MATH 185 HONORS CALCULUS I – FALL 2008

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*Calculus and Linear Algebra*, by Kaplan and Lewis (suggested and available online)

Material: Most students take calculus in high school, and it may seem that there isn’t much new to learn. The goal of this course is to try to develop the familiar concepts using a more rigorous and theoretical approach, thereby building a solid background for future math courses. Nonetheless, we will also pay considerable attention to problem solving. Students will learn how to use the appropriate mathematical language, and read proofs. Topics will include functions, graphs, continuity, limits, derivatives, and integrals. Tuesdays will be mostly devoted to an introduction to linear algebra. (Check the Math Course catalog for pre-requisites, alternatives and subsequent courses.)

Homework: Homework is important! There will be 11 problem sets, due on Fridays (the first one is due September 12th). Assignments should be turned in at the beginning of class on the due date. It is possible that not all assigned homework problems will be graded. No late homework!

Collaboration on the homework is fine, but everyone is responsible for writing up his/her own solutions. The lowest homework score will be dropped.

Solutions will be available on the course web-page.

Recitations: There will be a problem session held by Wade Hindes (whindes@umich.edu) in which homework problems and extra exercises will be discussed. He will also hold an office hour and an *extra math-hour* to discuss other topics (e.g., complex numbers).
Please check the course web-site for details.

**Exams:** Exams will be held outside class. Neither calculators, nor notecards will be allowed. The following dates are only tentative (check on the web-site for updates).

- First Midterm: October 14\textsuperscript{th} evening
- Second Midterm: November 18\textsuperscript{th} evening
- Final: December to be announced

**Grades:**
25% First Midterm + 25% Second Midterm + 40% Final + 10% Homework

*Grades will also be available on CTools.*

**(Hopefully) Helpful Tips:** Check the course web-site regularly for updates. (Homeworks and solutions will be posted weekly.) Come to class and take notes. Review your notes as soon after class as you can and read the book carefully and thoroughly. Ask questions in class, come to office hours, and talk to your classmates. Start your homework exercises early, write your solutions neatly and with care, and check your mistakes when you get your homework back. If you have any concerns or need any help, write me an e-mail or come talk to me sooner, rather than later!

**Useful links:**
- Math Course Catalog
  http://www.math.lsa.umich.edu/courses/undergrad.shtml#185
- Course Web-site
  http://www-personal.umich.edu/~asiano/185F08/
- Kaplan and Lewis’s book
  http://scholarlypublishing.org/calculus
- CTools
  https://ctools.umich.edu/portal