## Honors (Accelerated) Calculus SYLLABUS

Professor:	Jack Lee Padelford C-546, 206-543-1735 lee@math.washington.edu
TA:	Mark Bun markmbun@uw.edu
Classes:	Mon/Wed/Fri 10:30-11:20, Smith 407 Tues/Thu 10:30-11:20, Condon 135
Web site:	www.math.washington.edu/~lee/Courses/134-2010 From the Math Dept. home page, Class Web Pages $\rightarrow$ Math 134A
Textbook:	Calculus, One and Several Variables, 10th Edition by Salas, Hille, and Etgen.
Prerequisite:	A good calculus course that covers differentiation and integration, and above average preparation, interest, and ability in mathematics.
Exams:	Two midterms to be announced. Final exam: Monday, December 13, 2010, 8:30-10:20, Smith 407

## GENERAL DESCRIPTION

This is the first quarter of a three-quarter calculus course, meant for students who have already studied calculus, at least to the point of being adept at using the formulas for computing derivatives and integrals. Because it is an accelerated course and an honors course, it is only appropriate for students with strong enthusiasm and aptitude for mathematics, and a desire to understand concepts rather than just to master problem solving techniques. It is ordinarily open only to students who have completed a full-year high school calculus course with an AP score of 5; excellent grades in Math 124 and 125 would be an acceptable alternative.

In Math 134, we will complete the subject matter of Math 124 and 125 (single-variable calculus), but with a much more theoretical approach. If you continue and complete Math 135 and 136, you will also have covered the material in Math 126 (multivariable calculus), Math 307 (differential equations), and Math 308 (linear algebra).

## REQUIREMENTS

**Classes:** Although I won't keep a formal attendance record, *class attendance is required*. Much of what I talk about in class will be designed to *supplement* the reading, not repeat it. If you will miss a class for a religious holiday, let me know in advance and I'll help you get the information you missed. If you must miss a class for some other unavoidable reason, it's your responsibility to find out what happened, and get your homework to me or to the TA by class time (or, in case of emergency, as soon as possible thereafter).

**Class Blog:** I've set up a Math 134 Class Blog, accessible from the class website. As soon as possible, you should log onto the blog, select "Profile," and set your notifications to "immediate notification," so that you'll receive an email whenever there's new information posted on the blog. I will post a blog entry as soon as possible after every class—usually, my entries will be ready by about 3:00PM, often sooner. Each of my blog entries will include a brief summary of what happened that day (no substitute for attending class!), and the latest reading and written assignments. Sometimes I'll expand on things that I said in class, or pose questions for you to think about before the next class. You're welcome to add posts of your own—adding comments, or asking questions of your own, or responding (respectfully!) to questions or comments that were posed by me or by others in the class. If you wish to write about specific homework problems, please confine your comments to general questions and suggestions about how to get started.

**Reading:** Most of my blog posts will include reading assignments. If the reading covers material that we have not yet talked about in class, I expect you to read through it quickly before the next class. Then, after we talk about it, you'll need to read it thoroughly and carefully. All reading assignments are required. Because we will

be focusing on *concepts*, not just problem-solving techniques, it's important to read all of the assigned sections of the textbook, not just go through and look for example problems.

Written Homework Assignments: Two or three times a week, after class, I'll post a homework assignment on the class website (with a link to it on the class blog). All homework assignments will be due at the subsequent Friday class. Homework that is turned in after the first ten minutes of class will get a 10% deduction, and homework turned in after class is over will not be accepted except in extraordinary circumstances and (except for emergencies) with advance permission.

**Study Groups:** On the first day of class, I will assign each of you to a study group of approximately four students. Each group will have a dedicated Catalyst discussion group for its own use. The TA and I will both have access to these discussion groups; we will occasionally "listen in," and we might offer suggestions if your group seems to be stuck or going in the wrong direction.

**Group Assignments:** Some homework problems will be designated as "group assignments." For these assignments, you'll need to collaborate with your group, either in person or in your online discussion group. For group assignments, only one copy of the solutions needs to be turned in for the entire group. You may make any arrangements you like with your group about how to figure out the answers and write them up. It should go without saying (but I'll say it anyway) that each member of the group should make a serious effort to contribute a fair share of the work, and to encourage other members of the group to contribute their fair shares. When you turn in a group assignment, list the names of everyone in the group who substantially participated in solving the problems. Group members who did not participate should not be listed; and anyone not listed on the paper will get no credit for that assignment.

**Collaboration on Individual Assignments:** In addition to the group assignments, I strongly encourage you to work on the individual asignments together with the other students in your group. Discussing the problems, brainstorming about solutions, and even telling each other how to do them, are fair game. There's just one hard and fast rule: When you're ready to write up your solutions to individual assignments, you must write your own solutions in your own words. It is not acceptable for one person to write down the solution (whether on paper, on a blackboard, or online) and for others to copy it. If two or more people turn in solutions to an individual assignment that are obviously verbatim or near-verbatim copies of each other, those people will get no credit for that whole assignment. (Of course, we realize that there will be many similar solutions to some problems; we're just talking about solutions that were obviously written by the same person and copied.)

**Quizzes:** On some Fridays, there will be short quizzes, usually (but not necessarily always) announced in advance. These will often be based on homework problems that you've already done, which I will ask you to answer in a timed setting without looking at your notes. Other times, they will be short questions that test how well you've absorbed the concepts that have been discussed recently. Quizzes cannot be made up, but your lowest quiz score will be dropped, and any quiz missed for religious or medical reasons (with a doctor's note) will not count against you.

Midterm Exams: There will be two midterm exams on days to be announced.

Final Exam: At the official University final exam time, there will be a final exam in the regular classroom.

**GRADES:** Your grade will be based on a weighted average of the following scores:

- 20% Homework assignments
- 10% Quizzes
- 20% First midterm exam
- 20% Second midterm exam
- 30% Final exam

Individual homework and quiz scores will be recorded as percentages, and the lowest homework score and lowest quiz score will be dropped before averaging the rest.