

Sociology 307D: Quantitative Research Methods

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University of Southern Maine
Fall 2009 LEC 2966
Tuesdays 4:15-6pm LB 203
Thursdays 4:15-6pm LB 509
<http://www.courses.maine.edu/>

INTRODUCTION

This course provides an overview of the principles and logic of sociological research methods. It focuses specifically on quantitative research methods and contains a computer laboratory component. Sociologists often distinguish between “qualitative” and “quantitative” research. Quantitative methodologies are based on mathematical techniques to organize and manipulate data for the purpose of testing hypotheses and answering research questions. In this enterprise, statistics are a tool employed in the quantitative research process.

Statistics are also commonly understood simply as numerical evidence. In this respect, qualitative researchers also regularly use statistics in their research. Indeed, statistics are everywhere in today’s society. They are often used for political purposes and therefore need to be examined critically. While the primary emphasis of the course is on conducting quantitative research, we will also have several units on the critical assessment of statistics as numerical evidence. This course is much more about research than it is about math.

Course Objectives

There are primary and secondary objectives in this course. Primarily, students will learn to:

- State research questions
- Conduct a literature review
- Formulate and justify testable research hypotheses
- Determine the merits of different data collection techniques
- Become familiar with the fundamentals of survey data collection
- Describe secondary data sources
- Identify a variable’s level of measurement
- Identify the appropriate measure of central tendency and dispersion for a variable
- Identify independent, dependent, and intervening variables
- Identify the appropriate quantitative technique for testing a research hypothesis
- Use SPSS to analyze secondary data
- Present quantitative data in tabular and graphical formats
- Report quantitative data in scholarly writing
- Assess the validity of research hypotheses
- Interpret quantitative data findings in scholarly writing

Students will also learn to:

- Acquire an appreciation for numerical data
- Gain critical thinking skills to assess the statistics we encounter in our everyday lives
- Comprehend professional quantitative social science publications

COURSE REQUIREMENTS

Readings

There are two required books for this course that are available for purchase at the bookstore. They are:

- J. Richard Kendrick's Social Statistics: An Introduction Using SPSS for Windows, 2ed 2005
- Joel Best's Stat-Spotting: A Field Guide to Identifying Dubious Data, 2008

The Kendrick text is the core of this course. You are required to bring this book with you to every class meeting since it will be regularly used for in-class exercises. On-time completion of this reading is critical to having a successful experience here. You want to make sure that you are able to summarize the chapters and engage the key concepts. In lecture I will cover the most substantive material and provide examples and applications to help clarify concepts. The Best book is an enjoyable read and provides a great background for the study of statistics as a whole. Quizzes will be given routinely in order to encourage students to stay up to date on the readings (see below). The reading Schedule is provided below. You need to have read and be prepared to discuss and engage the readings in class on the day in which they appear in the schedule. Snow Day Policy: In the event that class is canceled, you are still responsible for having completed the scheduled readings by the date indicated in the schedule. Any revisions to this schedule will be announced via the Blackboard web site and email.

Other Required Materials

In addition to the books, there are four other requirements: 1) a functioning USM login name and password, 2) a USM Card with at least \$2 of value added on it, 3) a USB flash drive, and 4) a basic calculator.

1) If you are not a regular user of USM computer resources, you must request a USM login name and activation key in person at the help desk in the computer lab. You will be required to have photo identification with you. Those of you who do regularly use your USM email or the Blackboard system should be able to login to the laboratory computers without a problem. You will be required to use your login name and password repeatedly throughout the semester, beginning with the first class. If you do not take care of this immediately you will not be able to complete your homework and you will receive no credit for any missed assignments.

An online Blackboard course web page exists at: <http://www.courses.maine.edu/>. This is a required component of the course. I will use Blackboard to distribute assignments, grades, and messages. There is a toll-free assistance line and online tutorials to provide help should you experience any difficulties with the system. Please be certain that if you do not regularly use your university provided email address that you update the Blackboard system with the email that you do regularly use.

2) All USM computer laboratories charge a fee of 4 cents per page to print. You must have an official USM Card with a few dollars of value added on it. You will be required to print statistical output as part of your homework assignments.

3) We will be working with PC computers regularly in this course. Specifically, we will be running the data analysis software package SPSS (this will be required to complete all but one of the assignments in this class). Tuesday classes will be held in a computer classroom (LB 203) so that we will have access to computers. Additionally, both the Portland and Gorham computer labs have machines equipped with SPSS. These labs have very accommodating hours of operations. Please respect USM's computer facilities and their regulations. When you work in any lab you will need to save your files to a USB flash drive (or "memory stick"). You will not be able to store any files on the hard drives of the laboratory computers and some of these machines do not have floppy drives. Save your files regularly when you are working in a lab!

4) At the beginning of the semester, we will be doing a couple of in-class exercises that require a calculator. You only need a calculator capable of basic math functions.

Optional Materials

1) If you prefer or need to work on your homework assignments at home, rather than in a USM computer lab, you can rent an SPSS license for your personal computer for six months. This service costs \$45.99. For more information, visit: http://www.onthehub.com/spss/spss_6MonthRentals.htm and click on the appropriate “GradPack Base” option. Please note that this service is independent of USM and neither I, nor the HelpDesk, will provide technical support for it. I *assume* that this version of the software can complete all of the functions that we need for this class, though I cannot guarantee it since I have never seen nor used it before. Again, this is purely optional. SPSS.com also has a free two-week trial version available for download.

Quizzes

In lieu of long examinations, nine short quizzes will be administered at the beginning of class throughout the semester. The Schedule (see below) provides the dates of the nine quizzes as well as the reading material for which you will be responsible for on each quiz. Your first quiz is on Thursday, September 3rd and it will cover Kendrick’s Ch. 1. The quizzes are not cumulative. Please be prompt on quiz days. I will administer them immediately at the beginning of class and you will have limited time (ten or fifteen minutes) to complete them. Quizzes are in multiple-choice format and occasionally require simple computations. Attendance is mandatory and no excuses will be accepted for missing class on a quiz day. Your lowest quiz grade will be dropped—only eight of the nine quizzes count toward your final course grade. If there is an emergency or if you are seriously ill and are absolutely unable to attend class on a quiz day, that missed grade will be the one that is dropped. The correct answers will be given immediately after the quiz is collected and will serve as a basis for discussion.

Homework Assignments

Eight homework assignments will be given throughout the semester. Seven of these require the use of the statistical software package SPSS. These assignments will require you to apply the knowledge you have learned from the text and lecture. The Kendrick text walks you through all the necessary steps in SPSS, so it is your responsibility to become proficient with this software (bring this book to class everyday). We will be analyzing a variety of data sources, primarily the 2002 General Social Survey. A portion of our meeting time will be devoted to lab time to work on the assignments during the class preceding your homework due date. Do not expect to be able to complete your homework assignments during our lab session, they will require more time. The homework due dates are provided below in the Schedule. Homework must be printed out and stapled. It is always due at the beginning of class and late assignments will not be accepted.

Students will be allowed to revise and resubmit the homework on which they receive the lowest score. At the end of the semester, you should look over all eight of your homeworks and decide whether or not you wish to resubmit the lowest one in order to get a higher score. Students may not resubmit any homework that they did not turn in by the due date (missed homeworks will remain as zero points). Resubmitted homeworks must be turned in to the Sociology Department on the Portland campus by Noon on Friday, December 11th. You must turn in the original, graded version of your homework along with your revised version. All eight homeworks are worth 100 points (each comprising 5% of your final grade).

Research Project

This course will culminate with an original research project. There will be no final examination and you are not assigned any readings during the last three weeks of the semester. You will be required to generate a research question, conduct a literature review, construct theoretically-informed hypotheses, choose an appropriate secondary data source, identify empirical indicators representing independent and

dependent variables, statistically test the relationship between these variables, report your results, assess the validity of your hypotheses, and interpret your findings. There will be several data sets used regularly by sociologists that measure a variety of social phenomena to choose from in order to complete this project. This assignment should be around eight type-written pages and formatted in the following manner: double spaced, 1.25 inch or less margins on all sides, and Times New Roman 12 point font. This paper is to be turned in at the beginning of the last class on Thursday, December 10th (students will informally present their results to the class at this time as well). No late papers will be accepted. Further details regarding this assignment will be provided throughout the semester. There is a sample research project posted on Blackboard to give you an idea of what is expected.

Grading

Incomplete grades will not be granted unless there are truly exceptional circumstances. Your final course grade will be comprised as follows:

- 40% Quizzes (eight at 5% each)
- 40% Homework (eight at 5% each)
- 20% Research Project

Attendance

Class attendance is mandatory and critical for having a successful experience here. I will not formally track attendance since you must come to class. Quizzes will be administered, homework distributed, and assignments turned in only during our regular class meeting time.

Accommodation Needs

If you need course adaptations or accommodations because of a disability, please register with the Office of Academic Support and make an appointment with me as soon as possible. The quizzes will be administered at the beginning of class and you will have limited time to complete them. If you require additional time to complete the quizzes because of a disability, I need to know immediately. Arrangements will be made for you to take the quizzes at the Office of Academic Support *prior* to our scheduled class time (since the answers will be given immediately following the quizzes). At any point in the semester, if you encounter difficulty with the course or feel you could be performing at a higher level, please do meet with me. There are a number of academic support services available on campus including Academic Support Center (242 Luther Bonney, 780-4470, for help with writing, time management, or general study skills), Office of Academic Support for Students with Disabilities (237 Luther Bonney, 780-4706) and the Counseling Center (106 Payson Smith, Portland, 780-4050 or 110 Upton Hall, Gorham, 780-5411).

SCHEDULE (Subject to change at instructor's discretion)

Tues 9/1 <u>K: Ch. 1</u>	Thurs 9/3 Quiz 1 <u>K: Ch. 2</u>	Tues 9/8 Quiz 2 <u>K: Ch. 3</u>	Thurs 9/10 Homework 1 Due <u>K: Ch. 4</u>
Tues 9/15 <u>B: Parts A-D</u>	Thurs 9/17 Quiz 3 <u>K: Ch. 5</u>	Tues 9/22 <u>Johnson et al. *</u>	Thurs 9/24 Homework 2 Due <u>K: Ch. 6</u>
Tues 9/29 Quiz 4 <u>B: Parts E-G3</u>	Thurs 10/1 Homework 3 Due <u>K: Ch. 7</u>	Tues 10/6 Quiz 5 <u>K: Ch. 8</u>	Thurs 10/8 <u>B: Parts G4-K</u>
Thurs 10/15 Homework 4 Due <u>K: Ch. 9</u>	Tues 10/20 <u>K: Ch. 10</u>	Thurs 10/22 Homework 5 due <u>K: Ch. 11</u>	Tues 10/27 <u>K: Ch. 12</u>
Thurs 10/29 Quiz 7 <u>No Readings</u>	Tues 11/3 Homework 6 Due <u>K: Ch. 13 Pt. 1</u> (pg. 427-441; 454-455)	Thurs 11/5 <u>K: Ch. 13 Pt. 2</u> (pg. 441-448; 455-458)	Tues 11/10 Quiz 8 <u>Collom*</u>
Thurs 11/12 Homework 7 Due <u>K: Ch. 13 Pt. 3</u> (pg. 448-452; 458-461)	Tues 11/17 <u>Sample Project*</u>	Thurs 11/19 Homework 8 Due RP Variables Due <u>No Readings</u>	Tues 11/24 Quiz 9 <u>No Readings</u>
Tues 12/1 <u>No Readings</u>	Thurs 12/3 <u>No Readings</u>	Tues 12/8 <u>No Readings</u>	Thurs 12/10 Research Project Due Informal Presentations <u>No Readings</u>

[Readings are underlined, K=Kendrick, B=Best, * = Readings distributed electronically via Blackboard]