Mathematics 134 Autumn 2011

Instructor: John Palmieri, Padelford C-538, 543-1785, `palmieri@math.washington.edu`, office hours Wednesdays 1:30-2:30, Thursdays 1:30-2:30, drop in, and by appointment. I am often free at other times, and you can always send questions by email.

TA: Ian Zemke, PDL C-115, `ianzemke@u.washington.edu`, office hours Wednesdays 4:00-5:00, Thursdays 4:00-5:00.

Class time and place: MTWThF 10:30–11:20, SIG 228

Web page: `http://www.math.washington.edu/~palmieri/Math134/` or
   `http://faculty.washington.edu/jpalmier/Math134/`

Text book: *Calculus, One and Several Variables*, tenth edition, by Salas, Hille, and Etgen.

Goals. Study single-variable calculus: differentiation, integration, and related material. We will be going through this material *very quickly*. If you don't have a good calculus background, this is not the class for you!

Class structure. Four days a week – every weekday but Friday – you meet with the professor, John Palmieri. On those days, there will be a mix of lectures, small group work, large group discussions, etc. For example, I might discuss a topic briefly, after which you would work in groups on problems while I try to help when you get stuck.

Quiz sections and the TA. On Fridays you meet with the TA, Ian Zemke. This is a good time to ask questions about the homework and other material from the course. There will also be quizzes on most Fridays, usually announced ahead of time. Ian will also hold regular office hours, as listed above.

Homework. I will assign homework weekly; see the course web page for the assignments. Homework will be due **each Friday**. Typically there will be two components to the homework: practice problems that you don't turn in, and (usually harder) problems that you do turn in.

The best way to learn mathematics is to use it to solve problems. So the practice problems are important. Since you don't have to turn them in, you need to decide how many to do: if you think the material is familiar and straight-forward, you might just do a few; if the material is new or confusing, you should do more. You might even do more than the ones I've assigned, if you want more practice. Note also that the quizzes may be based on the practice problems.

For the problems to be turned in: some of these might be hard. Struggling with a problem is perfectly normal; in fact, it's actually helpful, because it will force you to come to grips with the underlying mathematics. When you get stuck, here are some steps to take:

- take a break from the problem – get some exercise, have a snack, listen to music – and come back in a few hours

- bounce ideas off of your classmates

- ask for hints from me or the TA or someone else who knows how to do it

Finally, you might ask for more than a hint; you might extract a solution from me or the TA if you pester us enough, or you might find something helpful on the internet. Use this as a last resort! Being able to follow someone else's reasoning on a problem is not at all the same as solving it yourself. You learn a lot more by solving it yourself.

Having said this, the homework policy for this class is: you may work with other people on your homework, but you must write your solutions yourself. If you find a solution in a book or some other source, please provide a reference. (But you will learn more if you don't rely too much on your classmates or outside references. I strongly encourage you to try the problems on your own.)

I will drop your lowest homework score at the end of the quarter. Late homework will not be accepted.

Midterms. We will have two midterm exams: the first will be on **Tuesday, October 25**, and the second on **Tuesday, November 22**. After I've graded each midterm, you will have a few days to correct some of your mistakes for some extra credit. I'll give you more details after I've graded the first midterm.

The final exam is on **Monday, December 12, 8:30–10:20am**.

Grading. The various components of the course are weighted as follows:

midterms	40% (20% each)
final	30%
homework	20%
quizzes	10%

The mathematics. The purpose of this course is to study differential and integral calculus. We will cover roughly the same material as in Math 124 and 125, but in more depth and from a more theoretical perspective. This corresponds to Chapters 1-10 in our textbook.

Next quarter we cover material from Math 307 and some of Math 126; in the spring, we finish up 126 and also cover Math 308. All of this is approximate and subject to change, depending on our pace and other factors. We use the current textbook all three quarters, supplemented by other books and material at various points.