

Syllabus

Mathematics 2250, Calculus I for Science and Engineering, Spring 2007

Professor: *Gordana Matić*

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Book: Hass, Weir, and Thomas: *University Calculus*, Pearson-Addison-Wesley publishers.

Class time and location: MWF 9:05-9:55 am and M 12:20-1:10pm in Room 303 in Boyd GSRC

Office: Room 321A in Boyd GSRC

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

Study rooms: Please look for information on the Mathematics department study rooms (afternoon help sessions) and other free help you can get with this course at http://www.math.uga.edu/undergraduate/student_services.html

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.

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, as well as the basic integration and applications. We will cover Chapters 2,3, 4 and 5 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 graph functions after finding their global and local maxima and minima, and how to use that information in applications. We will also learn basic facts about "antiderivative", or integrals and their applications, with the more advanced topics in the subject left for the second semester.

Students are expected to work without the use of calculators or computers except if attempting specially marked problems from the book. Calculators will not be necessary or allowed on the tests. 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 problems from the book during each class. I will expect the homework to be done, or at least seriously worked on, before next class, so that you are capable of using what we learned the previous time in the next lecture. I will not collect and grade

the homework weekly. It is your responsibility to keep your HW up to date. Test and quizzes will be based on the HW problems.

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. Please work with others if you wish 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.

Grading: Each midterm will be 100, the final exam will be 200 points for a total of 500 possible points. I might also give some quizzes as I feel necessary, which will be graded according to length and difficulty. 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. The highs and lows in those ranges will add + or - to the grade.

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.