Sociology 3220-001
Introduction to Social Statistics
Winter 2019
T, Th: 1:00pm – 2:15pm
STATE 329

Instructor: Professor Jeffrey Kentor, 2233 FAB, Office Hours: T, Th: 2:30-3:30pm
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Texts

There is no required text. You will be provided with weekly study guides to assist your leaning activities. For those of you who would like a text, I recommend *Social Statistics for a Diverse Society*, by Nachmias and Leon-Guerrero. Any edition would do. Used versions can be purchased on the internet for around $10-$15.

Software

This course requires the use of SPSS Statistical Software. Students may obtain a free rental copy of SPSS that you can install on your personal computer. You can obtain your copy at https://commerce.wayne.edu/clearinghouse/ (click student software).   Please contact me ASAP if you are having trouble getting access to SPSS.

Calculator

A calculator that can compute square roots is required and should be brought to each course meeting. You should be able to get an acceptable calculator for less than $20. If you do not know how to operate your calculator, please ask me for guidance. **You may not use your phone as your course calculator.**

Course Summary

The goal of this course is to enable you to understand, calculate and interpret statistical analyses within the context of social science research. This course introduces you to the basic concepts of statistical analysis, both in theory (lectures) and practice (labs). We begin with a discussion of descriptive statistics, including frequency distributions, graphs, and measures of central tendency and variability. Next, we examine relationships between variables and measures of association, including bivariate regression and correlations. The course concludes with an introduction to inferential statistics, including estimation, t-tests, chi-square tests, and analysis of variance. In addition, there will be three computer labs during the semester, which will introduce you to SPSS statistical software.

Course Requirements and Grading

Regular – and on time - attendance is especially important in this type of class, where each week's work builds on the prior week's content. Missing even one class may make

it difficult for you to make satisfactory progress. To encourage you to keep up with the work, there will be several unannounced quizzes during the semester at the beginning of class. These quizzes MAY NOT be made up. However, I will drop your lowest quiz. There will be weekly homework assignments. Assignments are due at the beginning of class in the week following the session in which the material was discussed. Homework will not be graded, but turning it in each week is required, as it is a way for you to practice your statistics skills. There will be three exams during the semester. Prior approval is necessary to miss an exam, and will only be permitted in extreme cases. Please be sure to contact me or the teaching assistant immediately if you are having difficulty with any aspect of the course. Don't wait until the day before a test to ask for help – it may be too late!

Your grade will be calculated as follows:
Exams   50%
Quizzes   20%
Homework   15%
Labs   15%

93-100%   A
90-92%   A-
87-89%   B+
83-86%   B
80-82%   B-
77-79%   C+
74-76%   C
70-73%   C-
60-69%   D
<60%   F

Student Learning Outcomes

- Students will understand the basics of data organization.
- Students will understand univariate statistical techniques used to describe individual variables and when these techniques are appropriate.
- Students will be able to compute descriptive statistics by hand and using SPSS.
- Students will understand statistical inference and how probability theory informs inferential techniques.
- Students will be able to test univariate hypotheses using inferential statistical techniques
- Students will understand basic bivariate statistical techniques and know when these techniques are appropriate.
- Students will be able to carry out bivariate techniques by hand and using SPSS and interpret results.
- Students will understand how statistics can be used to answer research questions and test hypotheses.

General Course Policies

- **Office Hours.** Office hours are designed for me to answer specific questions or assist with specific aspects of an assignment. Please come to office hours with questions ready and attempt to complete assignments independently prior to coming to office hours. If you think you will need more than 20 minutes of time, please schedule an appointment.

- **Final Grades.** Final grades submitted by the instructor are **final.** If you believe that there has been a clerical error or other mistake you may inquire for an accounting of your grade. However, grades are based solely on your scores on course assignments and **will not be arbitrarily adjusted** at the end of the term. Students who aspire for a specific grade should ask me early in the semester about whether they are on track and work proactively to achieve their desired goals.

- **Academic Honesty.** Students are expected to display academic integrity in all of their work for this course. Academic dishonesty includes cheating, fabrication, and plagiarism. Any student suspected of dishonesty in their work will receive a zero for the assignment in question and referred to the department chair for further disciplinary action. If you have any questions about academic honesty, please contact me.

- **Honor Code.** Students are bound by the Wayne State University honor code that states: "Wayne State University holds its students to the highest academic standards. Pride in the University and in oneself requires students to maintain an environment free from any breach of academic honesty. As lifelong representatives of Wayne State, we seek to cultivate honor, integrity, and civility in order to ensure that we earn our degree honestly and that we provide an ethical platform for our continued success."

- **Course Drops and Withdrawals.** In the first two weeks of the semester, students may drop this class and receive 100% tuition and course fee cancellation. After the end of the second week, there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request in Academica. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: https://wayne.edu/students/register/dropping.

- **Disability.** If you have a documented disability that requires accommodations, you need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-

577-3365 (TDD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

<u>Course Outline and Readings</u>: Please note that this outline is tentative. Topic discussions, lab dates and test dates may change.

<u>January</u>
08   Course Introduction.
10   *Section 1*. What are Statistics? The Basics: variables, levels of measurement
15   Organizing and presenting data: Frequency Distributions & Graphic Presentation
17   Central Tendencies
22   Variability
24   Lab #1
29   Review
31   **Test #1**

<u>February</u>
05   *Section 2*: Relationships Between Two Variables
07   Relationships Between Two Variables, con't
12   Measures of Association for Nominal and Ordinal Variables
14   Measures of Association for Nominal and Ordinal Variables, con't
19   Regression and Correlation
21   Regression and Correlation, con't
26   Regression and Correlation, con't
28   Lab #2

<u>March</u>
05   Review
07   **Test #2**
12   No class
14   No class
19   Section 3: Inferential Statistics. The Logic of Inferential Statistics
21   Probability Sampling and Sampling Distributions
26   Estimation
28   Testing Hypotheses about Two Samples (t-tests)

<u>April</u>
02   Testing Hypotheses about Two Samples, con't
04   Tests of Statistical Independence (chi-square test)
09   Tests of Statistical Independence (chi-square test), con't
11   Comparing Multiple Means (analysis of variance)
16   Lab #3
18   Review

Test #3 will be given during exam week.