

SAN JOSÉ STATE UNIVERSITY
URBAN AND REGIONAL PLANNING DEPARTMENT
URBP 204A: QUANTITATIVE METHODS I
FALL 2011

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| Instructor: | Amy Fauria |
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| Email: | amy_fauria@yahoo.com |
| Office hours: | Tuesdays: 6:00pm to 7:00pm |
| Office location: | WSQ 218B |
| Class days/time: | Tuesdays: 7:15pm to 10:00pm |
| Classroom: | WSQ 208 |
| Class website: | http://urbp204a.pbworks.com |
| Prerequisites: | None |

Course Catalog Description

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

Course Description and Student Learning Objectives

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 significant” 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 provides an overview of survey research. Thereafter, it focuses on learning statistical tools needed to answer specific research questions. It then reviews the elements of research design. In the end it requires the students to conduct statistical analysis of survey data, and to present the research findings to the class.

Upon successful completion of the course, the students will be able to:

- a) identify the overall strengths and weaknesses of quantitative, qualitative, experimental, and survey research methods; and assess which research methods, given the resource constraints, are most appropriate for answering the research question;
- b) develop research a question worthy of informing public policy, and identify the statistical tool (the tools learned in this class are: Tests Between Means of Different Groups, Tests

- Between Means of Related Groups, ANOVA, Factorial ANOVA, Correlation, and One- and Two- Factor Chi Square) appropriate for answering the research question;
- c) develop survey research questions that conform to conventional best practices in survey design;
 - d) critically evaluate the strengths and weaknesses of various non-probability and probability-based sampling techniques;
 - e) present quantitative data and results in text and graphic formats;
 - f) identify the policy implications of statistical test results; and
 - g) read a research article that uses multiple regression method and:
 - i. identify the aim of the paper;
 - ii. identify the data sources;
 - iii. identify the dependent and the independent variables;
 - iv. using the regression result table, identify the level of statistical significance, and describe the direction and magnitude of the impact of each independent variable on the dependent variable.

Planning Accreditation Board (PAB) Knowledge Components

This course partially covers the following PAB Knowledge Components: 4.2.3.(a), 4.2.3.(b) and 4.2.3.(d). A complete list of the PAB Knowledge Components can be found at <http://www.sjsu.edu/urbanplanning/courses/pabknowledge.htm>.

Required Course Readings

There are two required text books for this course:

Babbie, Earl. 2010. *The Practice of Social Research*, Twelfth Edition. Belmont, CA: Wadsworth. (ISBN: 0-495-59841-0)

Salkind, Neil J. 2011. *Statistics for People Who (Think They) Hate Statistics*, Fourth Edition. Thousand Oaks, CA: Sage. (ISBN 978-1-4129-7959-7)

Course Assignments and Grading Policy

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

Your grade for the course will be based on the following assignments/activities:

| Assignment Title | Percent of Total Grade |
|--|------------------------|
| Assignment 1: Research Design and Neighborhood Quality of Life | 15% |
| Assignment 2: Data Collection and Spreadsheet Analysis | 20% |
| In-class Midterm | 20% |
| Term Project – Report | 30% |
| Term Project – Presentation | 10% |
| Class Participation | 5% |

The class participation element will be based on participation in class discussions and activities. Late work will not be accepted, except with the prior permission of the professor(s).

Course grade and corresponding numerical grade:

A+ (97 to 100); A (93 to 96); A- (90 to 92); B+ (87 to 89); B (83 to 86); B- (80 to 82); C+ (77 to 79); C (73 to 76); C- (70 to 72); D+ (67 to 69); D (63 to 66); D- (60 to 62); and F (below 60).

Academic Integrity Statement, Plagiarism, and Citing Sources Properly

SJSU's Policy on Academic Integrity states: "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 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.

Plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. In severe cases, students may also fail the course or even be expelled from the university.

If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final 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 don't identify the language as a quote by putting the text in quotation marks and referencing the source, you have plagiarized.
- 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 webpage or book and don't reference the source, you have committed plagiarism.
- If your work 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 the following pages:

- Overview of plagiarism at <http://www.indiana.edu/~istd/overview.html>
- Examples of plagiarism at <http://www.indiana.edu/~istd/examples.html>
- Plagiarism quiz at <http://www.indiana.edu/~istd/test.html>

If you still have questions, feel free to talk to me personally. There is nothing wrong with asking for help, whereas even unintentional plagiarism is a serious offense.

Citation Style

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian's "A Manual for Writers of Research Papers, Theses, and Dissertations, 7th edition" (University of Chicago Press, 2007, ISBN-10: 0-226-82336-9). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy. Please note that Turabian's book describes two systems for referencing materials: (1) "notes" (footnotes or endnotes), plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list – either style is acceptable.

Accommodation for Disabilities

If you need course adaptations or accommodations because of a disability, 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 requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

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Course Schedule for Tuesday Classes

The schedule below outlines the lecture topics and the recommended pace of the reading. The readings are for the week of the lecture. The assignments are due the day they are listed. Any changes to this schedule will be announced in class with as much notice as possible.

| Date | Topic | Reading | Assignment |
|-------------|---|------------------------------|-------------------|
| 8/30 | Course Overview; Social Research | B: 1, 2, 3 S: 1, 16, 19 | |
| 9/6 | Social Indicators and Data | B: 4, 5 | |
| 9/13 | Census Data Overview | S: 20, 21 | |
| 9/20 | Survey Research: Part 1 | B: 6, 9, 10 S: 6 | |
| 9/27 | Survey Research: Part 2 | B: 7, 8 S: 8 | Assignment #1 Due |
| 10/4 | Statistical Analysis: Descriptive Statistics | B: 11, 12 S: 2, 3 | |
| 10/8 (Sat) | Neighborhood Survey | | |
| 10/11 | Statistical Analysis: Normal Distribution, Hypothesis Testing, T-statistics | B: 13, 14 S: 7, 9, 10, 11 | |
| 10/18 | Statistical Analysis: Test Between Means, ANOVA | B: 15, 16 S: 12, 13, 14 | |
| 10/25 | Statistical Analysis: Correlation, Chi-Squared | S: 5, 15, 17, 18 | Assignment #2 Due |
| 11/1 | Midterm | | |
| 11/8 | Research Design: Computer Graphics | S: 4 | |
| 11/15 | Research Design: Handling Data, Research Ethics | B: 17 | |
| 11/29 | Lab Time | | |
| 12/6 | Final: In-Class Presentation (group 1) | | Term Project Due |
| 12/13 | Final: In-Class Presentation (group 2) – this class starts at 6:45pm | | Term Project Due |

B: Earl Babbie's *The Practice of Social Research*

S: Neil J. Salkind's *Statistics for People Who (Think They) Hate Statistics*