

Math 118 Course Information

Fall Term 2003

Course Instructor: Ron Buckmire
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Required text and materials: Smith and Minton, *Single Variable Calculus*, 2nd Edition, McGraw Hill, 2002
Texas Instruments' TI-83 calculator.

Class Times: MWF 1:30-2:25pm in Fowler 316, and (Lab 1) R 10:00-11:30a or (Lab 2) R 3:00-4:30p, in Fowler 112.

Office Hours: I will be in my office available for individual or group help on Mondays & Wednesdays 3:30-5:00pm and Fridays 11:30am-12:30pm. I am also in my office at other times, usually preparing for class. If you need to see me at another time, please check my full office hour schedule online or on my door, call my office, send me email or instant message me to set up an appointment. For more exact information about my office hour schedule, look at <http://faculty.oxy.edu/ron/fall2003schedule.html>

Course: You have all successfully mastered many of the techniques of calculus. This course will build on your knowledge through application of the ideas of calculus. You will work with the notions of derivatives, integrals, and series in many new guises: modeling of scientific phenomena involving rates of change or accumulation, successive approximation schemes to solve initial value problems, and studying error in these approximations. You will also use technology (computers and calculators) to do some of the extensive manipulations for you so that you can focus on content and understanding instead of getting to an answer. Technology will also give you another view of a problem - you'll see the same idea represented graphically and numerically as well as symbolically, i.e., with x 's and y 's.

Thus the primary goal of this course is to gain insight into how calculus is actually used and to practice adapting the concepts of calculus to new situations. A secondary goal of the course is to begin to express mathematical ideas clearly, both orally and in writing. This is painstaking work at first, particularly if you have never had to write a math report before, but it is a necessary component of mathematical education. The group work that is built into this course should provide a comfortable cohort with whom you can practice talking and writing about the projects and labs.

Homework: You are required to complete all homework assignments given in class by the next class period. You are encouraged to work together on homework. However, what you complete and hand in should represent **your own understanding** of the material. Homework will be collected regularly and will be checked based on accuracy, completeness and effort.

Quizzes: In addition to homework you will have weekly take-home quizzes. These quizzes are to be completed **on your own** and should be treated like single-question take-home exams, with all the rules that would apply to an exam. They will generally reflect the homework and are to give you a sense of what the exams will be like.

Labs: Labs meet every week on Thursdays, at 10:00 am and at 3:00 pm in Fowler 112. It is here that you will work in teams to explore many of the concepts discussed in class. Lab reports (usually brief typed explanations of the lab results) will be graded. Lab reports are an opportunity for you to demonstrate your facility with explaining the concepts we are examining in the course in written form.

Testing: There will be 2 comprehensive tests given during the semester, tentatively scheduled for

Wednesday, October 8: Test 1

Friday, November 14: Test 2

There also will be a comprehensive final exam on **Wednesday, December 10 8:30-11:30am**.

Gateway Policy: Because of your strong background in calculus, it is unnecessary to cover the basic techniques. However I do need to be sure that you are prepared for future courses in mathematics. Hence, “Gateway Exams,” one on differentiation skills and another on integration skills will be administered during the course of the semester. You must pass at the 90% level in order to receive a grade in the course. You may retake different versions of the Gateway as many times as is necessary. A help sheet and a practice test is available for each gateway. **In order to receive a grade in Math 118 you MUST pass both gateway exams by the last day of classes!**

Online Materials: In my continuing project of incorporating technology to produce innovative and stimulating teaching I have adopted to use Blackboard as the platform for online materials in the course. You can access the site at <http://blackboard.oxy.edu> . You login with your Oxy username (i.e. email address without the @oxy.edu). The password is your student id. Change this password as soon as possible. Your grades in the class will be accessible from this account. As much of the course materials as I can manage to digitize will be on the site. For example, the solutions to all homework assignments, quizzes and tests will be on the course website. Gateway information is also online.

Attendance: You are responsible for understanding the material covered in class and lab, and so you should take class attendance seriously. Furthermore, you are expected to come to class prepared. This means that you have completed to the best of your ability the homework assignment, you have your calculator, and you are seated in the classroom or lab and ready to work at the appointed hour.

If you are going to miss class or an assignment you need to inform me by e-mail, phone or person **in advance** of this possibility in order to obtain any possibility of dispensation. **NOTE:** There will be no class on **Monday September 1** (Labor Day), **Thursday-Friday October 9-10** (Fall Break), and **Wednesday-Friday November 26-28** (Thanksgiving). This is is not an exhaustive list. I will inform you at least one week before any scheduled absences.

Policies: Fairness to all members of this class is fundamental to my job as an evaluator of your progress in this course. With this in mind, I have set the following policies:

- Make-up tests will not be given except for compelling reasons that have been presented to me (at least 1 week) well in advance of the test date.
- You may bring in a $8\frac{1}{2} \times 11$ sheet of paper with one side blank to each test. The other side may only have HANDWRITTEN information on it.
- If you are late to a test, you will only be allowed the time remaining in which to take your test.
- Late lab assignments will receive significant grade reductions.
- Late homework will not be accepted under any condition.
- Quizzes must be handed in on the day that they are due.

Academic Honesty: I expect the highest level of academic honesty from each student. Any instances of plagiarism or cheating will be dealt with strictly and in accordance with the procedures found in the student handbook.

Grading: The following is a guide to how the various components of your work will be weighted: Labs 15%, Tests 30%, Final Exam 20%, Homework 15% and Quizzes 20%.

CATEGORY	YOUR PERCENTAGE	GRADE FRACTION
Homework		$\times .15 =$
Labs		$\times .15 =$
Quizzes		$\times .20 =$
Final Exam		$\times .20 =$
Tests		$\times .30 =$
TOTAL		

Of course the overall grades will be curved, but the above table should give you some indication of how your grade will be computed. Please do not ask me to try to compute your grade before the end of the semester.