

ANTH 4713 - Statistical Concepts in Anthropology Fall 2009

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Introduction:

This course is an introduction to statistics for anthropologists. We will use anthropological examples with real data to understand how individuals and populations are described, as well as how different variables relate to each other. The major goal of the course is for the student to acquire basic statistical literacy and a greater understanding and appreciation of quantitative research methodology. In other words, at the end of the semester you should be able to read the results section of a scientific paper and more or less understand what it means (and, just as important, what it doesn't mean).

Previous exposure to statistics and/or computer literacy is neither expected nor required. Completion of Anth 1113 (General Anthropology) or junior standing is a prerequisite. This course fulfills the research analysis requirement for anthropology majors. Graduate students may enroll for graduate credit.

Required materials:

The textbook for this course is *Statistics for Anthropology*, by Lorena Madrigal.

- Please make sure you get the second or third reprinting (1999 or 2000), as the original first printing (1998) contains many errors.

You will need a calculator for the course; please bring it to every class. We will frequently do in-class worksheets to help you understand that day's lessons, so a calculator is essential.

Course requirements:

9 homework assignments (15 points each):	135 pts
3 exams (100 points each):	300 pts
<u>2 short write-ups (30 points each):</u>	<u>60 pts</u>
Total	495 pts

The homework assignments are short assignments, typically two or three problems, which will be given out in class for you to complete at home. They will be due two classes after they are handed out. (So, for example, homeworks handed out Wednesday will be due Monday; those handed out Friday will be due Wednesday; etc.) Your homework grade will be based on 9

homework assignments, worth 15 points each. However, I will hand out 10 homeworks during the course of the semester. Thus, your lowest homework grade will be dropped. (This also means that if you do not hand in one assignment, it will not count against you.) Your homework score cannot exceed 135 points, e.g., there is no extra credit for completing every homework assignment.

You are expected to complete the homework by yourself; be sure to show your work in detail to get full credit. Homework assignments must be turned in by their due date; late homeworks will not be accepted (unless due to documented illness, deaths in family, etc.). You may turn in the homework assignment early to my departmental in-box if you prefer, or if you will be absent in class when the assignment is due.

The exams are not cumulative. They are closed-note and closed-book, though you may bring in a single-sided piece of paper with formulas written down on it. This page must be in your own handwriting, and cannot be photocopied; it must have your name on it, and must be turned in with the exam. You may also use your calculator during the exam. The final exam is simply another exam; it is not cumulative.

- Please note that make-up exams will be given only when (a) there are exceptional circumstances preventing you from taking the exam on the scheduled day (e.g., a serious illness requiring hospitalization, death of a family member), (b) you can provide written proof of the exceptional circumstances (e.g., a note from a physician), and (c) you notify me of the situation prior to the time of the exam. Outside of these circumstances, you will receive a zero for a missed exam. Make-up exams are not granted for dental appointments, flat tires, etc.

The short write-ups are short statistical analyses that will be done using a computer dataset I will provide. We do not spend much time on computers in this course, for two reasons: 1) the department does not have a computer lab and it is difficult to schedule one that is compatible with lecturing needs; and 2) the good statistical packages are expensive (even the student versions), and the free ones are not very user friendly. But I do think it is valuable for you to learn the basics of using a computer software package, because if you ever use statistics in the real world (i.e., outside of this class), you are most likely to do it on the computer. These two short write-ups can be completed using SPSS, a user-friendly software package which is available in all of the computer labs on campus. You will be given about two weeks to complete each assignment. As with homeworks, the short write-ups are due in class, though they can be handed in early if you prefer. Late short write-ups will not be accepted.

Graduate students enrolling in the course will have additional assignments throughout the semester, and will complete an additional research project using SPSS.

There will be no extra credit. Letter grades will be assigned on a ten point scale. (A = 90+, B = 80-89, etc.)

Other Requirements and Expectations (the fine print):

- 1) You are expected to come to class and participate in class discussions and in-class exercises.
- 2) Log in to Desire2Learn (D2L, <http://learn.ou.edu>) as soon as possible, and familiarize yourself with the site. Any handouts I pass out in class (including this syllabus) will be available on the course website. Lecture notes will also be available online after class, if attendance is high. If attendance is low, I will distribute lecture notes only to people who were in class that day. (Be advised that the lecture notes are no substitute for class attendance.)
- 3) Please act respectfully and courteously toward the rest of the class, including the instructor. This means not reading newspapers, not sleeping during class, not talking on your cell phone or text messaging (cell phones and pagers should be turned off during class), not engaging in disruptive conversations with your classmates, and so forth. I reserve the option of deducting points from your grade for persistent disrespectful behavior.
- 4) Academic misconduct—cheating and plagiarism—will be treated as a serious offense. Cheating includes the use of notes or other materials during exams and discussion of exam questions with other students during the exam period. Plagiarism includes the presentation of the work or ideas of others as your own. You are expected to know and understand university policy regarding academic misconduct (see <http://www.ou.edu/provost/integrity>). Academic misconduct may result in severe penalties, including a zero on the assignment in question, as well as further sanctions from the provost such as censure, suspension, or expulsion.
- 5) All students in this class are expected to sign the Honor Pledge on short write-ups and exams. The Honor Pledge reads: “*On my honor, I affirm that I have neither given nor received inappropriate aid in the completion of this exercise.*” Please write or type the pledge, and sign it, for every assignment you turn in. Any assignment that requires the Honor Pledge and is turned in without the signed pledge will not be graded. More information on the Honor Pledge is available at <http://www.ou.edu/honorcouncil/statement.pdf>.
- 6) The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 405/325-3852 or TDD only 405/325-4173. Students whose first language is not English should discuss any concerns or needs with me as soon as possible.
- 7) Students who need to miss a class because of a religious holiday, a university-sponsored activity (e.g., a scholarly competition, fine arts performances, an academic field trip) or a legally required activity (e.g., emergency military service, jury duty), should contact me in advance regarding their absence from class.
- 8) If you prefer to use a non-OU address for your e-mail: please either check your OU address regularly, or set your OU address to autoforward mail to your preferred address, so that you can receive important announcements and last-minute information.

Schedule of classes and topics:

Aug 24, 26, 28 – Introduction to Statistics (Ch. 1)

Aug 31, Sep 02 – Frequency distributions and graphs (Ch. 2)

Sep 04, 09, 11, 14, 16 – Descriptive statistics (Ch. 3)

- **Sept 07: No class (Labor Day)**

Sep 18, 21, 23, 25, 28 – Probability and statistics (Ch. 4)

Sep 30 – Exam 1 (Chs. 1 – 4)

Oct 02, 05, 07, 09 – Hypothesis testing (Ch. 5)

Oct 12, 14, 19, 21 – The differences between two means (Ch. 6)

- **Oct 16: No class (Fall Break)**

Oct 23, 26, 28, 30, Nov 02 – Analysis of variance (Ch. 7)

Nov 04 – Exam 2 (Chs. 5 – 7)

Nov 06, 09, 11, 13 – Nonparametric comparisons of samples (Ch. 8)

Nov 16, 18, 20 – Simple linear regression (Ch. 9)

Nov 23, 30, Dec 02 – Correlation analysis (Ch. 10)

- **Nov 25, 27: No class (Thanksgiving break)**

Dec 04, 07, 09, 11 – Analysis of frequencies (Chi-square) (Ch. 11)

Wednesday, December 16, 8:00 - 10:00 AM: Final Exam (Chs. 8 – 11)

A note on the timing of the final exam: this schedule is set by the University, and is beyond my power to change. Please do not ask me if you can take the final exam early so you can leave town. The University's policy on such matters is clear

(<http://www.ou.edu/bulletins/01catalog/HTML/policies.htm>):

“An examination may be rescheduled for an individual student only in emergencies such as the illness of the student, a serious illness or death in the immediate family or an unavoidable academic conflict of compelling importance. For such a conflict to be considered as grounds for rescheduling a final examination, the activity must be directly related to the student's academic work in the University. Such rescheduling must have the approval of the instructor or instructors concerned, the department chair or chairs concerned, and the dean of the college in which the student is enrolled and should be timed in such a way to avoid compromising the integrity of the examination.”