Math. 3B, Calculus with Applications

Instructor: John Doner, SH 6705

Time and Place: MTWRF 2:00-3:100pm in Phelps 1445

Office Hours: MTWR 3:30-4:30pm

Prerequisites: Math 3A with a grade of "C" or better, or equivalent.

Text: *Calculus—early transcendentals, 5th ed.,* by James Stewart.

What the course is about: We'll cover Chapter 4.10, and most of Chapters 5 through 10, omitting Chapter 9. This material includes the concept of the Integral and its applications. Much of the time is devoted to the art of finding *antiderivatives,* i.e., functions which have a given derivative. The subject is usually called *Integral Calculus,* as opposed to *Differential Calculus,* the subject of Math. 3A.

Homework: All the homework is done using WeBWork on the Internet—more about that below. The back of this sheet gives some information about WeBWork. If you were enrolled in this class on Monday, you have been entered into the WeBWork class list, with your last name as id and your perm number as password. At the earliest opportunity, you should log in on WeBWork—use

`http://webwork.math.ucsb.edu/`

—and begin work on Set 0. Change your password to something other than your perm number. You may also change your email address. I will use your umail address to send you email unless you change it. Set 0 is a non-credit problem that teaches you how to enter things into the system. The first for-credit problem set is

`621`

and it is due Tuesday, June 21 at 11:59pm.

e-mail: Your umail address, the address the university gives you on the umail system, is very important. Many official communications may be sent to that address, and the senders will assume you have received them. Use another address if you wish, but please be sure to set up an appropriate forwarding address for your umail account, so that official communications will always get through.

MathLab: Get help in the MathLab, SH 1607, open 12-5pm Monday-Friday.

Tests: There will be a midterm on July 11, and a

Final examination
Thursday 7/28 and Friday 7/29

Grading: To pass this course with a C or better, you must pass the final at an appropriate level that I will determine when I grade it. After that level is decided, I will use a numerical score as a guide for determining your letter grade. The WeBWork assignments will be 40% of your score. The midterm will account for 20% of your score, and the final for 40%. My experience tells me that the students who do well in the course will do well in all the various categories.

I grade on a curve. But I'm also sensitive to how good or bad the whole class is, so I don't specify in advance what score or percentile implies what grade. I have to make up a letter grade for each individual, and when I do, I will use the numerical score as a guide only; in rare cases, I may see fit to depart from the calculation. Historically, I give 10-15% "A"s.

WeBWork: This is a computer system for homework on the Internet. You connect to the url

`http://webwork.math.ucsb.edu/`

and click on the appropriate course; in this case, math3b-02-M05.

You should do Set 0 first—this is a series of exercises just to get you used to WeBWork. The set 621 is the first set of problems for this course, and you need to complete it by 11:59pm on Tuesday, 6/21. There will be a WeBWork assignment due every day except Friday and Saturday.

Important: WeBWork expects things to be typed a certain way, although it is pretty flexible. You can always click the **Preview Answers** button to see what it thinks you typed. Be sure you've tried this before you come to me complaining that the computer didn't understand what you typed!

WeBWork grades your work immediately, so you get immediate feedback and should avoid having to unlearn misconceptions you've maintained over days or weeks. The Math Department is hopeful that this new system will improve the homework experience for both students and teachers.

In an ideal world, every homework problem would be carefully graded by a knowledgeable human being. Doing that is far beyond the financial means available for our courses, and in the past our readers (almost all undergraduates themselves) could only read a few of the problems turned in, maybe 10% of them. Now budget cuts have eliminated readers entirely. Since WeBWork provides immediate grading of every problem, we see it as a substantial improvement over the former system.

WeBWork can insert random data into problems, so you usually won't see exactly the same Problem 3 that your friend does. But you will always see the same Problem 3 no matter how many times you log out and in again.

Using WeBWork:

- Go to the WeBWork website at `webwork.math.ucsb.edu`
- Click the Math 3B with my name on it.
- Click **Login**
  Type in your Username and Password in the indicated boxes.
- Click **Continue**
  You can change your email address and password if you wish; click the appropriate boxes and follow instructions.
- Click **Begin Problem Sets**
- Click `Set0` to highlight it
- Click **Do problem set** (Alternatively, you can get a printable copy of the entire problem set—do this if you want to work on it away from the computer, and come back later to enter your answers.)
- Click the problem you want to do, say **Problem 1**, which will be highlighted.
- Click **Get Problem**
- Keep the **typeset** button checked (located near the bottom).
- Type in your answers and click **Submit Answers**; your answers are graded immediately. If some are Incorrect, you can retry by typing in your new answers and clicking **Submit Answers** again. Unlimited tries are allowed unless otherwise specified. Your latest score is recorded in the WebWork system.
- If you're having trouble determining whether WeBWork is interpreting what you've typed as you intend, click **Preview Answers.** The typeset version of your answers may help you.
- Click **Next** for the next problem. (You can always return to this one, even if you didn't finish it or not all your answers were correct. It will retain whatever work you've submitted (merely typing it in the answer box isn't sufficient; for retention, you must submit it.)

  Or, click **Prob. List** and choose a different problem to work on.
- Click **Problem Sets**
- Click **Get Summary** to see your scores
- Click **Logout** to logout.