

Calculus Math 122 Fall 2003

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Meeting Times

MATH 122 Section 03 meets M-W-F 8:00-8:50 in LA5-243.

Activity Section 105 meets 8:00-9:50 in LA5-169.

Activity Section 106 meets 10-11:50 in LA5-169.

Office hours (held in my office: FO3-218)

Feel free to stop by, email or call to schedule an appointment or ask a question!

Mondays	9:00-10:00
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Description:

Topics: Derivatives and applications of the derivative. Integration and applications of integration.

Prerequisites: A grade of "C" or better in MATH 117 or four years of high school mathematics including two years of algebra, one year of geometry, one-half year of trigonometry and one additional senior-level course.

Goals:

In addition to gaining mastery of the fundamentals and applications of the derivative and the integral as well as the relationship between them, students should be able to:

- work with **functions** represented in a variety of ways: [graphically](#), [numerically](#), [analytically](#), and [verbally](#), and understand the connections among these representations.
- **communicate** mathematics both orally and in well-written sentences and should be able to [explain solutions](#) to problems.
- determine the **reasonableness** of solutions, including sign, size, relative accuracy, and units of measurement.

Required Course Materials:

Text: Calculus, early transcendentals **edition 5e**, by James Stewart.

CD Rom: Tools for Enriching Calculus (TEC), by Harvey Keynes and Dan Clegg (included with the 5th edition of the text).

Note: About the new 5th edition of Stewart Calculus:

At least 25% of the homework problems in the 5th edition are different than those in the 4th edition.

New sections have been added and old ones rearranged.

A CD called Tools for Enriching Calculus (TEC) is included with the new edition.

If you choose to try this course using the 4th edition of the text, it will be *your responsibility* to find out when the material differs and to make arrangements to get the necessary information from a newer version of the text. Please let me know if you are doing this; maybe I can help you.

Assignments:

It is my philosophy that:

Teaching is not telling; listening is not learning.

This means that you can expect to spend time thinking about mathematics. As is standard for a college course, you should expect to spend two hours outside class per credit. This is a 4 credit course; adjust your schedule so that you have 8 hours outside of class to work on calculus each week!

You will have three types of graded homework. *This course requires you to regularly access the internet.*

- **WebWork** (15% of your course grade).

WebWork assignments will probably include about 18 problems per week, divided into three sets of about 6 problems each due MWF.

An excerpt from a [website](#) at University of Rochester, where WebWork was developed:

WeBWorK is an instrument for delivering homework problems to students over the internet. It gives students *instant feedback* as to whether or not their answers are correct. Each WeBWorK problem set is *individualized* (each student has a different version of each problem, for example the numerical values in the formulas may be slightly different. **The student completes the assignment, logs onto the internet, and enters their answers into a web browser.** The WeBWorK system responds telling the student whether an answer (or set of answers) is correct or incorrect and also records whether the student answered the question correctly or incorrectly. The student is free to try a problem as many times as he or she wishes until the due date. A key educational benefit of this system is that if a student gets a wrong answer, the student gets immediate feedback while the problem is still fresh in their mind. The student can then correct a careless mistake, review the relevant material before attacking the problem again.

- **Calibrated Peer Review (CPR)** (*10% of your grade*)
You will have 4 CPR assignments during the course of the semester.

An excerpt from a [website](#) at UCLA, where CPR was developed:

Calibrated Peer Review(TM) (CPR) is an Internet-based instructional tool that enables students to learn by writing. In a CPR assignment, students write short essays on a specific topic. Guiding questions encourage critical thinking and help students organize thoughts for the essay. After electronic submission of essays, students read and assign a score to three “calibration” essays. When students demonstrate they are competent reviewers, they read and assign a score to three anonymous peer essays, and finally, to their own essay. Regular use of CPR assignments teaches students to articulate ideas coherently and to critically evaluate both their peers’ and their own work.

- **Hand-graded Work.**

You can expect to write up a couple of problems to be hand-graded each week. Most classes will begin with an in-class refresher question.

(10% of your grade) Problems completed at home and/or work resulting from in-class activities.

(5% of your grade) Refresher questions. At the beginning of class you will often be asked a question covering material from the previous class or from homework. These are not pop quizzes; I will tell you what to expect.

Grade Distributions	
WeBWork Homework	15%
CPR Homework	10%
Hand-graded Assignments	10%
Refresher Questions	5%
Midterm 1	12%
Midterm 2	12%
Midterm 3	12%
Final Exam	24%

Exams	
Tuesday, September 23	Midterm 1
Tuesday, October 21	Midterm 2
Tuesday, November 18	Midterm 3
TBA (Verify on CSULB Website)	Cumulative Final Exam