

Course Outline: Math 2850–005, Fall 2006

Welcome to Math 2850, a course in multivariable calculus. Multivariable calculus uses the same basic notions as one-variable calculus — derivatives and integrals — but applies them in situations where three or more interdependent variables are involved. Thus, much of this course will be devoted to the analytic geometry of space. We will use this geometry to develop the differential and integral calculus of several variables. In particular, we will aim for the theorems of Green, Gauss, and Stokes — three versions of what amounts to the Fundamental Theorem of Multivariable Calculus.

Office hours

My office hours: Tuesday and Thursday, 5:30–7:00, in UH 4080e. This means that you can call or stop by at these times without an appointment and I am sure to be there.

I am also available at other times, but for these you must make an appointment. Feel free to ask for office hour appointments at other times if you cannot make it to my posted office hours. If you call me when I am not in my office then you can leave a voice mail message and I will get back to you as soon as I can. I tend to listen to my voice mail messages only during office hours, so often email is a faster way to get in touch with me.

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Text and syllabus

We will cover chapters 13–17 of *Calculus*, 5th edition, by James Stewart. Here is a detailed calendar.

Exam 1:	Tue, 29 Aug	Calculus review
Exam 2:	Thu, 28 Sep	Sections 13.1–13.7, 14.1–14.4, 15.1–15.3
	Mon–Tue, 16–17 Oct	<i>Fall Break</i>
Exam 3:	Thu, 26 Oct	Sections 15.4–15.8, 16.1–16.8
	Fri, 27 Oct	<i>Last day to withdraw</i>
	Wed–Fri, 22–24 Nov	<i>Thanksgiving Break</i>
Exam 4:	Thu, 4 Dec	Sections 17.1–17.9
Final Exam:	Mon, 11 Dec	Comprehensive: chapters 13–17
	2:45–4:45 pm	

Prerequisites

Your success or failure in this course depends to a large extent on your familiarity with basic differential and integral calculus. We will review this prerequisite material during the first week, then have our first exam on the first day of the second week. You should expect to pass this first exam with a score of at least 80%. If you score less than this then you should seriously reconsider whether you are prepared to take this course.

Homework assignments

I will regularly post homework assignments on the web, with due dates. Each problem set will be worth 20 points. Your ten best scores will count towards your final grade. Your solutions must be neat and show all work. If you do not show your work then you will not receive credit for your solution. When you turn in your assignment fold your papers lengthwise, and write your name, the course number, and due date on the outside.

Exams

We will have four midterm exams, each worth 100 points. For the first exam, I have posted a set of practice problems. For the remaining exams the problems will be drawn from the homework assignments.

If at the end of the course you are not satisfied with your final grade then you will have the option of taking a two-hour, 400 point, comprehensive final exam. If you choose to take the final exam I will replace all four midterm exam scores with your final exam score.

Attendance

I will *never* accept assignments late under any circumstances. It will not affect your final grade if you miss an assignment since only your five best scores count towards your final grade. However, if you are in the habit of missing classes and assignments regularly then probably you will fail the course. Making up missed assignments will not help. There will be no exceptions to this rule. Ever. Don't ask.

I will give make-up exams only in case of a documented emergency, such as illness or a funeral. If you are sick the day of the exam then you must call or email that same day if you expect to be able to make up the exam. Otherwise you must reschedule the exam ahead of time. If I am not in my office then you can leave a voice mail message. If you fail to show up for an exam and do not contact me about it until afterwards then you will not be able to make up that exam — you will get 0 for that exam.

Grades

I will determine final grades based on the class-wide distribution of points earned. I want to emphasize that you are not in direct competition with each other. I do not feel obligated to give any grades of F, nor any grades of A for that matter. I will not split hairs. I do not have a set grade scale. You will find that the grade distribution breaks into obvious groups. Historically in my classes it takes 85–90% of the points to earn an A; around 70–75% for a B; and around 60% for a C. However, these are not rigid targets, just historical observations. After the first exam I will post a histogram of total points earned, and this should give you a clearer idea of where you stand.

If you want me to post your grades under a nickname then bring me a 3 × 5 card with your name, an email address, and the nickname you want to use — preferably something not obvious!