

Introduction to Social Statistics

Summer Semester 2004
SOCS 3305, Section 523, Call 11876

Class: Tuesday 6:00 – 10:00, JO 4.614
Office Hours: Tuesday 4:30 – 5:30
E-mail via WebCT

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COURSE INFORMATION

Description

This course introduces students to the basic tools of statistics and shows how they are used in the analysis of social science data. A fundamental understanding of these tools is a critical foundation for social science research in many fields. The course covers descriptive statistics, inference from samples, hypothesis testing, and the basics of regression analysis.

Objectives

The student will become acquainted with common statistics used in the social sciences, and will learn to compute these basic statistics as appropriate for the data at hand. Most importantly, the student will become an educated consumer of statistical information, with the ability to apply what is learned in class to statistical information presented in everyday life and in the course of education in the social sciences.

Requirements

Required Texts

Levin and Fox, *Elementary Statistics in Social Research*, 9th Edition, Allyn, Bacon, & Longman, 2002

Recommended Texts

Kranzler, *Statistics for the Terrified*, 3rd Edition, Prentice Hall, 2002

Ford, *Workbook for Levin and Fox Elementary Statistics in Social Research*, 9th Edition, Allyn, Bacon, & Longman

Resources

While we won't be working with large sets of numbers, the involved math will be sufficiently complex to require a calculator. Sophisticated, expensive graphing or programmable calculators are not necessary, and will be of no use to you. Simple arithmetic functions, as well as the ability to take square roots and raise numbers to powers will be helpful.

This class will make extensive use of **WebCT** for posting grades and resource materials, and this will require that you activate your NetID. **WebCT** is accessible at <http://webct.utdallas.edu>. If you have difficulty, see http://www.utdallas.edu/distlearn/students/webct_login.htm or call the help desk at (972)883-2911.

Prerequisites

College Algebra (MATH 1314 or equivalent)

WARNING! You *must* be able to do math at a college algebra level. If you cannot, and you do not seek remedial assistance, it is likely that you will fail this course! If you doubt your ability, check out the college algebra refresher in the back of the Levin & Fox book. Many errors on tests and assignments arise from improper execution of basic algebra: order of operations, powers, roots, and equations. DO NOT FEAR! Remedial help *is* available, so there's no need to drop this course. Just *be sure* of your abilities before we start.

EXPECTATIONS

Your Expectations

You probably expect that statistics is hard. It's only as hard as you allow it to be. If you don't understand a particular concept, you probably aren't the only person who is struggling. Raise your hand and ask for help.

You expect, and deserve, timely feedback. I will make every attempt to have your assignments and quizzes graded and grades posted on WebCT as soon as possible.

My Expectations

You Want To Learn

I expect that you want to learn the material in this class. Whether this is a required course for your major or an elective you've chosen, I assume you want to get something out of the experience. If you do not want to learn, please do not come to class – your distractions are a disservice to those hard-working students who want to learn. Disruptive behavior will be referred to the Dean of Students for handling under the disciplinary code.

You Will Ask For Help

More than likely, at least one of you will be stumped at one point or another in this class. This course builds upon itself from day one, so if you find yourself lost after day 3, you'll likely be lost (and miserable) for the rest of the semester. As I said earlier, if you're having trouble with a concept, you're likely not the only one. Raise your hand in class and I'll take as much time as you, and others, need to clarify and make the point clear. Likewise, I'm available during the office hours listed above, or by appointment. The bottom line is ***SPEAK UP!*** I can't help you if you don't ask!

You Will Not Cheat (A.K.A. Academic Dishonesty)

The surest way to torpedo your academic career is to cheat. This course is open book and open note, so cheating (a.k.a. academic dishonesty) for our purposes means using your neighbor (with or without his or her permission) during a quiz or exam, or otherwise misrepresenting work done by others as your own (e.g., improper citation, copied homework, etc.). If I suspect any cheating on quizzes, the exam, or other assignments, the case will be referred to the Dean of Students for investigation.

You Will Come to Class

Class attendance is essential. It is also your responsibility. Versions of my lecture notes are made available via WebCT, and they provide an excellent resource. They are, however, no substitute for taking your own notes in class. Whether or not you attend, **you** are responsible for all material delivered in class. This will probably include: deviations from the published text, notification of errors in the text, rescheduled or cancelled tests, announcement of extra credit opportunities, etc. You can avoid many headaches by checking with a friend (or me) to see what you missed. Remember, this is a summer session class. If you miss one class, it's like missing 1.5 to 2 weeks during the regular semester.

GRADING

Grades in this class are based on the work that you do. There will be **NO** end of semester extra-credit assignments made on an individual-student basis. This does not preclude extra-credit opportunities that present themselves on occasional quizzes or exams.

Grade Structure

Grades in this class come from your performance on quizzes, the final exam, and the final project. Grades are structured as follows:

4 In-class Quizzes	60%
1 Final Exam	30%
1 Final Project	10%
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Total	100%

Letter grades will be assigned on the following point scale.

97% and above	A+	77% through 79%	C+
93% through 96%	A	73% through 76%	C
90% through 92%	A-	70% through 72%	C-
87% through 89%	B+	67% through 69%	D+
83% through 86%	B	63% through 66%	D
80% through 82%	B-	60% through 62%	D-
		59% and below	F

Quizzes

There will be four in-class quizzes throughout the semester, following each major section we cover. A portion of the class period prior to each quiz will be reserved for review, providing you an opportunity to ask any last minute questions.

There will be four quizzes, together worth 60% of your overall grade.

Final Exam

Statistics is, by its very nature, an accumulating course. There will be a comprehensive final examination given at the time specified in the tentative schedule. If there is sufficient interest (i.e., at least 5 students interested), I will be open to discussing a review session outside of class prior to the final exam.

The comprehensive final examination is worth 30% of your overall grade

Final Project

All students will complete a final project, allowing them to demonstrate the *application* of their new statistical knowledge to current social science literature. Essentially, this means reading a journal article that I assign and critiquing the authors' use of the statistics we learned in class. The project will be assigned toward the end of the semester.

The final project is worth 10% of your overall grade

Grading Policies

Missed Quizzes or Exams / Late Assignments

Arrangements to take a quiz or exam outside of the regularly scheduled time must be made *prior* to the test. This rule applies whether you intend to miss the quiz for personal reasons, academic reasons, or sanctioned school events (sports, field trips, etc.). If you demonstrate sufficient justification for rescheduling, I'll work with you to find a mutually beneficial time. If you wait to contact me until after I've given the exam or quiz, you'll need some evidence of your prior incapacitation, through no fault of your own, that prevented you from complying with this policy. Missing a quiz or the final exam will result in a quiz or exam score of 0. Makeup exams, while covering the same material, may differ in design and organization from the in-class exam.

Assignments are due at the beginning of the class period on the date I state. Assignments will not be accepted at any time after I collect them from the class at the beginning of a class period.

Open Book Policy

In the real world, your employer will not ask you to perform statistical calculation "without referring to your notes;" neither will I. **Your quizzes and the final exam will be open note / open book.** Resist the temptation to think these will be easy. Open book tests are generally harder because the answer is not in the book. While you may rely liberally on your notes and text for exams and quizzes, you may not rely on your neighbor (see Cheating).

Showing Your Work & Partial Credit (Sloppiness)

All assignments, quizzes, and exams done for this class must show all steps (i.e., all calculations). **To receive any credit for an answer, all work must be shown. If you only provide the "final" answer, you will not receive any credit for the answer. If I cannot read your answer, follow the steps that you have taken, and clearly see how you arrived at your answer, you will not receive any credit for the answer.**

Provided you have shown your work, your answer will be considered correct if it is within rounding error of the answer I have calculated on the key. Incorrect answers receive no credit. Partial credit is not given unless a particular item shows a partial credit breakdown. Partial credit for wrong answers is given in only one case, that of "serial" questions, in which your answer to one question is used in another. If you get the first question wrong, you will get the second one wrong, too. **Showing your work will enable me to see that you only got the second question wrong because of your errors in the first one, and you will receive full credit for that question.**

Reporting Grades

To respect your privacy, your grades will not be posted publicly, nor will they be provided by e-mail or telephone. Your grades for each assignment, quiz, or exam will be entered into **WebCT**. As soon as I enter them, you will have access to them. Do not call to ask for your grade, or ask when grades will be posted.

TENTATIVE SCHEDULE

This tentative schedule is *TENTATIVE*, subject to change with minimal notification. I reserve the right to change the dates for lectures, exams, and assignments from those shown below. All changes will be announced in class. It is your responsibility to listen for them. Remember, you're taking a semester's worth of material in 10 weeks. Missing one class is the equivalent of missing 1 or 2 weeks during the normal semester!

	Date	Material
1	5/18	Introduction, Chapter 1, Chapter 2
2	5/25	Chapter 3, Chapter 4, Review for Quiz 1
3	6/1	Quiz 1 , Chapter 5
4	6/8	Chapter 6, Review for Quiz 2
5	6/15	Quiz 2 , Chapter 7
6	6/22	Chapter 8, Chapter 9, Review for Quiz 3
7	6/29	Quiz 3 , Chapter 10
8	7/6	Chapter 12
9	7/13	Chapter 11, Review for Quiz 4
10	7/20	Quiz 4 , Review for Final Exam
	7/27	Final Exam

GENERAL MODULES

Ch. 1	About Statistics	Ch. 7	Differences Between Means
Ch. 2	Looking at Data	Ch. 8	ANOVA
Ch. 3	Measures of Central Tendency	Ch. 9	Chi Square
Ch. 4	Measures of Dispersion	Ch. 10	Parametric Correlation
Ch. 5	Probability and the Normal Curve	Ch. 12	Non-Parametric Correlation
Ch. 6	Sampling	Ch. 11	OLS Regression