SAN JOSE STATE UNIVERSITY
DEPARTMENT OF URBAN AND REGIONAL PLANNING

Quantitative Methods I

URBP 204 A

SPRING 2008

Prof. Shishir Mathur
Office: WSQ 216E
Phone: 408-924-5875
Email: shishir.mathur@sjsu.edu

Time: Monday 4:00 pm - 6:45 pm
Room: WSQ 208
Office Hours: Monday 11 am – 12:30 pm; 1 pm - 3 pm
Tuesday 5:00 pm – 6:30 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) understand the role of research methods in overall research design;
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; and
e) 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.
You may use the 9th edition 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.
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

1. January 28
Course Overview

2. February 4
Social Research
Required reading:
Earl, Babbie. Ch. 1, 2, 3 and 5

3. February 11
Statistical Analysis - I
Descriptive Statistics
Required reading:
Salkind, Neil. Ch. 2 and 3
1st Take Home Exercise Set

4. February 17
Statistical Analysis - II; Overview of Census Data
Normal Distribution; Hypothesis Testing; T-statistics
Required reading:
Salkind, Neil. Ch. 6, 7 and 8

5. February 25
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
Term Project Introduced (Review of Survey Questionnaire; Review of Survey Data File)

6. March 3
Statistical Analysis - IV
Factorial ANOVA; Correlation; Chi-squared tests
Required reading:
Salkind, Neil. Ch. 12, 13 and 15
2nd Take Home Exercise Set
Term Project: First Set of Research Questions Due

7. March 10
Statistical Analysis - V; Discussion of First Set of Research Questions
Term Project: Neighborhood Profile Memo due

8. March 17
Survey Research - I
Required reading:
Earl, Babbie. Ch. 7 to 10
2nd Take Home Exercise Set Due; Revised First Set of Research Questions Due; and Second Set of Research Questions Due

9. March 24
Spring Recess - No Class

10. March 31
Caesar Chavez Day - No Class

11. April 7
Survey Research - II; Computer Graphics; Discussion of Second Set of Research Questions
Mid-Term Exam (take home)
3rd Take Home Exercise Set

12. April 14
Research Design - I; Revised Second Set of Research Questions Due
Required reading:
Earl, Babbie. Ch. 4 and 6

13. April 21
Research Design – II; Lab Time for Term Project
Term Project: Term Project Analysis Report Due

14. April 28
IRB; Lab time for Term Project
3rd Take Home Exercise Set Due; Mid-Tern Exam Due

15. May 5
In-Class Presentation of Term Project

16. May 12
In-Class Presentation of Term Project