SOCIOLOGY 476/L: Social Statistics

University of Hawai'i at Mānoa, Summer Session 2009

COURSE SYLLABUS

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UH CATALOG COURSE DESCRIPTION

SOC 476 Social Statistics (3): Common statistical procedures emphasizing univariate and bivariate description; some attention to multivariate techniques and statistical inference, within context of research procedures. Pre: junior standing and 300, graduate standing; or consent. **WI, DS**

SOC 476L Social Statistics Laboratory (1): Required lab for computer applications for analysis of sociological data. CR/NC only. Co-requisite: 476.

INSTRUCTOR'S ADVICE TO STUDENTS

This syllabus is different from many others. It is longer than some, more detailed than most. But most importantly, it is designed to help you successfully pass the course. Please keep this syllabus for reference during the course.

The course requires a considerable amount of work and time. Given this course is designated as *Writing Intensive (WI)*, this is especially true. In the following pages there are many suggestions to you, but the most crucial one is this: get help as soon as you think you need it. Do not create an insurmountable "catch-up" problem for yourself. I offer generous office hours. If you need help, come see me.

Because the Extension schedule is somewhat concentrated and the learning process is a cumulative one, it is imperative that students do not fall behind and, to this end, the following practices will be adopted:

- 1. Before each class, students may place their completed Suggestion/Question Forms (see page 9) at my lectern or, at any time, in my mailbox.
- 2. Each homework assignment will be graded and individual feedback provided. Thereafter, homework assignments may be resubmitted for an improved grade.
- 3. After term examinations, each student will be provided with an individual grading sheet that explains any deduction of points. Students are encouraged to meet with me independently to discuss their progress.
- 4. Generous office hours will be offered.

INTRODUCTION

Sociology is the study of human social behavior. Compared to some of the physical sciences, it is a relatively young science. Nevertheless, the systematic understanding of our own behavior is valuable to us as individuals, as groups, and as nations.

In the *Sociological Imagination*, C. Wright Mills defines the relationship of the individual to the larger society. Similarly, the *Statistical Imagination* calls for viewing data in a number of larger contexts – essentially proportional thinking, visualizing a part to a whole.

A course in statistics is often the source of much fear and loathing among college students. Many students believe that statistics are incomprehensible and downright mind-numbing. This is unfortunate because, given the opportunity, statistics can be both exciting and intellectually challenging. Statistical analysis may be likened to a crime scene investigation (CSI), only instead of using standard forensic tools you use numbers, data, and formulae. The use of statistics allows researchers to uncover hidden relationships between variables which can lead to new and exciting knowledge.

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This course provides an introduction to statistical theories and techniques appropriate for answering sociological questions through the analysis of quantitative data. Statistics require numerical calculations, some by hand, some using a calculator or a computer. However, the focus of the course will be on the concepts and information conveyed by numbers – not on calculations *per se*. The course provides an introduction to both descriptive and inferential statistics, the various techniques available to analyze data, and the specialized software used to carry out statistical analysis.

By the end of the course, you will be able to select an appropriate analysis technique for a given situation, perform the analysis, and correctly interpret any results. To accomplish such goals, this course will utilize a combination of lecture, class discussions, computer exercises, and problem sets. Lectures will focus on specific analysis techniques and methods whereas discussions will focus on issues raised in the reading assignments, problem sets, and computer exercises.

It is true that statistics is challenging. Keep in mind that learning statistics is analogous to learning a new language – it takes time to become comfortable with new concepts and terminology. Above all, do not become discouraged or give up!

LEARNING OBJECTIVES

The overall goals for this course are threefold.

- 1. Students should learn statistical concepts sufficiently well to be able to apply them to new circumstances.
- 2. Students should improve their ability to evaluate the comprehensiveness and adequacy of published statistical analyses. Students should be able to make inferences about a population based on a random sample.
- 3. Students should gain some insight into the underlying statistical methods employed by sociologists in their research and should foster the ability to constructively criticize the methods used in any social science study.

The textbook offers specific learning objectives at the end of each chapter. I encourage you to study them as part of your preparation for examinations.

OFFICE HOURS, MAIL BOX AND EMAIL

Office hours will be negotiated during the first class meeting. It is pointless to offer office hours when students cannot attend. Once office hours have been established, no appointment is necessary. I will be faithful to my office hours, but if I am delayed or temporarily in another office, I will leave a note on my door to that effect.

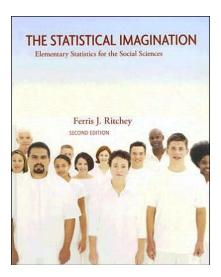
Many routine administrative office matters, such as signing add-drop slips can be handled before or after class.

If you would like an appointment with me outside regular office hours, arrangements can be made via email. You may leave messages or assignments in my mailbox in Saunders 247. Another means of communication (anonymously, if you wish) is by the suggestion form included at the end of the syllabus. Make a suggestion, bring about a complaint, or just remind me of something....

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REQUIRED TEXTBOOK

Ritchey, Ferris J. 2008. *The Statistical Imagination: Elementary Statistics for the Social Sciences*. 2nd ed. Boston: McGraw-Hill.



 $\begin{tabular}{ll} \textbf{Title:} The Statistical Imagination with SPSS Student \\ Version 14.0 \end{tabular}$

Hardcover: xvi, 656 pages

Publisher: McGraw-Hill Humanities/Social

Sciences/Languages; 2nd Edition (January 23, 2007)

ISBN-10: 0073331600 ISBN-13: 978-0073331607

Product Dimensions: 9.2 x 7.4 x 1.2 inches

Shipping Weight: 2.5 pounds

List price: \$111.56

UH Bookstore: TBA Amazon: \$111.56

Barnes & Noble: \$118.75 (Members, \$95.00)

Borders: \$111.56 eCampus: \$101.51

OPTIONAL MATERIALS

- 1. An inexpensive pocket calculator with a square root ($\sqrt{}$) key; and a summation key (Σ) is desirable. A statistical or scientific calculator is NOT required.
- 2. A three-ring binder in which to file course handouts and assignments. You will find this strategy helpful in preparing for exams.

MATERIALS ON RESERVE

A copy of the course textbook will be made available at Sinclair Library with a two-hour loan period. Likewise, assignment and examination solutions sets will be on reserve.

ATTENDANCE POLICY

Sometimes it is necessary to miss a class. If you must miss a class, please arrange with a classmate to borrow notes. I will not assume responsibility for providing lecture notes for missed classes.

Attendance will be taken at the beginning of each class and computer lab. While attendance is not explicitly used in the calculation of your overall course grade, I am required to report excessive absences to your academic dean. The matter will then be left to the dean's discretion.

Having explained the attendance policy, please know that research has shown — and my experience confirms — that absenteeism is correlated with lower grades. This is especially true of this course as the knowledge is cumulative with each step building on the previous step. Inconsistent attendance will create insurmountable "catch-up" problems for the student.

In other words, absenteeism is counter-productive to your academic objectives and strongly discouraged. However, this course will come easily to anyone who attends all classes and labs, keeps up with the assignments, and gets help when needed.

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METHOD OF EVALUATION: Assignments, Examinations and the Course Grading Criteria

The overall grading structure of the course will consist of class participation (5%), 14 homework assignments from the textbook (25%), two term examinations (40% = 20% + 20%), and a final exam (30%).

Assignments:

Assignments provide previews and "practice" for examinations. They are designed to encourage students to keep up with course material and thereby learn and do well in the course.

When preparing homework assignments, you are encouraged to collaborate with one another. Working together often serves as a means of accelerating student learning while reducing stress. However, collaboration does not sanction plagiarism. You are entirely responsible for your own answers.

Assignment solution sets will be provided after assignments are returned; therefore, *under no circumstances* can an assignment be accepted late. See page 7 for assignment due dates.

However, once an assignment has been graded and returned, you have the opportunity to resubmit your assignment in order to earn up to a full score. It is important to understand and learn from mistakes. In resubmitting assignments, in plain English, explain what portion of the exercise you did not initially understand and how you arrived at your new answer.

In some cases, the solution set may provide enough clarification for you. In other cases, you should see me. The assignments are learning opportunities. Make full use of each and every assignment.

Examinations:

Two term examinations and a final examination will be administered over the course of the semester. Exams will directly reflect lecture and textbook content. Everyone is required to take the final examination at the specified date and time.

All examinations are open book. However, do not think this is a free pass. If you have not been diligent in studying the coursework, the open book will be of minor benefit. Learning "on the fly" during an examination is not a strategy for success.

When taking an exam, be sure to bring a sufficient number of sharpened pencils, an eraser, and a calculator.

Warning: Do NOT miss an exam! Makeup exams are given the day of the final examination. They are made more difficult so as to negate any advantage a student may gain from having additional time. To do otherwise would put your classmates at a severe disadvantage. Make-up examinations are seldom passed.

Course Grading Criteria:

SPECIAL WARNING: The Mānoa Writing Program requires that "Students must adequately complete all writing assignments to pass the course with a D grade or better. Students who do not complete all writing assignments will get a D- or an F and will not earn WI Focus credit."

This course employs a criterion grading system. Therefore, theoretically, everyone in the class could earn an "A". This helps to prevent students from being penalized in the event one or two students do exceptionally well. To <u>assure</u> a specific grade, consider the following scale:

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98-100% = A+	87-89% = B+	77-79% = C+	67-69% = D+
94-97% = A	83-86% = B	73-76% = C	63-66% = D
90-93% = A-	80-82% = B-	70-72% = C-	60-62% = D-

EXTRA CREDIT PROJECT

Following the two term examinations, should any students feel the need to raise their grades, they may write an optional paper (5-8 pages) for extra credit. This will provide an opportunity for them to attain an overall higher course grade.

KOKUA FOR STUDENTS WITH DISABILITIES

Any students who feel they may need an accommodation based on the impact of a disability are invited to contact me privately. I will be happy to work with you and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA may be reached at:

Queen Lili'uokalani Center for Student Services 013 2600 Campus Road, Honolulu, HI 96822

Hours: Monday-Friday, 7:45am-4:30pm

Tel.: (808) 956-7511 (V/T) or (808) 956-7612 (V/T)

Fax: (808) 956-8093 Email: kokua@hawaii.edu

Website: http://www.hawaii.edu/kokua/

The KOKUA Program — *Kahi O Ka Ulu'Ana* ("The Place of Growing") — is the primary campus unit responsible for providing academic access services to students with disabilities toward equal opportunity. Creating equal access is a shared responsibility of students, faculty, KOKUA, and the entire campus community. KOKUA is administratively situated in the Office of Student Equity, Excellence, & Diversity within the Division of Student Affairs.

IMPORTANT NOTE CONCERNING STUDENT CONDUCT

Students are required to abide by the University of Hawai'i at Mānoa Student Conduct Code. Note that "the University of Hawai'i at Mānoa exists for the pursuit of knowledge through teaching, learning, and research conducted in an atmosphere of physical and intellectual freedom. Moreover, members of the UH academic community are committed to engage in teaching, learning, research, and community service and to assist one another in the creation and maintenance of an environment which supports these activities. It is therefore the policy of the University that members of the academic community may not violate the rights of one another nor disrupt the basic activities of the institution (as provided in section 1-4, chapter 1 of the Board of Regents' Bylaws and Policies [Part D]). Students who are disruptive are, consequently, subject to a variety of academically related penalties which may include reprimand, probation, restitution, suspension or expulsion" (http://www.manoa.hawaii.edu/students/conduct/).

Furthermore, recognize that the code prohibits all forms of scholastic dishonesty, including cheating, plagiarism, and falsification or misrepresentation of experimental data. The code covers all written and oral examinations, term papers, creative works, assigned computer related work, and any other academic work done at the University of Hawai'i. Any violation of the student code will be reported.

Any further questions regarding the Conduct Code should be addressed to the Office of the Dean of Students, Bachman Annex 10, phone V/TT (808) 956-3290.

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SCHEDULE OF ASSIGNMENTS AND EXAMINATIONS

✓	ASSIGNMENT	CHAPTER QUESTIONS	CHAPTER EXERCISES	DUE DATE
	Chapter 1	1, 2, and 8	Problem Set 1D	07/08/2009
	Chapter 2	3, 7, and 10	Problem Set 2D	07/10/2009
	Chapter 3	1, 3, and 8	Problem Set 3D	07/13/2009
	Chapter 4	9, 10, and 11	Problem Set 4D	07/15/2009
	Chapter 5	3, 5, and 21	Problem Set 5D	07/17/2009
	EXAMINATION #1			07/20/2009
	Chapter 6	2, 9, and 17	Problem Set 6D	07/22/2009
	Chapter 7	8, 9, and 10	Problem Set 7D	07/24/2009
	Chapter 8	1, 2, and 3	Problem Set 8D	07/27/2009
	Chapter 9	1, 2, and 7	Problem Set 9D	07/29/2009
	Chapter 10	2, 5, and 21	Problem Set 10D	07/31/2009
	EXAMINATION #2			08/03/2009
	Chapter 11	9, 16, and 17	Problem Set 11D	08/05/2009
	Chapter 13	2, 3, and 7	Problem Set 13D	08/07/2009
	Chapter 14	3, 7, and 9	Problem Set 14D	08/10/2009
	Chapter 15	2, 3, and 10	Problem Set 15D	08/12/2009
	FINAL Examinatio	n		08/14/2009

General Instructions for Preparing Assignments

1. Presentation quality is a grading criterion

Neatness counts. All answers must be legible and given in context. Demonstrate each step of the problem, theoretically and mathematically.

2. Do not skip the steps

For hypothesis tests, use the six steps of statistical inference (unless otherwise noted in the assignment). For confidence intervals, present the five steps in computing them.

3. Think and foster the statistical imagination

At the end of each assignment, give a one half- to one full-page summary of (a) insights derived about the statistical procedures and (b) skills required for organizing and completing the procedures. Do not simply report the statistics such as "I learned how to do a t-test in this assignment." Rather, discuss how this assignment furthered your statistical imagination, the strengths and weaknesses of statistical procedures, and any "aha" moments you experienced while meeting the challenge of completing the assignment.

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COURSE CALENDAR

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
>	5	6 First Class Meeting	7	8	9	10	11
July	12	13	14	15	16	17	18
	19	20 TERM EXAM	21	22	23	24	25
2009	26	27	28	29	30	31	

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
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August	2	TERM EXAM	4	5	6	7	8
A	9	10	11	12	13	14 FINAL PAPER DUE	15
2009	16	17	18	19	20	21 Holiday (Statehood Day)	22

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IMPORTANT REGISTRATION AND WITHDRAWAL DEADLINE INFORMATION

TBA Last day to register. Last day to receive 100% refund

TBA Last day to drop (No "W" on transcript). Last day to receive 50% refund.

TBA Last day to withdraw from class ("W" on transcript).

Disclaimer: If circumstances change, the instructor reserves the right to alter, modify, amend, or

otherwise change the syllabus. No changes are anticipated at this time, but if changes

do become necessary, students will be notified in writing.

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STUDENT SUGGESTION AND QUESTION FORM
This form may be completed at any time during the course and left at my lectern before class or in my mailbox.
I HAVE THE FOLLOWING SUGGESTION/QUESTION:
PLEASE ANSWER ME (CHECK ONE):
\square In class (if time permits).
☐ Through my email at:
\square No answer is required.
NAME (optional):