

Quantitative Methods I

URBP 204 A

FALL 2008

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Time: Monday 4:00 pm - 6:45 pm

Room: WSQ 208

Office Hours: Monday 11 am - 12:30 pm; 1 pm - 3 pm

Tuesday 2 pm - 3:30 pm

Syllabus

Course Catalog Description

Urban research design, measurement, selected statistical research tools and introduction to computer processing. Extensive treatment of survey research.

Overview

What does “quantitative research” mean? How do I choose an appropriate research method? Why is survey a research tool? How do I conduct surveys? What kind of information may be obtained using U.S. Census data? What is “standard deviation”? What does the term “statistically significance” mean? These are some of the questions that interest many of us in the field of urban and regional planning. This course aims to answer these and other similar questions.

The course begins with an overview of social research, and of several research methods frequently used in social science research. Next, it focuses on learning statistical tools needed to answer specific research questions. Thereafter it focuses on survey research, including survey administration. It then reviews the elements of research design, and in the end requires the students to conduct statistical analysis of the data obtained through the survey, and to present the research findings to the class.

Student Learning Objectives for the Course

After completing this course, the students will be able to:

- a) conduct a comparative evaluation of quantitative, qualitative, experimental, and survey research methods;
- b) design research based upon the research question and constraints;
- c) conduct descriptive and inferential statistical analysis using the following tests: Tests between Means of Different Groups, Tests Between Means of Related Groups, ANOVA, Factorial ANOVA, Correlation, and One- and Two- Factor Chi Square;
- d) frame survey research questions;
- e) conduct door-to-door surveys; and
- f) generate research questions, and use statistical tools learned in the class to answer the questions

Class format

This class will be a combination of lectures, discussions, and lab work. MS Excel and SPSS will be the primary statistical software used.

Grading

Grades will be based on three take home exercises (10% each for a total of 30%), mid-term exam (20%), term project (40%), and presentation of the term project (10%). Late work will not be accepted, except with the prior permission of the professor.

Course grade and corresponding numerical grade:

A+ (96 and above); A (93 to 95); A- (90 to 92); B+ (87 to 89); B (84 to 86); B- (81 to 83); C+ (78 to 80); C (75 to 77); C- (72 to 74); D+ (69 to 71); D (66 to 68); D- (63 to 65); E+ (60 to 62); E (57 to 59); E- (54 to 56); F (below 53)

Required Text Books

There are two required text books for this course. They are:

a) Babbie, Earl. 2004. Practice of Social Research, 10th ed. Belmont, CA: Wadsworth. (ISBN: 0-534-62029-9)

You may use the 9th edition (ISBN 0-534-57491-2) of the book if you find the price of the 10th edition to be very high.

b) Salkind, Neil. 2004. Statistics for People Who (Think They) Hate Statistics, 2nd Edition. Thousand Oaks, CA: Sage. (ISBN 0-7619-2776-X)

Both these books may be bought from any vendor. Some on-line vendors include:

<http://www.powells.com>

<http://www.amazon.com>

<http://www.bordersstores.com>

Policy on Plagiarism

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

"Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development" (Academic Senate Policy S07-2). The policy on academic integrity can be found at <http://www.sjsu.edu/senate/S07-2.htm>.

Plagiarism will lead to grade penalties and a record filed with the department chair. It may also result in your failing the course and/or having the incident permanently noted in your SJSU student records.

If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues *before* you hand in written work.

Learning when to cite a source and when not to is an art, not a science. However, here are some examples of plagiarism that you should be careful to avoid:

- If you use a sentence (or even a part of a sentence) that someone else wrote and do not put it in double quotes and reference the source, you have committed plagiarism.
- If you paraphrase somebody else's theory or idea and don't reference the source, you have committed plagiarism.
- If you use a picture or table from a web page or book and don't reference the source, you have committed plagiarism.
- If your paper incorporates data someone else has collected and you don't reference the source, you have committed plagiarism.

The University of Indiana has developed a very helpful website with concrete examples about proper paraphrasing and quotation. See in particular:

- <http://www.indiana.edu/~wts/wts/plagiarism.html>
- <http://www.indiana.edu/~istd/examples.html>.
- <http://education.indiana.edu/~frick/plagiarism/item1.html>

At the last page listed you will find a quiz to test how well you understand proper paraphrasing.

If you still have questions after reading these pages, feel free to talk to the instructor personally. There is nothing wrong with asking for help, whereas even unintentional plagiarism is a serious offense.

Recommended Citation Style

When you cite another author's work in any written assignments, use "Turabian" style:

- For print sources, follow the directions in Kate Turabian's *A Manual for Writers of Term Papers, Theses, and Dissertations* (University of Chicago Press, 1996). Copies are available in the SJSU King library and in the main office of the Department of Urban and Regional Planning (WSH 216). Additionally, the book is relatively inexpensive, and you may wish to purchase a copy (there are often cheap, used copies available through on-line book sellers).
- For electronic sources, follow the directions at Maurice Crouse's page "Citing Electronic Information in History Papers" available at <http://cas.memphis.edu/~mcrouse/elcite.html>. The page begins with a discussion of the theory behind good citation style, and then provides detailed examples of how to cite all sorts of sources. Be sure to follow the guidelines for Turabian-style citations.

Please note that Turabian's book describes two main systems for referencing materials: (1) footnotes or endnotes, plus a corresponding bibliography, or (2) in-text parenthetical references, plus a corresponding reference list. Either system is fine, but you need to be consistent with your referencing style.

Disability Accommodation

If you need course adaptations or accommodations because of a disability, or if you have emergency medical information to share with me, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Disability Resource Center to establish a record of their disability (408-924-6000).

Class Schedule

Please note: In the Course Schedule below, the chapter numbers for the Earl Babbie book are as per the 10th Edition. The Chapters titles for the 10th Edition are provided at the end of the syllabus. If you buy the 9th Edition, look for the corresponding chapter titles.

Chapter numbers for the Salkind book are as per the 2nd Edition.

1. August 25

Course Overview; Social Research

Required reading:

Earl, Babbie. Ch. 1, 2, 3 and 5

2. September 1

Labor Day – No Class

3. September 8

Statistical Analysis - I

Descriptive Statistics

Required reading:

Salkind, Neil. Ch. 2 and 3

1st Take Home Exercise Set

4. September 15

Statistical Analysis - II; Overview of Census Data

Normal Distribution; Hypothesis Testing; T-statistics

Required reading:

Salkind, Neil. Ch. 6, 7 and 8

5. September 22

Statistical Analysis - III

Tests between Means of Different Groups; Tests Between Means of Related Groups; ANOVA

Required reading:

Salkind, Neil. Ch. 9, 10 and 11

1st Take Home Exercise Set Due

6. September 29

Statistical Analysis - IV

Factorial ANOVA; Chi-squared tests; Correlation

Required reading:

Salkind, Neil. Ch. 12, 13 and 15

2nd Take Home Exercise Set

Term Project Introduced (Review of Survey Questionnaire; Review of Survey Data File; Assignment of Survey Teams)

1st Take Home Exercise Graded

7. October 6

Statistical Analysis – V; Survey Research – I

Neighborhood Profile Memo Due; Research Questions Due

Revised 1st Take Home Exercise Due

8. October 13

Survey Research – I; Remaining preparatory work for the October 18 Survey (including each Team's sampling strategy)

Required reading:

Earl, Babbie. Ch. 7 to 10

Research Questions Due

Revised 1st Take Home Exercise Graded

October 18 – date for field Survey**9. October 20**

Survey Research – II; Lab Time for Term Project

Mid-Term Exam (take home)

3rd Take Home Exercise Set

Completed Surveys Due (paper copy of the completed surveys and the electronic data file)

Survey Experience Memo Due

Survey Research Questions Graded

10. October 27

Research Design – I; Lab Time for Term Project

Required reading:

Earl, Babbie. Ch. 4 and 6

2nd Take Home Exercise Set Due

Revised Research Questions Due

11. November 3

Research Design – II; Computer Graphics; Lab Time for Term Project

2nd Take Home Exercise Graded

Revised Research Questions Graded

12. November 10

Research Design – III; Lab Time for Term Project

Term Project: Term Project Analysis Report Due

13. November 17

Lab time for Term Project

3rd Take Home Exercise Set Due

Term Project Analysis Report Graded

Revised Term Project Analysis Report Due November 20

14. November 24

IRB; Lab Time for Term Project

Mid-Term Exam Due

Revised Term Project Analysis Report Graded

3rd Take Home Exercise Graded

15. December 1

In-Class Presentation of Term Project
Revised 3rd Take Home Exercise Due
Mid-Term Exam Graded

16. December 8

In-Class Presentation of Term Project
Revised 3rd Take Home Exercise Graded

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APPENDIX:

Chapter Titles: Babbie 10th edition

Ch. 1

Human Inquiry and Science

Ch 2

Paradigms, Theory and Social Research

Ch 3

The Ethics and Politics of Social Research

Ch 4

Research Design

Ch 5

Conceptualization, Operationalization, and Measurement

Ch 6

Indexes, Scales, and Typologies

Ch 7

The Logic of Sampling

Ch 8

Experiments

Ch 9

Survey Research

Ch 10

Qualitative Field Research

Ch 11

Unobtrusive Research

Ch 12

Evaluation Research

Ch 13

Qualitative Data Analysis

Ch 14
Quantitative Data Analysis

Ch 15
The Elaboration Model

Ch 16
Social Statistics

Ch 17
Reading and Writing Social Research