Math 2 Course Guidelines Winter 2006

http://www.math.dartmouth.edu/ m2w06/

1. About The Course

Math 1-2 is a two-term sequence. Its purpose is to cover the calculus of Math 3, the standard introduction to calculus. The prerequisite for taking Math 2 is completion of Math 1. This course will start where Math 1 left off in the Fall of 2005 and will provide a thorough introduction to integral calculus. Students completing Math 1-2 will be prepared to take Math 8.

2. Textbook

The textbook for this course is Calculus of a Single Variable (Second Edition) by Earl W. Swokowski et. al. This is the same textbook that was used in Math 1 in the Fall of 2005.

We will spend most of our time in Chapters 4, 5, 6 and 7. We will begin by introducing antiderivatives and the definite integral and looking at The Fundamental Theorem of Calculus (Chapter 4). Then we will revisit the transcendental functions studied in Math 1 as well as simple differential equations (Chapter 6). The course concludes with a study of techniques of integration (Chapter 7). Applications of the integral will be studied throughout the course (Chapter 5).

3. Instructors and Lectures

The instructors for this course will be Brooke Andersen and Allison Henrich. Both instructors will be using all x-hours.

Section 1:

- Instructor: Brooke Andersen
- Email: brooke.m.andersen@dartmouth.edu
- Office: 1L Bradley Hall
- Office Hours: T,Th 1-2, Su 3-5 (or by appointment)
- Lectures: Bradley 102: MWF 8:45 - 9:50 Th 9:00 - 9:50 (x-period)

Section 2:

- Instructor: Allison Henrich
- Email: allison.henrich@dartmouth.edu
- Office: 1S Bradley Hall
- Office Hours: T,Th 1-2, Su 3-5 (or by appointment)
- Lectures: Bradley 101: MWF 10:00 - 11:05 Th 12:00 - 12:50 (x-period)

4. Tutors and Study Groups

The IAS Program in the First Year Office will continue to run study groups for this course. Students will be assigned to study groups and are encouraged to take advantage of this resource.

5. Help from Instructors

If you have any questions about the course guidelines or about the material we study during this course, please talk with us. Although we enjoy mathematics, we are not here just to have fun. Our primary goal is to help you learn and understand calculus. Your questions are an essential part of your learning process and we can help you find your answers.

In addition, we expect that you will spend time talking with your classmates about the ideas we are studying. Often mathematics is pursued as a solitary endeavor and there are many times when focused, individual effort is essential. But just as important is the time you spend working with your colleagues to find answers to your questions. Before you leave the first class, you should know how to be in touch with at least one of your classmates.

In many ways, mathematics is really about asking questions and then searching for, and hopefully finding, truths in answer to our questions.

We look forward to talking with you about math during our office hours.

6. Homework

The philosophy of this course is simple: **You learn math by doing math.** Mathematics is not a spectator sport! Football players don't train for the season by sitting around and reading about different plays – nothing can take the place of exercise and practice. Similarly, you cannot learn mathematics by only listening to the lecture – you must do problems, and lots of them. The first type of homework assignment consists of carefully chosen problem sets from the book and in WeBWork.

In general, WeBWork problem sets and written problem sets are due by the beginning of class on quiz days. Partial credit will be awarded. Late problem sets will NOT be accepted.

7. Writing Assignments and Problem Solving

Problem sets, while vital to your learning the concepts in this course, do not closely model real world problems or situations. It is highly improbable that your future employer will ever say "Find the derivative of $f(x) = x^2$." Rather, it is much more likely that you will be asked to solve actual (i.e. non-textbook-style) problems, whose answer requires more than the statement and application of a formula, and communicates more than a string of equations. For these reasons, we have developed a series of writing assignments and problem solving exercises: realistic problems presented in a realistic format, which require a realistic response. The problems are at the same difficulty level as those you are already doing in problem sets; they just require a more formal response.

Each Thursday in the x-hour, students will be given class time to work on projects. These assignments will be due on Mondays. We will accept late assignments until the Wednesday of the same week, but late assignments will LOSE HALF CREDIT.

8. Other Assignments and Grades

See the course webpage for information on Journals, Quizzes, Exams and an explanation on grades.

9. Honor Principle

On Exams and Quizzes: No help given or received.

On Homework: Working together is permitted and encouraged, but NO COPYING.

You are welcome to work in groups to discuss the ideas and specific problems (also feel free to discuss with your instructors, tutors, and anyone else you may find). However, each student is expected to produce the final written homework set individually and independently.

10. Disabilities

Students with learning, physical, or psychiatric disabilities enrolled in this course that may need disability-related classroom accommodations are encouraged to make an office appointment to see their instructor before the end of the second week of the term. All discussions will remain confidential, although the Student Disability Services office may be consulted to discuss appropriate implementation of any accommodation requested.

Also, they should stop by the Academic Skills Center in Collis Center to register for support services.