Math 141 (Section 1 & 2) – Calculus I

Instructor	Professor Doug Meade
	Office Hours: MW 10:00 – 11:00, Th 12:30 – 2:00 and by *prior* appointment
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WWW URL	`http://www.math.sc.edu/meade/math141-F02/`
Meeting Times	Lecture MWF 9:05am– 9:55am, GAMB 152
	Lab (§001) Tu 8:00am– 8:50am, LC 303A
	Lab (§002) Tu 9:30am– 10:20am, LC 303A
Text	Dale Varberg, Edwin J. Purcell, and Steven E. Rigdon, *Calculus*, Eighth Edition, Prentice Hall, 2000.
Prerequisite	Qualification through placement or a grade of C or better in Math 112 or 115.
Overview	This is the first course in the traditional calculus sequence. While the general topics are traditional, the presentation and your experience in this course will not be traditional. While learning calculus does involve a certain amount of formulae and methods, and techniques, it is much more important that you obtain a fundamental understanding of the concepts. These concepts are *limits*, *differentiation*, and *integration*. To help develop the understanding of these concepts you will be expected to complete weekly computer-based lab projects.
Course Content	This course will cover most of the topics in Chapters 2–6 in the text. You should already be comfortable with the material in Chapter 1: inequalities, absolute values, roots, lines, and graphs. The key topics to be discussed are summarized below.

Chapter 2: Functions and Limits
- functions and their graphs
- limits and their properties
- continuity of functions

Chapter 3: The Derivative
- definition and properties of the derivative
- the Chain Rule
- implicit differentiation
- related rates and differentials

Chapter 4: Applications of the Derivative
- optimization, limits, graphing
- Mean Value Theorem

Chapter 5: The Integral
- antiderivatives and Riemann sums
- Fundamental Theorem of Calculus

Chapter 6: Applications of the Integral
- area, volume, length of a curve

Grading	Your grade in this course will be based on your performance on quizzes, weekly computer-based projects, three (3) mid-term exams, and a final exam. The weights assigned to each of these components will be:

Quizzes	10%
Projects	15%
Mid-term exams (3)	50%
Final exam	25%

Course grades will be determined according to the following scale:

A	90 –100
B	80 – 89
C	70 – 79
D	60 – 69
F	0 – 59

Note that the deadline to drop this course with a grade of W is <u>Thursday, October 3, 2002</u>.

Exams   There will be three (3) exams during the semester. *Tentative* dates and topics for these exams are:

Friday, September 20	Chapters 2 and 3
Friday, October 18	Chapters 3 and 4
Friday, November 22	Chapters 5

There will be no make-up exams. If you miss one exam due to a documented reason of illness, family emergency or participation in a University sponsored event, your score on the final exam will be used to replace the missing exam score. Excuses such as oversleeping, forgetting the time or location of the exam, and lack of studying are explicitly noted as unacceptable grounds for missing an exam.

A comprehensive final will be given at <u>9:00AM</u> on Wednesday, December 11, 2002.

Homework   Homework problems will be posted for each section that we discuss. The assigned problems will not be collected. You will have an opportunity to ask questions during class on Monday, Wednesday, and Friday. Solutions to the assigned problems will be made available electronically and/or in the Mathematics Library in LeConte.

Quizzes   Approximately twenty (20) quizzes will be given during the semester. Each quiz will be given during the first five (5) minutes of a lecture and are worth a maximum of ten (10) points. The quiz questions will be directly related to the homework problems. Quizzes will be graded and returned as soon as possible. Your quiz score will be computed after the four (4) lowest scores are dropped. *There will be no makeup quizzes.*

Projects   Weekly computer projects will be available every Tuesday. The projects will be selected to complement the lectures with a particular emphasis on realistic applications of calculus. You will have time to work on the projects in class on Tuesday but you should not be surprised if you do not finish the project in class. All projects must be sent to the Blackboard dropbox. Projects are generally due midnight Thursday. Your overall project grade will be computed after dropping your lowest two (2) project grades. *No late projects will be accepted for a grade.*

Study Hints   Before each class, you should both review the material from recent sections and read the section to be discussed that day. This will allow you to both understand my presentation of new material and identify questions about earlier material.

Attendance   Regular class attendance is important. Consistent with the USC Undergraduate Bulletin, a grade penalty may be applied to any student missing more than four classes (10%) during the semester.

Academic Honesty Cheating and plagiarism will not be tolerated in this course. You are encouraged to discuss homework problems with others. Violations of this policy will be dealt with in a manner consistent with University guidelines.