AMS 27: Mathematical Methods for Engineers.

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Required Text


Optional Text for Linear Algebra


Optional Text for AMS27L

Pratap, Rudra, Getting started with MATLAB, Oxford University Press, 2006.

Lectures

Social Sciences 1 computer lab. Everyday from 4:00pm to 6:00pm.

Laboratories – AMS27L

Labs will be taught concurrently with the lectures.

Office hours

Tentative schedule. Please get in touch with me in case you cannot make any of the times below. Office hours are an important part of the learning process, and we want to make sure everyone has access to at least one of the office hours sessions per week.

Bruno: Everyday at Jack Baskin building, room #141 or Jack’s Lounge (always check both), from 2.30pm to 3.00pm.

Homework

There will be one set of homework problems per week. They are due every Friday at 6.00pm at the grey box under the glass case at the entrance to Jack’s Lounge.

Homework will count as extra credit to the final score. Each homework will add 1% to the final score if you do at least 50% of the problems assigned.
Lab assignments

If all the lab assignments have a score higher than 60%, that score will account for 10% of the final grade for AMS27. Given this, your final grade for AMS27 and AMS27L will be the same.

There will be a total of 4 lab assignments. Easier parts of the lab assignments will be due at the end of each lab, the whole assignment (which will typically include the harder questions) will be due later in the following dates:

- Assignment #1 due at the end of your first week of classes (Friday, 30th of June at 6pm).
- Assignment #2 due at the end of your second week of classes (Friday, 7th of July at 6pm).
- Assignment #3 due at the end of your third week of classes (Friday, 14th of July at 6pm).
- Assignment #4 due at the end of your fourth week of classes (Friday, 21st of July at 6pm).

You can email the code to Bruno (time stamp of the email will serve as proof of compliance to the deadlines). And proofs or other handwritten material have to be dropped off in the grey box under the glass case at the entrance to Jack’s Lounge.

Midterm

Will take place on July 11th, in class, and will cover all that was taught just before the date of the exam.

It will contribute 40% to the final grade.

Any questions regarding the midterm scores should be addressed to Bruno.

Final exam

Final exam date will take place in class on Wednesday, July 28th, and will cover all that was taught during the quarter.

The final exam will account for 50% of the final grade.

Official solutions will be posted at Jack’s lounge, in the glass showcase.

Any questions about the scores on the final should be addressed to Bruno.

Final grade

It is the result of a weighted average of the grades you get in the midterm (40%), final exam (40%) and the lab assignments (10%). Homeworks add 1% extra do this score.

Passing score is 60% (with a score of at least 60% in the final exam).

If a student does not pass the computer lab portion of the course, ie. AMS27L (passing grade is 60% of the average score of lab assignments), then the student’s final grade in AMS27 will be calculated in the following way: 50% of midterm score, 50% of final exam score.
Course’s web page

Address: http://www.soe.ucsc.edu/classes/ams027/Summer06/

The web page will contain the list of homework due, score list (updated weekly) and any other material related to the course. It will also contain any announcements related to the course and all the information related to it.

Protected material can be accessed by using the following information,
username: ams027 password: doina64

How to improve your chances of getting a good result in this course

Take as much advantage as possible of the office hours. They are a wonderful opportunity to get an almost one-to-one tutoring. I will be able to pay closer attention to you individually and therefore help you more efficiently.

Unfortunately our system still expects the students to arrive at this school with good strategies for working or studying, and the sad reality is that many times they don’t. Although we are very well aware that each person is an individual and running the serious risk of sounding paternalistic, allow us to give you a few ideas on how to improve your studying of mathematics.

• Read the book. Many people give up after a first read of the book, giving in to frustration. Please keep in mind that no one expects you to understand everything on a first read. No one can do that. Most typically a student needs to read the material two to four times until he/she starts feeling comfortable with the new concepts.

• Study the examples. These are the "doors" that lead to the solution of most of the exercises. It is almost pointless to tackle homeworks and quizzes if one doesn’t understand the examples. The usual procedure should be to re-read the theory in case you have difficulties with a specific example.

• Work out the problems given in the book. Feel free to do as many as you feel like. Start with the easy ones first. If you have problems, go back to the examples, maybe you just skipped something important.

• Organized work. Be organized and write down your calculations in a clean and ordered way, problem solving is much simpler if one has organized, clear calculations.

• Make full use of lectures, sections, office hours and labs. Don’t be afraid to make questions. The more you interact with the teachers the more likely you will be able to absorb more knowledge. Come to us as many times as are necessary!

You can and you should come to us for help during any of the stages described above, but you’ll be able to take more from our meetings if you have gone through the first items in this list on your own at least once.

I look at this course as a team work and the main goal of all of us is to help you learn mathematics and help you have a good final grade.

I welcome you to this course and we hope that by the end of it you feel that you have learned something useful and at the same time had some fun doing it!