

Math. 34A, Winter 2011, TR 8-9:15, Prof. Akemann

Prof. Charles Akemann, South Hall 6706
Hours W 9-12, phone 805-518-9555
e-mail: akemann@math.ucsb.edu

**We're paid to help you learn.
PLEASE use CLAS, our
office hours and Math Lab.**

Head TA: Jonathan Cass
Office and hours: SH 6431M
E-mail: jcass@math.ucsb.edu

The text is Calculus and Mathematical Reasoning for Social and Life Sciences, SECOND PRINTING, by Daryl Cooper. The text is available in the bookstores. Please bring the text to each lecture and discussion section. This allows us to do problems from the book without writing them on the board. In addition to our office hours, you can seek help at the Mathematics Lab, Monday-Friday, 12-5 PM, South Hall 1607, starting in the second week of classes. Mathematics graduate students are there during these hours to answer questions. CLAS has instructional groups associated with this class, and drop-in tutoring is also available. I also strongly encourage you to form study groups to work on the homework. Explaining mathematics is the best way to learn it well.

The course outline and homework for the quarter are shown on the other side of this sheet. Homework will not be collected. However, I am encouraging you to do all of the homework by promising that at least 75% of the points on each exam will be attached to problems that are taken from the homework with the numbers changed and the wording clarified.

I expect students will work an average of 16 hours of work per week on this course, including time spent in class and discussion. This should give you time to read the text, do the homework, and review. It is very helpful if you have read each section of the text before the lecture that covers it. I encourage you to make a time budget for all of your classes. That way you know how much time you have left for non-academic activities.

For most students the first midterm will count 25%, the second midterm will count 25%, and the final exam will count 50%. However, your grade in the course will never be less than your grade on the final exam

The final exam will be long and will cover the entire course. Exam grades will be calculated according to the following percentage table. **There is no "curve" grading.** Infinity-102=A+, 101-93=A, 92-90=A-, 89-88=B+, 87-82=B, 81-80=B-, 79-78=C+, 77-72=C, 71-70=C-, 69-68=D+, 67-62=D, 61-60=D-, 59-0=F. Since every exam will have extra credit points on it, it is easier to get an A+ than it might appear. There have always been A+ students in my classes.

Calculators are strongly encouraged at all times, including all exams. Get a good one, learn how to use it, and bring it to class and discussion section. However, calculator skill is not a substitute for understanding what is going on. In particular, quoting your calculator on an exam (other than for routine arithmetic calculations) will **never** be a substitute for showing your work or explaining what you are doing. For each exam you will be allowed to use one 3" x 5" card with any notes you want written on it. No other books or notes are allowed.

General Exam Information

The following instructions apply to all exams, including the final exam.

1. Each problem will be worth 3 points. Partial credit is proportional to work correctly done and explained. Answers, even correct answers, with no explanation will get 0.
2. Calculators are allowed on all exams, but you can't get credit just for quoting your calculator. You must explain what you are doing and show your work. Answers need not be simplified unless that is specifically stated in the problem. Otherwise you may leave answers in terms of logs, square roots etc.
3. You may bring a 3"x5" note card with anything you want written on it. No other notes of any kind are allowed. Do not store notes in your calculator.
4. Try very hard to arrive 3-5 minutes early on test days so that you have the full time to work.
5. **The penalties for cheating on a test are intense personal shame and self-delusion about your knowledge of the material. If you are caught, you will get an F in the course, and, in addition, the standard punishment recommended by the Committee on Student Conduct is suspension from school for two quarters. Not least, you can forget about getting into a good major, or med school or law school or** The cost/benefit ratio approaches infinity **BE WARNED!**

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HOMEWORK LIST AND DAY BY DAY COURSE PLAN:

The homework consists of all problems for each section listed, except as noted. Not all sections will be discussed in class, but you are responsible to read them and do any homework. Always read the introduction to each chapter and do exercises there.

DATE

1/10	Please read pages 2-3 and 247-254; they contain <u>very</u> useful advice. 1.1, 1.2, 1.3, 1.4, 1.5. Also problems 3.2.1-3.2.10
1/12	1.6, 1.7, 1.8, 1.9 (omit 1.7.2). Also problems 3.2.11-3.2.20
1/17	3.1-3.2 (omit 3.2.33, 3.2.36, 3.2.47, 3.2.53, 3.2.54)
1/19	5.1, 5.2, 5.3
1/24	Review for test. Also 6.1 (not on first test)
1/26	First midterm. Covers Chapters 1, 3, 5 only
1/31	6.2-6.4
2/2	7.1-7.7. Also 11.0.1-11.0.5.
2/7	7.8-7.14 (for 7.13, omit 7.13.1-7.13.8 and 7.13.22-7.13.29)
2/9	8.1, 8.2. Also 11.0.6-11.0.9
2/14	8.3, 8.4. Also 11.0.12-11.0.14 and 11.0.16-11.0.19
2/16	8.5, 8.6. Also 11.20-11.0.24
2/21	8.7, 8.8. Also 11.0.38-11.0.44
2/23	8.9, 8.10. also 11.0.48-11.0.51
2/28	8.11, 8.12 (omit 8.12.12(b)(c)). Also 11.0.54, 11.0.56, 11.0.57, 11.0.59
3/1	8.13
3/6	REVIEW
3/8	Second midterm. Covers chapters 6-8 and the homework problems from Chapter 11.
3/13	REVIEW, 10.1-10.2. Omit from the last 3 lines of p. 179 thru the first 5 lines of page 181. (Omit problems 10.2.44-10.2.50, 10.2.60 10.2.63-10.2.69)
3/15	REVIEW
3/22	FINAL EXAM, 8-11 AM, IN OUR LECTURE ROOM. Comprehensive. Covers entire quarter.

MATH. 34A TEXTBOOK ERRATA LIST 9/8/03)

- p. 31: problem 1.7.2, figure is inconsistent. Ignore problem.
- p. 85, 6.2.5 The rate a certain disease spreads is JOINTLY proportional to...
6.2.7 The MASS of a sphere...
- p. 89, 6.4.1 Refer to the above world population example ***6.3.1*** .
- p. 144, line 14, losing
- p. 185, problem 10.2.64, line 1, second "is" should be "in".
- p. 297, 1.3.7 (a) ... (b)... (c) 15%, 1.5.1(d) a^4 , (e) x^2 , (f) t^{13} , 1.5.2(c) $1/4$ if $x > 2$, $-1/4$ if $x < 2$, undefined if $x = 2$, 1.5.14 add the following: if $s+t=0$, then any number is a solution. If $s-t-1 = 0$, then no solution exists.. 1.7.2 Ignore this problem.
- p. 298, 4.1.8 a) approx. 2.52×10^{13} miles, b) approx. 1989 miles, c) approx. 4.62×10^7 miles, 3.2.33 solution is Total Money = $200M(20-M)(\$20)$; 3.2.38 1600π meters/minute
- p. 299. 5.1.2c limit does not exist
- p. 300, 7.13.45a $100 \cdot \sqrt{2}$
- p. 301, 8.13.4 $10,000 \text{ m}^2$, 8.11.2 $y = (\ln(10))^x + 1$.