

Syllabus — Math 242 Section 3

Calculus II, Spring 2008

1 Professor and contact information

Professor: David Ross

Office: Physical Sciences Building (PSB) 319

Phone: 956-4673 (but I'm rarely around to answer this, and the voicemail is iffy - email is much better)

Email: ross@math.hawaii.edu

Course Website: www.math.hawaii.edu/~ross/242.htm

Professor Website: www.math.hawaii.edu/~ross

Office Hours: (Tentatively) Open walk-in MWF 8:00-8:40, other times by prior appointment. See website for updates.

This document and the web site together comprise the the 'manual' for the course. Be sure to read the manual before asking policy questions during the semester! Especially questions about grading policy...

2 General

Lecture: 9:30-10:20, Keller 413. Attendance is mandatory (see below).

Discussion/Lab Section: Once a week (Tuesday, 11:00-11:50) you will meet in PSB 208 for a lab/recitation section. This is your opportunity to ask questions on the homework. You will also be given some demonstrations which are more easily done in the lab than in the classroom, and see how the computer can be used for some of this semester's problems. You will have a small number of lab assignments during the semester.

Web: You should check the website regularly for announcements, assignments, and (especially) handouts.

3 Grades, Policies, Etc.

Text: *Calculus Early Vectors* by James Stewart. We will cover most of sections 4.1-4.8, 6.6, 9.1-2, 15.1-4, and Chapters 8 and 10 of the text (but not in that order). We will also cover some material (especially theoretical material) which does not appear in our text, but which is nevertheless equally important.

Mid-term exams: There will be 3 of these. You will NOT be allowed to use a calculator on my exams and quizzes, unless I announce otherwise for a particular exam. I will permit a crib sheet (one side of one 8 × 11 sheet of paper) for the exams (but not for quizzes).

Final exam: Cumulative, worth roughly twice a midterm (see below).

Exam Schedule: Midterm 1: Friday, Feb. 8

Midterm 2: Wednesday, March 12

Midterm 3: Friday, April 18

Final Exam: Monday, May 12, 9:45-11:45

Notice that the date for the Final Exam is set in stone; please do not schedule a family holiday at this time.

Homework: Assigned frequently and in great quantity, but only a fraction will be collected and graded. There will also be quizzes based on the homework; usually these will be announced, but not always. Homework assignments will be posted on the website.

A non-exam grade will be compiled, based on quizzes, homework, and labs; this will be worth approximately 1/2 of a midterm exam.

+/-: No plus/minus grades will be given.

Grades: Scores will be amalgamated at the end of the semester, and your final class grade based on the total. The actual process used to combine these scores into a final grade is somewhat mysterious, but proceeds roughly as follows: (a) All exams (midterms, amalgamated non-exam grade, and final exam) are renormalized to a common scale. (b) The lowest midterm or the non-exam score is dropped, unless the final exam is the worst score, in which case the three midterm exams and non-exam grade are all retained. (c) The scores are added together to get a first approximation of the grade. (d) A final grade is assigned based on this approximation, but the grade might be pushed up or down based on score trends, preponderance of evidence, attendance, etc., or the special conditions from the next paragraph.

Special conditions: (a) A student cannot pass by passing just one midterm (or the non-exam grade). For example, if a student receives an F on

the final and 2 midterms, but a D or C on the third midterm, and the numerical average turns out to be a D, the student will still receive an F. (b) A student will not receive more than one letter grade lower than the Final Exam letter grade, unless the Final was borderline and the other scores were appreciably worse. For example, a student with a middle B on the Final Exam will not earn worse than a C for the semester. However, a student with a borderline B/C on the final, and midterms so low as to drag the cumulative average down to a D, will earn the D for the semester.

Partial credit: Any solution for any problem on any quiz or exam which is not 100% correct, with every step in the solution process clearly spelled out, will be worth zero points. However, I will often give some fraction of the credit (sometimes as high as 100%) for a partial or slightly incorrect solution, entirely out of the goodness of my heart. Please see the section below on cheating for a further discussion.

Make-up work: Make-up mid-term exams or quizzes will not be given under any circumstances. If you miss an exam, that is the exam that gets dropped in the grade computation. The same holds for quizzes (the amalgamated quiz score will be based on a 'trimmed mean' which drops the two lowest quiz scores). A make-up **final** will only be given if UH policy requires me to give one, and will never be given on a date earlier than the established, announced exam date.

Cheating: Cheating will not be tolerated in this class. It is the student's responsibility to ensure that (s)he does not copy from another student, or let another student copy from him or her. If I have strong reason to suspect that some infraction has incurred, I will at the very least adhere strictly to my policy (above) on the granting of partial credit, and not give any to the suspected student(s); under egregious circumstances I will fail the student.

Attendance: Mandatory. I will take roll at random times, and a final attendance grade will be computed based on attendance. The attendance grade will be used to help determine what to do with borderline grades. **If a student misses more than 33% of the classes or 33% of the labs, he or she will lose a full letter grade.** You are responsible for everything we do in class, even on days you do not attend. In particular, the make-up policy for any surprise quizzes I decide to give is the same as for midterms (ie, none permitted).

Cell phones etc: If you have a cell phone, the ringer must be turned off during the class. I find phones ringing while I teach very unnerving, and I will not be responsible for any unprofessional actions on my part if your phone rings during the class period. The same goes for other noise sources, including pagers, and alarm watches that go off before the period ends, especially the ones that play music which I do not like.

Expectations: Please read the statement at the 'Academic Expectations' link at the class website. It will give you a sense of what I expect from you as far as work and personal responsibility.

Respect: A few insensitive people can easily (and inadvertently) irritate many classmates at one time. Please try to respect the personal space of others – in particular, try to limit classroom discussion to that which is appropriate for the class.

Laptops: Please close all computing devices and do not use them in this classroom during lecture.

4 Content

Topics:

1. Inverse functions
2. Transcendental functions ($e^x, \ln x, \text{trig}x$)
3. Applications to Calc I: l'hospital's rule, logarithmic differentiation, etc
4. Techniques of integration
5. Numerical and improper integrals
6. Infinite sequences/series, power series
7. Differential equations

Rubrics: Exams and quizzes will be written to conform as much as possible to the following rubrics:

- A C student should be master the basics in all of the above.
- A B student should in addition be able to handle harder problems, including multipart problems that cross topics and applications.
- An A student should also understand the theory - definitions and derivations.