

Instructor:

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MSB 205



Maybe you've always been good at math. Maybe not. Either way, I'm here to help you master some very new material (and maybe to unlearn old mistakes) so that you can analyze data intelligently, move ahead with your plans for transfer and - we all hope!—a job that will allow you to live comfortably and do meaningful work.

That's not easy today, when many students face real obstacles, and the kind of work we need is hard or impossible to find. So, while we're struggling with Statistics this semester, let's also spend a little time thinking about what education and work should really be like. And let's think about how we can make that happen!



**Math 227 (#4496) Spring 2015
TTh 4:30 - 6:35 p.m. in MSA 202
Statistics (UC:CSU 4 units)
SEE INSIDE FOR IMPORTANT INFORMATION!**



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CATALOG DESCRIPTION: This course is an introduction to the use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; hypothesis testing, including chi-square and t-tests; analysis of variance, and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education. In short, this statistics course emphasizes the analysis of collected data and how inferences about a population are made from that sample.

Prerequisite: Mathematics 125 or Mathematics 128 or Mathematics 123C with a grade of "C" or better, or placement through the WLAC Assessment process.

Instructor: Dr. Bonnie Blustein 310-287-4217 blusteb@wlac.edu

Office Hours: I will be in the classroom from 4:00 - 4:30 on Tuesdays and Thursdays specifically to help students in this class. If you need help or want to chat, the best time to find me in my office (MSB 205) is usually Wednesday or Thursday, 12:45-2 pm, but please stop by any afternoon to see if I'm free, or email me to set up an appointment.

Textbook: Michael Sullivan, Statistics: Informed Decisions Using Data We will mainly use the 3rd edition but a later one would be okay. ISBN for the student edition is 978-0-321-56802-1 or 0-321-56802-8. You can probably find a used copy for \$25 or less online. (WARNING: You DO NOT want Fundamentals of Statistics by the same author.)



Technology: Your text gives instructions on the use of Minitab, Excel, and the TI83/84 graphing calculator. We will mainly use the calculator; ask friends and relatives whether they have one that you can borrow for the semester. You might also be able to purchase one for around \$30 on Craigslist, Amazon or elsewhere.

Minitab is much more useful for some of the material in Ch. 13-14. A 1-month free trial of Minitab Express can be downloaded from estore.onthehub.com/WebStore. Do this early May.

Calculators or laptops with symbolic manipulation capabilities (CAS) are not allowed on tests. That includes the TI-Nspire series, Casio ClassPad or Algebra FX2+ or Prizm, HP Prime, etc. **Also not allowed on tests** are calculators built into a phone or any other device with communication capability.

Free tutoring is available in the Learning Resource Center (Library). Please use it! You may also use the Math study room (MSB 217) where an instructor is often accessible.

Students with disabilities should contact Disabled Students Programs and Services located in SSB 320 (310-287-4450) immediately to arrange accommodations. The instructor will do everything possible to comply with ADA and all other mandates, and to assist you.



Most of us are dealing with a lot besides class: job (or joblessness), family problems, child care, health or housing issues, and many other impacts of the deep crisis in our society today. The **WLAC Health Center** can hook you up with a counselor to help you deal with stress. Other programs on campus that can help include **Workforce Development, TRIO-SSS, EOP&S, Counseling, the Veterans' Office, and DSPS.** Let me know what you need, and I will try to point you in the right direction.

The LA County hotline is **211** - it refers you to publicly available services.

IMPORTANT DATES:

FIRST DAY OF CLASS: TUESDAY, February 10

Last day to add a class, or to drop without W: Friday, February 20

Last day to drop with W: Friday, May 8

Final Exam: Thursday, June 4, 4:30 - 6:30 p.m.

Studying STATISTICS will help you to understand "numbers in the news." It's also important in business, social science, and natural science. It is required for some majors at some universities, but requirements vary. Check with the program into which you expect to transfer. If your major does not require Statistics, or you are undecided about your major, please consider taking College Algebra (Math 245) or Trigonometry (Math 241), which will prepare you for the math needed in most scientific and technical fields.

HOW TO SUCCEED IN MATH 227:

Do a lot of math problems and make sure that your answers are correct!

Math is not a "spectator sport." Most students will need to spend 8-10 hours per week, outside of class, plus weekend time, practicing math. There's no other way to learn it.

- Specific problems will be assigned but not collected.
- Come to class early with questions.
- Form study groups! If you meet in the Library, a tutor might join you.
- Keep all of your work in an organized fashion and use it to study for tests.



Materials: Please bring your math notebook (with graph paper), pencils, a scientific calculator and the textbook to class each day.

Attendance: Please be in class on time every day, stay to the end, and participate in all class activities. College policy allows an instructor to drop a student who has missed more than six hours of class. If you have excessive absences (for any reason) AND you are not passing, you may be dropped without notice.

If you miss a test, you MUST call or email me ASAP to let me know why, and when you can take a make-up. If you miss two or more days in a row, please let me know why. If you can't complete the class, it is YOUR responsibility to drop the class ("withdraw") on or before Friday, May 8, 2015.

"Did I miss anything?" If you were absent, then Yes! The schedule in this packet tells you what we're working on each day. If you miss a class, look for an instructional video on YouTube or read the text, and try the homework problems. Consult a tutor or use the instructor's office hours to get help.

R E S P E C T: Yourself, Classmates, Instructor



- Please practice positive behavior (cooperation, civility, helpfulness, constructive engagement)
- Avoid disruptive behavior (side conversations, eating/drinking in class, wandering in and out of the room, coming late or leaving early without an urgent reason, etc.).
- Maintain the highest standards of academic honesty. Collaboration is encouraged on most homework, classwork, take-home assignments, and test corrections. However, you may NOT give or receive help on tests (except make-up points) and you may not turn in someone else's work as your own.

If you are discovered committing any act of academic dishonesty (cheating), you will receive no credit ("zero") for the test or assignment AND you will be suspended from class AND the case will be referred to the Vice-President for Student Affairs. For further information see the WLAC Catalogue and Schedule of Classes.

Evaluation/Grading

I am confident that you can succeed, if your algebra skills are sufficient and if you have enough time for the work. I am here to help you master the course material. “Grades” and “points” are feedback on your progress.

Ideally, education would be very different from today’s schooling and there would be no points or tests or grades. But since we are still struggling for an ideal society, I will have to assign you a grade in December, and it will be based on the rubric described below.



Projects, in-class activities, quizzes: 10% of grade

In-Class Tests (3) - 60% of grade

These will mainly be one-hour “constructed-response” (show all work) in-class exercises. They are NOT designed to impose time pressure. Make-ups will only be given if there is a valid, documented excuse and if requested promptly. **In-class tests are scheduled for THURSDAYS. No test scores will be dropped.**

Final Exam - 30% of grade

This will be a two-hour test. It will be cumulative but with emphasis on ch. 11-14.

Grades: “Incomplete” grades are extremely rare and may only be considered if a student is passing the class with a C or better on May 8 and is unable, due to an emergency, to complete the course on time. Otherwise, you must *withdraw* by Friday, May 8, 2015.

The **grading scale** will be no stricter than:

90-100% A 80-89% B 70-79% C 55-69% D under 55% F

However, if your weighted test average (including the final) or your score on the final is 70% or higher AND you have been attending regularly and taking tests, you will pass the class.

Math 227 Course SLOs

1. Given a set of sample data, students will perform a hypothesis test and correctly interpret the result.
2. Students will use a data set to perform a simple linear regression analysis, using appropriate technology, and use the results to create and interpret the sample linear regression equation and assess its utility.
3. Students will use mathematical principles of probability and symbolic representations to interpret discrete and continuous random variables, sampling distributions and confidence intervals.

Schedule Part I - Subject to change by Instructor

- These are the problems you should do AFTER we discuss the sections in class that day and BEFORE the next class period.
- ALWAYS check answers to odd problems in the back of the book, as you go.
- ALWAYS read the text of each assigned sections, make note cards for each definition or new concept AND answer the “concepts and vocabulary” questions at the start of each problem set.



Week		TUESDAY	THURSDAY
1	February 10, 12	1.1-1.4 Ch. 1 Review #1-30 all; Ch. 1 "Test" p. 61-62 #1-15	1.5-1.6, 2.1-2.2 Ch. 1 "Test" p. 61-62 #16-20 Ch. 1 Review #31-34 all 2.1 #12, 14, 17-29 odds; 2.2 #11, 14, 17, 25, 29, 33, 41, 47, 51
2	February 17, 19	2.3-2.4, 3.1-3.2 2.3 # 8, 13, 24, 27; 2.4 # 4, 9, 10, 15 3.1 #12, 16, 18, 25, 29, 30, 38, 43; 3.2 #20, 22, 27, 30, 38, 39, 42, 46;	3.3-3.5 3.3 #4, 6, 15, 18; 3.4 #13, 16, 18, 24; 3.5 #9, 11, 14; 3.5 #9-16 Ch. 2 "Test" pp. 123-125 all
3	February 24, 26	4.4 4.4 #7-14 REVIEW FOR TEST 1 Review all definitions and concepts; Ch. 2 Review #2, 6, 8; Ch. 3 review #1-5 all; Ch. 3 "Test" #1, 3, 4a; 6, 10	Last-minute questions Test 1 (ch. 1-3) Finish any remaining work from 4.4 Preview 5.1-5.2
4	March 3, 5	5.1-5.2 5.1 #11-39 odds, 48; 5.2 #5-33 odds, 26, 37-41 all	5.3-5.4 5.3 #7-21 odds, 22, 24, 28 5.4 #3-21 odds, 27,29,33, 35, 41, 45
5	March 10, 12	5.5-5.6 5.5 #1-49 odds, 59-60, 63, 69, 71 5.6 #1-3, 5-21 odds, 26, 28	6.1-6.3 6.1 #1-10 all, 11-35 odds; 6.2 #11-53 odds, 58; 6.3 # 1-13 odds, 17
6	March 17, 19	7.1-7.2 7.1 #1-28 all, 29-35 odds 7.2 #5-43 odds, 45-50 all	7.3-7.4 7.3 #3-29 odds, 18, 24, 30 7.4 #1-8 Ch. 5 "Test" #6, 16
7	March 24, 26	7.5 7.5 #5-15 odd, 21-23 all, 27-28 Ch. 6 "Test" odds Ch. 7 "Test" all	Catch-up and review Ch. 5 review #1-10 all, 16, 18, 24, 32; Ch. 6 review ##1, 2, 4, 6, 12, 14; Ch. 7 review #1, 2, 14, 22
8	March 31, April 2	CESAR CHAVEZ HOLIDAY	Test 2 (ch. 5-7)
SPRING BREAK APRIL 4-10			

Schedule Part II- Subject to change by Instructor



These are the problems you should do AFTER we discuss the sections in class that day and BEFORE the next class period. ALWAYS check answers to odd problems in the back of the book, as you go. ALWAYS read the text of each assigned sections, make note cards for each definition or new concept AND answer the "concepts and vocabulary" questions at the start of each problem set.

Week		TUESDAY	THURSDAY
9	April 14, 16	8.1-8.2 8.1 #1-10 all, #11-31 odds, 30, 34 8.2 #1-6 all, 7-19 odds	9.1-9.3 9.1 #13-33 all, 35, 36, 43-48 all; 9.2 #7-27 odd 9.3 #15-27 odds, 33
10	April 21, 23	10.1-10.2 10.1 #1-11, 15-33 odds, 35-40 all 10.2 #1-10, 11-35 odds, 39-40	10.3-10.4 10.3 #5-23 odds, Ch 8 "test" #3-6
11	April 28, 30	10.5 10.5 #1-15 odds, 18 10.6 #1-2, 3-11 odds, 15, 17-19, 23 Ch. 8 review all; Ch. 9 review #1, 4-12 all, 15, 16; Ch. 10 review #1-2, 5, 6-9, 13-14, 18	11.1-11.2 11.1 #1-23 odds, 24 11.2 #1-23 odds Ch. 9 "test" #1-7, 9
12	May 5, 7	11.3-11.4 11.3 #1-23 odds 11.4 #5-23 odds	REVIEW Test 3 (ch. 8-10) Catch up on Ch. 11 HW.
13	May 12, 14	9.4, 10.4 9.4 #11-16; 10.4 #3-27 odds Download the free 30-day trial of Minitab Express from estore.onthehub.com/WebStore	12.1-12.2 12.1 #1-25 odds 12.2 #3-19 odds
14	May 19, 21	13.1-13.2 13.1 #1-4, 5-23 odd 13.2 #1-2, 3-19 odd (time permitting, we may look at additional material)	4.1-4.3 4.1 #9-15 (orally), 18, 24, 32, 39, 40; 4.2 #11, 17, 22, 26, 31, 32; 4.3 #11-20 (orally), 21, 26, 32; 4.4 #7, 14; Ch. 4 rev. #1, 3, 9
15	May 26, 28	14.1-14.2 14.1 #1-6, 7-23 odds 14.2 #1-2, 3-17 odds	9.5, 10.6, 11.5 9.5 #1, 2, 3-9 odds, 13-23 odds 10.6 #1-2, 3-11 odds, 15, 17-19, 23 11.5 #1-2, 3-11 odds, Ch. 11 review #1-9 odd, 13, 15 Ch. 12 review all
16	June 2, 4	REVIEW Ch. 10 "test" #1-8 Ch. 11 "test" #1-7, 9, 12 Ch. 12 "test" all Review all concepts and definitions, including Ch. 13-14.	FINAL EXAMINATION DURING REGULARLY SCHEDULED CLASS PERIOD (4:30-6:30 p.m.)

