Calculus I – MA 123, A1
Fall 2005

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Teaching Fellow:	Karen Yeats
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Lecture:	9-10 MWF; MCS 149 (by R. Pollack)
Discussion section:	A2: 12–1 Fri, MCS B31 (by K. Yeats)
	A3: 1–2 Fri, MCS B31 (by K. Yeats)

Text: James Stewart, *Calculus – Concepts & Contexts*, Third Edition, Thomson Brooks/Cole, 2005.

Website: There is a web page for the course located at:

http://math.bu.edu/people/rpollack/Teach/123fall05.html

Homework assignments will be posted on this website along with other important information for the course.

Homework: Problem solving is an essential part of the course and homework will account for 25% of your final grade. Homework problems will be assigned at each regular class meeting and should be done before the next class (often to aid in the understanding of the next class' material). **Homework will be collected each Monday in class.** Be certain to show your work on the homework to receive full credit. (Indeed, for many questions the answers are in the back of the book!)

If you cannot attend class on some Monday, make sure that you give your homework to someone else to hand in or to put in my mailbox by the end of class. **Late homework will only be accepted with a doctor's note.**

Section: During discussion sections you will have the opportunity to go over problems and discuss examples and techniques that you might not have understood from class or from a homework set. Be sure to come prepared to ask questions to get the most out of this experience.

Attendance will be taken at each section. If you have perfect attendance over the semester, your bottom two homework grades will be dropped. If you miss no more than 2 sections, your bottom homework grade will be dropped.

Exams: There will be two in-class hour exams during the semester and a final exam at the end of the semester. The dates of the exams are listed below:

Hour exam I	**Monday, Oct 3rd**	**In class**
Hour exam II	**Monday, Nov 14th**	**In class**
Final exam	**TBA**	**TBA**

All exams will be closed book and calculators will not be allowed.

Make-up exams: You are expected to take all exams at the scheduled time. No make-up exams will be given except in case of a serious illness. A note from a physician stating that you could not take the regularly scheduled exam due to medical reasons is required before any make-up exam can be given.

Grading policy: Your final grade for the course will be determined according to the following scale:

Homework/Quizzes	25%
Hour exam I	20%
Hour exam II	20%
Final exam	35%

Attendance: Class attendance is required and will be factored into your final grade in borderline cases.

Academic honesty policy: Given the sterling qualities of character to be found in each and every student at Boston University, it is certainly unnecessary to mention that plagiarism and cheating are not only dishonest and immoral, but are also against the policies of Boston University. Please keep in mind that, in the highly unlikely event that you do choose to plagiarize, cheat or copy your classmates problem sets, you will be referred to the University Academic Standards Committee for disciplinary action.

Help outside of class:
(1) In room 144 in MCS, at most times during working hours, there are math graduate students on duty there to answer questions from any class. This is a fantastic resource that is available all week long.
(2) You are very much encouraged to attend my office hours and the teaching fellow's office hours as posted above.
(3) Our weekly discussion section is there to answer your questions. Come prepared and ready to ask away!

Tentative Lecture Schedule: The following pages contain a class-by-class schedule. This schedule (with the exception of exam dates) should be consider as tentative. Depending on the pace of the course, some topics may be deleted or inserted into the schedule.

Tentative Lecture Schedule:

September	7	2.1	Introduction to Calculus; Tangent lines and velocity
	9	2.2	Limits
	12	2.3	More on limits; Limit laws
	14	2.4	Continuity
	16	2.5	Limits involving infinity
	19	2.6	Tangent lines and rates of change
	21	2.7, 2.8	Derivatives
	23	2.9	The meaning of the derivative
	26	–	Catch-up Day/Review
	28	3.1	Derivatives of polynomials
	30	1.5, 3.1	Derivatives of Exponential functions
October	3	–	**First Exam**
	5	3.2	Product and Quotient rules
	7	3.3	Rates of change in science
	10	–	Holiday
	12	3.4	Differentiating trigonometric functions
	14	3.5	The chain rule
	17	1.6, 3.6	Inverse functions; Implicit differentiation
	19	3.7	Logarithmic differentiation
	21	3.8	Linear approximation
	24	–	Catch-up Day/Review
	26	4.1	Related rates 1
	28	4.1	Related rates 2
	31	4.2	Max/Min questions
November	2	4.2	More max/min questions
	4	4.3	Derivates and shapes of curves
	7	4.4	Curve sketching
	9	–	Catch-up Day/Review
	11	–	Holiday
	14	–	**Second Exam**
	16	4.5	L'Hospital's rule
	18	4.6, 4.7	Optimization problems
	21	4.8	Newton's method/Anti-differentiation
	23		Holiday
	25		Holiday

	28	5.1	Area and distance
	30	5.2	Definite integrals
December	2	5.3, 5.4	The fundamental theorem of Calculus
	5	5.3, 5.4	More on the fundamental theorem of Calculus
	7	5.5	The method of subsitution
	9	5.6	Integration by parts
	12	–	Catch-up Day/Review