AMS 27: Mathematical Methods for Engineers.

Instructor: Bruno Mendes  
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TA-AMS27L: Sumanth Kolar  
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Required Text


Optional Text for Linear Algebra


Optional Text for AMS27L


Lectures

Kresge Clrm 327, Tuesdays and Thursdays from 4:00pm to 5:45pm.

Sections

Section 01A is held at Social Sciences 1 room #165 on Wednesdays from 07:00pm-08:10pm.  
Section 01B is held at Social Sciences 1 room #165 on Thursdays from 08:30am-09:40am.  
Section 01C is held at Social Sciences 1 room #165 on Fridays from 09:30am-10:40am.  
Section 01D is held at Crown Clrm 202 on Wednesdays from 12:30pm-01:40pm.  
Sections are **not** optional. They are part of the requirements to pass this course and attending them is paramount to getting a satisfactory result.  
There will be a quiz during each section.
Laboratories – AMS27L

All labs meet at Jack Baskin room #109 (Computer Lab).
Lab01 meets Mondays from 7:00pm to 9:00pm.
Lab02 meets Tuesday from 1:30pm to 3:30pm.
Lab03 meets Wednesdays from 12.00pm to 2:00pm.
Lab04 meets Tuesdays from 11:00am-01:00am
You have to enroll in the labs concurrently to AMS27.
There will be 4 assignments for the labs.
Responsible for labs: Sumanth Kolar.

Office hours

Tentative schedule. Please get in touch with us 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: Tuesdays and Thursdays from 6:00pm to 7:00pm and Fridays at Jack Baskin building, room #141 or Jack’s Lounge (always check both), from 1.00pm to 2.00pm.
  Chris: Fridays at Jack’s Lounge, from 11:00am to 12:00pm.

MSI tutoring sessions

Modified Supplemental Instruction sessions are tutoring sessions led by a specially trained tutor, and they are free. The tutor leading these sessions is Annendra Lal. Annendra will be attending every class, and in the first class he will introduce these sections and allow you to choose the best times to hold them. We highly recommend you attend at least one of these sessions a week. these are typically very popular with students.

You can find more information about these sections at
www.cse.ucsc.edu/advising/undergraduate/current/tutor.html

Quizzes

There will be one quiz per section; they will be very easy and short. The intention behind having them is to both reward the students for attending section and also to give everyone a (very) rough idea on how well they are doing.

Quizzes will account for 10% of the final grade.

Any questions regarding quizzes should be addressed to Chris.

Homework

There will be one set of homework problems per week. They are due every Friday at 5.00pm in the grey box at the entrance to Jack’s Lounge.

To the best of our abilities we will try to post the solutions in the glass showcase at Jack’s Lounge. We encourage questions about grading, and if you can’t find solutions posted to the problems you want, you can always ask Chris to have a look at the solution manual.

Homework will account for 10% of the final grade.

Any questions regarding homework should be address to Chris.
Lab assignments

One needs a score higher than 60% to pass the lab.

Since you will have 2 weeks to complete each assignment, all assignments will count for the final grade.

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 second lab section (April, 13th).
- Assignment #2 due at the end of your fourth lab section (April, 27th).
- Assignment #3 due at the end of your sixth lab section (May, 11th).
- Assignment #4 due at the end of your eighth lab section (May, 25th).

Any questions regarding lab assignments can be addressed to either Bruno or Sumanth.

Midterm

Will take place on May 3th, in class, and will cover all that was taught just before the date of the exam.

It will contribute 40% to the final grade.

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

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

Final exam

Final exam date will take place in class on Monday, June 11 between 7:30-10:30 p.m., and will cover all that was taught during the quarter.

(Check http://reg.ucsc.edu/soc/2072/sched.htm#Spring2007 for latest news)

The final exam will account for 40% 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 quizzes (10%), homeworks (10%), midterm (40%) and final exam (40%).

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

Letter grades are decided based on the following rules:

1. Final exam scores below 60% automatically imply an F.
2. Final scores below 60% automatically imply an F (in some cases a D).
3. Final scores between 60% and 65%: C.
4. Final scores between 65% and 75%: B-.
5. Final scores between 75% and 80%: B.
6. Final scores between 80% and 85%: B+.
7. Final scores between 85% and 90%: A-.
8. Final scores between 90% and 95%: A.
9. Final scores between 95% and 100%: A+.

Course’s web page

Address: http://www.soe.ucsc.edu/classes/ams027/Spring07/

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: gurle43

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 great 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. Al-
though 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 frustra-
tion. 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 under-
stand 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 ques-
tions. 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!