

Syllabus

Mathematics 2300H, Calculus, Fall 2006

Professor: *Gordana Matic*

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Book: Calculus (Early Transcendentals Version) 6e (Sixth Edition) by Edwards and Penney.

Class time and location: MWF 11.15-12.05 am in Chemistry (building 1001) room 453

Office: Room 321A in Boyd GSRC

Office hour: Monday 10:10-11:00 am, Wednesday 12:20 -1:10pm. Please come to office hour if you have any questions or concerns.

Study rooms: Monday through Thursday 3:30-5:30 in room 322 in Boyd starting the second week of classes.

Pre-requisite and co-requisite: The prerequisite for this course is MATH 1113 or equivalent. All students are required to have a working knowledge of precalculus, including trigonometry.

All students registered for Math 2300H are required to also register for Math 2200L.

Attendance: Attendance will be taken periodically. If you miss class without a valid excuse more than 3 times (when roll taken) you may be dropped from the class.

Course Objectives and Outline: The objective of this course is for the students to learn about derivatives and their applications. We will cover Chapters 2,3, and 4 as well as 5.1 and 5.2 in the book. We will introduce the concept of limit and use it to calculate derivatives of basic functions, then learn techniques ("differential calculus") for calculating derivatives of complicated functions. As applications we will use derivatives to explain and calculate rates of change of various quantities. We will also learn how to find maxima and minima of functions, and use that in applications. As an honors version of Math 2200, this class will be expected to get into the material covered in that course in more depth and to ask for more proofs and harder problems, but the scope of the material covered and the pace will be approximately the same.

Students are expected to work without the use of calculators or computers. Students will learn the use of calculators and computers in Math 2200L. Please note that Math 2300H and Math 2200L are separate and independent courses, independently taught and graded, even though they are clearly related.

In Class: Ask questions please. Many people find it intimidating to ask questions, but it is an important tool for learning- for the brave (and thus smart) one who asks, as well as for the others. If you do not understand something, usually there are other people in the class who do not either. It also helps me to do a better job of teaching. I do try to guess your questions in advance, and answer them before you ask, that is a part of my job as a teacher. But each class is different, and I can not guess all the questions. So please ask them.

Homework: I will assign practice problems from the book during each class. The graded homework will be web based. The web address you need to go to is

http://ada.math.uga.edu/webwork2/Matic_2300H

You are encouraged to work with other students outside class time on the course material and the homework assignments. Most people work better when discussing new material

with other people and building on each other's ideas. Sometimes there is a temptation, when working with others, for each to do one part of the problem and not really look at what the other people did. This is not a good idea, since you need to understand all of the material. So please work with others and use the experience to learn from each other and bounce ideas off each other. In the end, however, you have to solve the problems yourself if you want the benefit of learning the material and being prepared for the tests.

Tests: There will be three midterms in class about equally spaced. I will announce the exact days a week in advance. A missed test cannot be made up except with a valid documented excuse.

To prepare for tests, it is recommended to review the material covered in the lectures, to read the relevant sections of the book, redo the previous homework assignments and work out extra problems from the relevant sections of the book. You are encouraged to work together when preparing for tests. Explain the material to each other: it is common knowledge among academics that one really learns something once one has explained it to other people.

Also, to boost your performance in the course, it is very important that you review the material of each lecture before the next lecture. When past material is fresh in your mind, you will be much more receptive to new material, will understand and absorb it better. In general, the more you review the better off you are. This is true for all disciplines but especially for mathematics since often one needs time to "assimilate" new material. This means that often, it is difficult to grasp the full meaning of a new mathematical concept right at the start. By periodically going back to that concept, you will have a better and better understanding of it and its consequences. You will know how to better use it.

After each test (including the final exam), a complete set of solutions to the test will be posted outside my office.

Grading: Homework will count for a total of 100 points, each midterm will be 100, the final exam will be 200 points for a total of 600 possible points. The Final Exam will be comprehensive and cover all the material in the course. It will slightly emphasize the part of the course after the third midterm.

The grades will be assigned on approximately the scale : 90 percent and up A, 80 percent and up B, 70 percent and up C, 60 percent and up D, below 60 percent F. Throughout the semester you will get a chance to earn bonus points by doing extra work, either on the tests or in the homework, so look for the chances and take them.

Academic honesty: As stated in the Undergraduate Bulletin: "All students must comply with an appropriate and sound academic honesty policy and code of honest behavior". The University's academic honesty policy can be consulted on the world wide web at <http://www.uga.edu/~vpaa/polproc/ahpol/main.html> .

During the tests for this course, the use of any kind of student-to-student assistance, any table or list of formulae, numbers, theorems or mathematical statements (unless explicitly approved by me), any unapproved calculator, computer or electronic device is prohibited and would constitute a violation of the University academic honesty policy.

Statement: The course syllabus provides a general plan for the course; deviations may be necessary.