Calculus I *Spring 2007*
MA113

Textbook: The textbook for this course will be *Calculus*, 5th edition, by James Stewart.

Material to be covered: In Calculus I, we will learn about derivatives, integrals and the fundamental theorems of calculus. We begin by introducing the notion of a limit. Limits are essential to defining derivatives and integrals. By the end of the semester students should know precise definitions of the derivative and the integral and the fundamental theorem of calculus which gives the relation between the derivative and the integral. We will illustrate the methods and ideas of calculus by studying several physical and geometric problems. We will study the interpretation of the derivative as velocity or slope of a tangent line, the trajectory of a body falling under the influence of gravity, the interpretation of the integral as area or distance traveled and the use of the integral in computing volumes of familiar solids such as a sphere or a cone.
We will cover most of Chapters 1 to 6 of Stewart. Please see the course calendar for a detailed listing of sections.

Homework: The bulk of homework for this course will be completed using the web-based homework system at `http://www.mathclass.org`. See below for administrative details on using this website.
At this web site, students will find homework assignments which will count towards your grade. The graded assignments are A1–6, B1–7, C1–7 and D1–4.
There are several web homework assignments that will not be counted towards your grade. The review assignments AR, BR, CR and DR are study guides for each exam. All students should complete these review assignments. There are optional assignments, AW, BW, CW, and DW which are intended to provide additional practice on basic skills. The optional assignment A0 is intended to introduce students to the syntax needed to enter mathematical expressions in the web homework system.
The course calendar lists optional homework assignments from the textbook. These are intended for students who feel they need more practice to master a topic.
In addition to the web homework, we will have seven written assignments that will be graded by humans. These written assignments will be graded for mathematical correctness, and for clarity of exposition. Students who wish to receive full credit should write in complete sentences and use mathematical notation correctly.
Your homework and attendance grade is based on three components: the web homework (95 points), the written assignments (70 points) and attendance in lecture (35 points). Your web homework grade is the minimum of 95 and your your percentage score on web homework. You may find this score at `www.mathclass.org` by clicking homework scores on the main page. Each written assignment will be worth 10 points for a total of 70. Lecturers will take attendance 9 times in lecture. Students will earn 5 points for each time they are marked present, up to a maximum of 35. The total number of points is 200 which will be divided by 2 to obtain a homework score of between 0 and 100.

Late homework: No late submissions of web homework will be accepted. If an emergency

or illness takes you away from school, please meet with your lecturer to discuss your situation and ask to be excused from an assignment, if appropriate. If you have a scheduled absence (travel or authorized university absence) you must still submit the web homework by the deadline.
Written assignments are due at the beginning of lecture. If an emergency or unexpected absence prevents you from turning in the assignment, please see your lecturer to request permission to turn in the assignment late. If you have a scheduled absence (travel or authorized university absence) you should arrange to turn in your paper before leaving school. Unexcused and late submissions will be penalized 10% if the paper is turned in late on the due date and an additional 20% for each day that it is late.

Exams: There will be three exams and a final. These exams are scheduled in the evening as indicated in the course calendar. Please be sure that you have these dates free. The final exam will be cumulative, but with an emphasis on the material covered since the third exam.

MA193: In addition, to the 4 hours of credit for MA113, the department offers one additional hour of credit as MA193 on a pass/fail basis. You will pass MA193 if you have 0, 1 or 2 unexcused absences and you pass MA113. If you have three or more unexcused absences or you fail MA 113, you will fail MA193. Your section number for MA193 should equal your section number for MA113. If you drop or change sections of MA113, please make sure to also drop or change sections of MA193.

Grading: Your grade will be based on the activities in the table below.

3 exams	300
Final exam	100
Homework and attendance	100
TOTAL	500

Students need an average of 90% (450 points) for an A, 80% (400 points) for a B, 70% (350 points) for a C and 60% (300 points) for a D. Grades may be curved by adding a few points to each students course total.

Calculators: Students may use a graphing calculator on exams and homework. Students may not use a machine with symbolic manipulation capabilities on exams. Thus, no TI-89's, TI-92's, no HP-48's or laptop computers may be used on exams. Please see the lecturer if you have any questions as to whether a particular machine may be used on a test. We may clear the memory of calculators before or during an examination.

Absences: You should attend class. If you must miss a recitation and are registered for MA193, you must explain your absence to your teaching assistant. Otherwise, your absence will be marked as unexcused and this may lead to failing MA193.
Attendance will be taken in lecture. If you miss lecture, please speak with your lecturer to see if an absence can be excused.

Web page: A web page for this course is at
`http://www.msc.uky.edu/rbrown/courses/ma113.s.07` Any handouts will be available at this address. Solutions to exams and written assignments will be posted at this website.

Cheating: Students are encouraged to work together to understand a problem and develop a solution. However, the solution they submit for credit must be their own work. However, each student should write their final solution independently. Students should not permit others to use their account at `www.mathclass.org`. Copying on exams is not allowed. Students may not use books or notes during examinations.

Web homework: Students who have pre-registered for MA 113 will have an account at `www.mathclass.org`. Your user name for this account is the e-mail address that you have on file with the University. The password will be the characters `u$` followed by the last 6 digits of your social security number, *e.g.* `u$654321`. If you have difficulty logging in, you may visit Mathskeller (CB 065) M–F from 9am–4pm. You may look up your user name/e-mail address by going to `www.mathclass.org`, clicking on the link to login and then the link titled `Don't know which User Name or e-mail to use?`.

Students who registered near the beginning of the semester may not have an account. Their account will be created automatically within one day of registering for the course. Students who are having difficulty with accounts should speak with their instructor or use the help link at `www.mathclass.org`.

Students who choose to drop MA 113 must drop through the registrar's office. Dropping your registration at `www.mathclass.org` will have no effect on your official registration. Students who switch sections of MA 113 during add-drop will have their registration at `www.mathclass.org` updated automatically. When a student changes sections of MA 113 with the registrar's office, the account and record of homework will be automatically transferred to the new section at `www.mathclass.org`.

Web homework problems will be discussed in recitation on Tuesday and Thursday and submitted by 12 midnight on the following Monday. Students should attempt homework as soon as the corresponding material is discussed in lecture. Students who wait till the due date to begin an assignment will likely not complete the work on time.

Each student will have an individual version of the homework. Students should plan to print out their assignment, complete the problems in a notebook, submit their answers and then rework problems or seek assistance for problems that were marked incorrect. Your instructors will want to see the progress you have made in order to provide assistance. In addition, there is a common version of each homework set. The problems from the common version will be discussed in recitation.

If you feel you have worked a problem correctly and WHS marks it incorrect, please contact Russell Brown (by e-mail to `russell.brown@uky.edu` or by submitting the form at `http://www.msc.uky.edu/rbrown/whs/report.html`).