically/academically/scientifically-oriented.

Content for the discussion board postings may vary. Possible discussion board posts about what was learned could address the student’s thoughts on how the week’s readings inform the three questions for each error source (What is the cause of the error? What techniques are used to reduce the error in practice? What statistical models exist to measure the error, and what designs are needed to make the models estimable?) or inconsistencies seen across the readings, among others.

Each student must create an original thread. Topics may overlap across students, but each student must have an original discussion post. All posts must be about the methodological content of the readings. You will be required to post an original thread before reading other students’ posts.

All posts must be respectful of the other students in the class and of the instructor. Any inappropriate posts will receive a grade of zero for the week and will be immediately removed by the instructor. Posts about irrelevant topics or that do not address the week’s readings will also be assigned a grade of zero.

The goal of the discussion board posts is to facilitate discussion of the class readings in and out of class. It is also to help the instructor identify where students may need more help with the readings for in-class discussion.

Late posts (after Monday 6:00 PM and before Tuesday 12:00 PM) will be downgraded. Weeks in which no post or replies are made will be assigned a grade of zero.

Each post can earn up to 5 points as follows:

<table>
<thead>
<tr>
<th>Points</th>
<th>Post Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Post made on time. Addresses and cites the week’s readings, uses terminology and concepts appropriately. Well-written post. Appropriate length. Includes one thing learned and two questions.</td>
</tr>
<tr>
<td>4</td>
<td>Post made on time. Does not address readings or addresses/cites incorrectly; incorrect use of terminology or concepts. Slightly off-topic posts. Poorly written post. Inappropriate length. Includes one thing learned and two questions.</td>
</tr>
<tr>
<td>3</td>
<td>Post made late (after Monday 6:00 PM and before Tuesday 12:00 PM). Addresses the week’s readings, uses terminology and concepts appropriately. Appropriate length. Omits either one thing learned or two questions.</td>
</tr>
<tr>
<td>2</td>
<td>Post made late (after Monday 6:00 PM and before Tuesday 12:00 PM). Does not address readings or addresses/cites incorrectly; incorrect use of terminology or concepts. Slightly off-topic posts. Poorly written post. Inappropriate length. Omits either one thing learned or two questions.</td>
</tr>
<tr>
<td>0</td>
<td>Missing post for the week. Inappropriate or irrelevant posts. Posts made after 12:00 PM on day of class.</td>
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</tbody>
</table>

Students are responsible for making discussion board posts and keeping track of the number of replies (without an original contribution) that count toward their final grade. Weeks during which no reading is assigned do not require discussion board posts.

**F. Mini-Proposals**

Proposal writing is a key feature of life as a scientist. The skill of finding gaps in the literature, deriving a scientific question with a design to answer those gaps, and articulation of both the question and design
must be refined through repeated practice. As such, each student will complete two “mini-proposals,” each addressing a different methodological question and error source, throughout the semester.

Providing fast, useful feedback and critique of work to colleagues is another important skill to develop as a scientist. Throughout the course, students will be expected to give both verbal and written critiques of each other’s mini-proposals. Students will be the primary reviewer with written critiques on two mini-proposals throughout the semester.

All mini-proposals must be written professionally, free of grammatical and spelling errors. Students who need help with academic writing or editing their mini-proposals should contact UNL’s Writing Center. More information about the Writing Center can be found here: http://www.unl.edu/writing/students.

More information about the mini-proposal and primary reviewer assignments will be distributed during the first class. Ph.D. students are strongly encouraged to use at least one mini-proposal to develop an idea for their dissertation.

G. Grades

Students may earn points for participation, discussion board posts, each of the mini-proposals, and the written mini-proposal critique. The grades will be composed as follows:

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<thead>
<tr>
<th></th>
<th>Percent of Final Grade</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>25</td>
</tr>
<tr>
<td>Discussion Board Posts</td>
<td>15</td>
</tr>
<tr>
<td>Mini-proposal #1</td>
<td>25</td>
</tr>
<tr>
<td>Mini-proposal #2</td>
<td>25</td>
</tr>
<tr>
<td>Mini-proposal Critique #1</td>
<td>5</td>
</tr>
<tr>
<td>Mini-proposal Critique #2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Final grades will be assigned as follows: A+ (99-100), A (98.9-93), A- (92.9-90), B+ (89.9-87), B (86.9-83), B- (82.9-80), C+ (79.9-77), C (76.9-73), C- (72.9-70), D+ (69.9-67), D (66.9-63), D- (62.9-60), F (0.0-59.9). There will be no curve.

To earn an A grade, students must perform consistently at the highest level, participate in every class, have high quality discussion board posts, have innovative and important mini-proposal ideas, and respond thoroughly and appropriately to comments and critiques on their mini-proposals. Simply ‘doing the work’ is not sufficient to earn an A grade.

The class may be taken as Pass/No Pass. Students must earn a B or higher to receive a ‘Pass’ grade.

H. Plagiarism and Academic Honesty

Plagiarism or other violations of academic honesty as covered by the Student Code of Conduct will result in immediate failure of the class. Students should use appropriate citations in all written work, even in discussion posts. All students should carefully review and be familiar with the Graduate Studies discussion of plagiarism: http://www.unl.edu/gradstudies/current/integrity#plagiarism

I. Grade Appeals Policy
Students who wish to appeal a grade must follow the following procedures.

1. Wait at least 24 hours from the time that the grade is assigned before filing an appeal.
2. Provide to the instructor, in writing, a detailed description of the content of the work that is in question. The student must also address how comments given by the instructor on the assignment are inaccurate. Grades that are appealed because the student feels that a grade does not reflect the “effort” put into the assignment or class will not be changed. Grades are based solely on the content of the material.
3. The instructor will regrade the assignment in question. Be advised that the grade can go up or down in the regarding process.
4. The student will receive the revised grade. Students who would like to further appeal the grade can appeal to the Graduate Chair in the Sociology program.

Grades that are incorrect because of a simple miscalculation of total points can be corrected by directly talking to the instructor.

J. 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.

Services for Students with Disabilities (SSD) provides individualized academic support for students with documented disabilities. Support services can include extended test time, textbooks and handouts in alternative formats (electronic texts, Braille, taped texts, etc.), classroom notes, sign language interpreters, and transcriptionists. SSD not only accommodates students who have visible disabilities, but also students with other types of disabilities that impact college life. If you have a documented disability that is impacting your academic progress, please call SSD at 472-3787 and schedule an appointment. If you do not have a documented disability but you are having difficulties with your coursework (such as receiving low grades even though you study more than your classmates or find you run out of time for test questions when the majority of your peers finish their exams in the allotted time), you may schedule an appointment to discuss the challenges you are experiencing.

K. Technology and other Distractions Policy

Students must turn off their cell phones, Blackberries, iPhones, and iPods and other devices used for phone calls, entertainment, or social media when entering the classroom unless the instructor has said otherwise. Any student who makes or receives a phone call or text message, listens to an MP3 player, or uses any unauthorized electronic device during the class period will receive an automatic 5 point deduction from his/her final grade for each use of the electronic device. All newspapers, magazines, or any other material other than that necessary for this class also must be put away when entering the classroom. Any student who is seen reading a newspaper, magazine, or anything not related to this class will receive an automatic 5 point deduction from his/her final grade for each use of this material.

Students may use laptops, eReaders, or tablet computers to take notes and for class readings. Students who use these devices for email, social media, or other non-class-related purposes will be asked to put away their device immediately. They will lose 10 points from their final grade, and will have their privilege of using electronic devices of any kind revoked for the rest of the semester. The instructor
reserves the right to look at the screen of any electronic device used in class to ensure it is being used for appropriate class purposes. Refusal to permit the instructor to see the screen of an electronic device will result in 20 points being subtracted from the student’s final grade, and they will have their privilege of using electronic devices of any kind revoked for the rest of the semester. Repeated infractions of this policy will result in the use of any electronic devices revoked for the entire class for the rest of the semester.
Required Readings (Subject to change)

Required texts


Recommended texts


January 12 – Course Overview, Overview of Mini-Proposals, Introduction to Literature Reviews, Discussion of Plagiarism

Roller and Lavrakas, Chapter 8
NIH Writing Tips for Proposals: [http://grants.nih.gov/grants/writing_application.htm](http://grants.nih.gov/grants/writing_application.htm)

Recommended Readings:

NSF Graduate Research Fellowship Program:
Methodology, Measurement and Statistics page for Dissertation Grants:
[http://www.nsf.gov/sbe/ses/mms/mmsdiss.jsp](http://www.nsf.gov/sbe/ses/mms/mmsdiss.jsp) and

January 19 – Introduction to Survey Errors


Recommended readings

January 26 – Coverage Errors, Whole-unit coverage


Recommended readings:
February 2 – Coverage Errors, Within-Unit Selection Issues


Recommended Readings:


February 9 – Mini-Proposal #1 Discussion (Coverage Errors)

Students will post the drafts of their mini-proposals to Blackboard by 6:00 PM on February 8.

February 16 – Unit Nonresponse; Revised Mini-Proposal #1 Due


Recommended Readings


**February 23 – Item Nonresponse**


Recommended Readings:

March 1 – Statistical Models for Unit and Item Nonresponse


Recommended Readings
March 8 – Mini-Proposal #2 Discussion (Nonresponse Error)
Students will turn in the drafts of their mini-proposals on Blackboard by 6:00 PM on March 7.

March 15 – Overview of Survey Measurement Error, Mini-Proposal #2 Due


Recommended Readings

March 22 – Spring Break, No Class
March 29 – Measurement Error Estimation Techniques


**Recommended Readings**


**April 5 – Measurement Error: The Interviewer**

Roller and Lavrakas, Chapter 3 – In Depth Interviews

Biemer and Lyberg, Chapter 5


**Recommended Readings**


Groves, Chapter 8


April 12 – Measurement Error: The Respondent


Recommended Readings:


April 19 – Mini-Proposal #3 Discussion (Measurement Error)
Students will post the drafts of their mini-proposals on Blackboard by 6:00 PM on April 18.

April 26 – Processing Errors; Mini-Proposal #3 due

Biemer and Lyberg, Chapter 7, pp. 215-257.

Recommended