

## Math 341 - Applied Statistics I

### Course Objectives and Topics

Math 341 is the first of two courses in the practice of statistics and helps prepare future teachers to teach statistics in high school and to understand educational statistics. Math 341 covers about half of the Advanced Placement Statistics syllabus, so if you would like to be able to teach AP Statistics, you also must take Math 441. Topics include basic probability, discrete and continuous probability distributions, expectation and variance, sample surveys and experiments, displaying and summarizing data, sampling distributions, the central limit theorem, inference for proportions, chi-square tests, least squares regression.

### Instructor

Ann Watkins, Ph.D., Professor of Mathematics  
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Office hours: TTh 3:00-4:15 in SN 427 and by appointment.

**Prerequisite:** Math 150B.

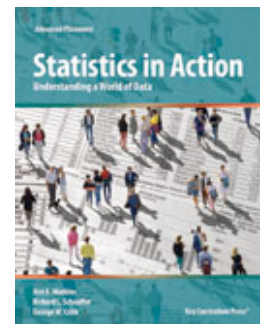
### Textbook and Computing

A.E. Watkins, R. L. Scheaffer, and G. W. Cobb,  
*Statistics in Action*, 2<sup>nd</sup> Ed. Key Curriculum Press,  
2008.

A graphing calculator with statistical functions will be necessary. Instructions for using the TI-83/84 may be downloaded at:

<http://www.keymath.com/x20391.xml>

Data sets may be downloaded from  
<http://www.keymath.com/x7871.xml>



### Course Requirements and Evaluation

Grades will be based on	final exam	35%
	tests (best 4)	65%

The grading scale will be: A: 90% and above, B: 80 - 89, C: 65 - 79, D: 50 - 64.  
Plus/minus grades may be used for borderline cases.

Because all students will be graded in exactly the same way, there will be no "extra" credit.

**Final** The cumulative final exam will be given on Thursday, December 10 from 8:00 - 10:00.

**Tests** There will be 5 tests, given on Tuesdays: 9/8, 9/29, 10/20, 11/10, and 12/1. Your lowest test grade will be dropped. There will be no make-up tests. If you miss a test, that will be the grade that is dropped. Tests, like the homework, will consist of a variety of questions: multiple choice, short answer, proofs, computations, and interpretations of the computations. They will cover material from the text, homework, and class activities, but mainly from the homework.

**Homework** Homework will be assigned almost every class period. Answers are in the back of the book. It will not be collected. I will be happy to look at your solution to any problem about which you are unsure of your answer.

### **Class Regulations**

Please turn off cell phones during class time. If you must answer a call, please leave the room and do not return until class is over.

Talking is very distracting to the people sitting near you, so please be respectful of other students and refrain from talking while the instructor or another student is speaking. (The students near you are equally distracted whether you are talking about statistics or not.)

### **University Regulations**

Please read the regulations about dropping a class in the CSUN catalog and schedule of classes. You can withdraw through SOLAR during the first three weeks of class. After that, it will be very difficult to drop (failing the class doesn't qualify).

Cheating will not be tolerated. If you cheat on a test (use unauthorized notes or your book, look at someone else's paper, etc.) or copy another student's homework or let them copy yours, you will receive an F in the course and the Dean of Students will be informed. Please read the pertinent pages in the CSUN catalog.

## How to Do Well in Statistics

- Never miss class.
- Do your reading and homework after every class session. This is necessary so you will understand the next lecture. Students who wait until right before a quiz to do their homework get D's and C's.
- Try to do the homework by yourself. Then get together with other students to compare solutions, checking each other's wording. Don't waste your time by allowing students into your study group who haven't tried the problems first.
- It is your responsibility to work through the assigned problems and get help on those you do not understand. Consult your study group, the instructor, or go to the Math Tutoring Lab if you get stuck or would like further explanation of a topic.
- Pay as much attention to wording, which can be tricky in statistics, as computation. This is not a mathematics class—it is a statistics class and statistics is about data in context (i.e. numbers that measure a real-life situation). Consequently, many problems will be graded like an essay in history or literature. A beautifully written answer that shows insight into the data will get more points than a poorly-written answer, even though both have correct computations.
- Keep in mind that the computations are done by the calculator or computer. That means that your grade will be based largely on how well you interpret and explain the computations and concepts.

C: *Technical Expertise.* You know what computations need to be done and do them correctly. You know the basic vocabulary.

B: *Expertise in Application.* You can apply what you have learned in new situations, interpreting the results more or less correctly, but your choice of wording is often poor. However, you can select the correct interpretation of the computations or concepts in a multiple-choice question. You may have the right idea, but don't explain concepts well.

A: *Conceptual Understanding.* You understand how the concepts are connected and can explain concepts in words, algebraically, and geometrically. Your interpretations of the computations and concepts are in context, correct, and well written. Your proofs are correct and well written.