

## MAT 127: Calculus C, Fall 2009 Midterm II Information

Wednesday, 11/04, 8:30-10:00pm

L01,L02: Earth&Space (ESS) Bldg 001

L03,L04: Old Chemistry Bldg 116

### General Information

- (1) It is **essential** that you show up to the location for the section you are registered in. All locations have limited seating, the proctors will have a limited number of exams at each location, and if your exam gets mixed in with a different section, your exam grade may not be recorded. *You must bring your Stony Brook ID card to the exam.*
- (2) Please show up no later than 8:25pm. The exam will begin at 8:30pm and you will not receive extra time if you show up after 8:25pm.
- (3) Please take every other seat starting with the front row. Once a row fills up, please take a seat *directly* behind another person (not diagonally from another person). You can put your bag and/or jacket on one of the seats next to you in the same row.
- (4) Blank paper will be provided, in addition to an exam booklet (4 sheets stapled together). The exam booklet should have sufficient space for solutions, but you can staple additional pages to it as needed. If you do so, please write your name and ID number on each additional sheet and indicate in the exam booklet where to find your solution. Any scrap paper that you not want to be graded should not be handed in (except separately from the exams, for recycling).
- (5) No notes, books, calculators, or cell phones may be used during the exam. Please bring pencils/pens and an eraser. The *only* items that may be on your desk between 8:25pm and 10:00pm are pencils/pens, an eraser, your exam booklet, and the scrap paper provided by the proctors.
- (6) When you receive the exam, please do not open it until the proctors say it is time to start. However, please do fill in your name and Stony Brook ID number and circle your section number on the front cover of the exam. The exact front cover of the exam is at the end of this handout.
- (7) All problems on the exam should be stated unambiguously. If you feel there is an issue with a statement of a particular problem, please let a proctor know; however, the proctor will not confirm whether your interpretation of the problem is correct.
- (8) Out of fairness to others, please do not open your exam booklet ahead of time and stop working when the time is over. Your exam score will be reduced by 5 points per minute of either violation.
- (9) When you are finished with the exam or when the time is called (whichever comes first), please take it to the front along with your Stony Brook ID card. Put the exam in the pile for your section and sign the photo roster under your picture immediately after.

(10) You can leave before the time is over, but please do so as quietly as possible and close the door very gently.

## Before Midterm II

**Note** that PS8 is due two days earlier than usual (except in L01). This will make it possible to post solutions to PS8 before noon on Wednesday, 11/04.

The midterm will cover Sections 7.6 and 8.1-8.3 from the textbook. You should re-read these sections thoroughly, review *Course Summary II*, and study the solutions to PS6-8 (even if you did all/most problems correctly). Make sure you can do all problem set exercises from the above four sections and some other related problems from the textbook.

The second midterms from Fall 05 and Spring 06 are available on the course website, along with solutions. Please try doing these midterms in 90 minutes (each) before looking at the solutions. The second midterm in this class will be similar in many aspects to these midterms, though there will be some differences. In particular, the Spring 06 midterm contains a plain logistic equation problem, which will not appear on your exam (see more details below); you should still be able to do this midterm though.

The grades in MAT 127 have had a history of dropping significantly from Midterm I to Midterm II. Section 7.6 is a hard topic being heavily graphics and graphics of rather difficult kind. Sections 8.1-8.3 often lead to confusion between sequences and series, the corresponding notions of convergence, and the corresponding convergence/divergence tests. This is rather avoidable while working on exercises from these sections, as sequences and series are kept separate there. It is thus essential to do exercises from the *Review* portion of Chapter 8 (*Concept Check*, *True-False Quiz*, and *Review Exercises*) as well as the old midterms under test conditions. Try to start studying for the exam as early as possible so that you can get some rest before the exam and not be exhausted while taking it (this appears to have had negative effect on quite a number of Midterm I scores).

If you received an F or D/C- on the first midterm (or a low C and your homework scores are low), you should do the Fall 05 second midterm under test conditions by Sunday, November 1. If you do poorly on it (and be honest with yourself in comparing your work with the solutions), you should probably withdraw from the class while you can. The *last* day to do so is Monday, November 2; you will receive a W on your transcript if you withdraw at this point, but presumably this is preferable to an F.

If you have any questions, please come to office hours (lots of them on Wednesdays!), MLC, and/or a Residential Tutoring Center. If you do not do well on the second midterm (which covers only 4 sections), it is likely to be very hard to compensate for this on the final (which will be cumulative).

**Note** that any possible issues concerning your grades on Midterm I and PS1-5 must be resolved before Midterm II. Midterm I and PS1-5 grades will not be changed after November 4 even if your score was simply tallied incorrectly.

## After Midterm II

Detailed solutions to the midterm will be available on the course website on Thursday morning; please print these out before the following lecture. If your total exam score was incorrectly tallied, please let your instructor know.

Before raising questions about how your exam was graded, you **must** read the solutions to the exam. Each problem is intended to be graded according to a fixed grading scheme, which will be outlined in the solutions. Errors (deviations from the scheme) can occur in grading, and you are welcome to discuss your score on each specific problem on the exam with the primary grader for the problem (bring along your exam **and** solutions). He/she will take this opportunity to check that the *entire* problem on your exam (and not just the part you are concerned about) was graded according to the grading scheme. This may change your overall score for the problem, either raising or lowering it, likely marginally, if at all. If your overall exam grade is changed (up or down), it will then be updated on your exam and on *blackboard*. If you decide to discuss the grading of a specific problem with an instructor, the grading of any of the remaining problems on your exam may be subject to re-evaluation at the instructor's discretion.

Your grade will be changed under the following circumstances only:

- if it is contrary to the grading scheme outlined in the solutions;
- if this outline does not address the issue in question and your score is contrary to the spirit of the scheme or is inconsistent with how another exam was graded. In the latter case, you have to come with the student whose exam was graded differently; it may be the case that his/her score will need to be adjusted down, instead of yours up.

While this re-grading policy may appear overly harsh, its only aim is to increase the likelihood that your overall exam score accurately reflects your work on the exam; this is only fair to you and the rest of the class.

One of the aims in grading the exams is consistency. Another aim is for the number of points taken off for an error to be appropriate in relation to the significance of the error to the entire problem as well as to the content of the class. In particular, the same error may carry different penalties on different problems. For example, the 20-point Problem 2 on Midterm I was rather simple; answering the actual question being asked and using  $(\ln 16)/(\ln 2) = 4$  thus constituted significant portions of the problem. In something like Problem 5 on Midterm I, their relative significance would have been less. At the same time, expressions like  $\ln |2|$  and  $(\ln 16)/(\ln 2)$  in final answers constitute fundamental errors, as the first indicates you have no understanding of what absolute value means while the second that you have no understanding of logs. Errors such as  $\ln 35 - \ln 5 = \ln 30$  or  $(\ln 35)/(\ln 5) = \ln 7$  are also very serious (in fact,  $\ln 35 - \ln 5 = \ln 7$ ); this would be another matter in MAT 123 or even MAT 125. Stating that a (random) solution of an autonomous equation  $y' = f(y)$ ,  $y = y(x)$ , is independent of  $x$  shows fundamental misunderstanding of the course, as solutions are functions of  $x$  (yes, some of them may be constant functions, but most are not if  $f(y) \neq 0$ ). All such errors could carry somewhat heavier penalties than you might expect.

On the other hand, the penalty for plain computational errors is fairly light. For example, if you forget a minus sign going from one line to the next, divide 1000 by 8 and get 120, or add  $7/8$  and