

## MATH 225: LINEAR ALGEBRA (section: 39538R)

Pr. Crombecque-FALL 2020

### ***Instructor:***

DAVID CROMBECQUE

office (but you will never see it): KAP 266B

email: crombecq@usc.edu

For ALL INSTRUCTOR'S OFFICE HOURS, use the following ZOOM link:

<https://usc.zoom.us/j/8851269340>

Meeting ID: 885 126 9340

### ***Course Info:***

Lectures: MWF 9-9.50am on ZOOM.

Discussion Sessions: TTH 2pm or 3pm on ZOOM.

Teaching Assistant: Samuel Armon

email: armon@usc.edu

### ***Textbook:***

Differential Equations & Linear Algebra by GOODE (4th edition)

### ***Grading:***

Your class grade will be calculated as follows:

Test 1: 15 or 20 %

Test 2: 15 or 20%

Note: the best score between Test 1 and Test 2 will be worth 20 % while the other will be worth 15 %.

Daily Check Quizzes: 15%

Homework: 15%

Final Exam: 35%

### ***Notes:***

All work and assignments (Tests, Final exam, Quizzes and Homework) will have to be uploaded on GRADESCOPE in order to be graded and counted.

The Gradescope code for the class is: 9DVX33

***Important Dates:***

1. The Add/drop deadline is on FRIDAY, SEPTEMBER 4th (if you want your money back that is).
2. If you decide to drop the class after September 4th but BEFORE FRIDAY, OCTOBER 2nd, you will NOT receive a W on your transcript but we get to keep your money (evil laugh)
3. The Last day to withdraw (get a W on your transcript, some people could believe it means Winner) is on FRIDAY, NOVEMBER 6th.
4. TEST 1 will be in class on FRIDAY, SEPTEMBER 25th.
5. TEST 2 will take place in class on FRIDAY, OCTOBER 30th
6. The FINAL EXAM is 2 hours on MONDAY, NOVEMBER 23rd from 11am PST to 1pm PST. If you can, AVOID showing up with your teddy bear still wearing your pjs. BUT DO SHOW UP AND ON TIME!  
Per UNIVERSITY wide POLICY on FINALS, final exams cannot be taken early. If you cannot take the exam on that day at that time, you may have to receive an incomplete and take a different M225 Final exam during the Spring or the Summer.  
NOTE FOR ALL TESTS AND the FINAL, if need is, a second time slot will be offered for students whose time zone is such that the regular schedule of the exam falls outside the window of 7AM to 10PM LOCAL TIME. Note that, while the alternate exam will cover the same content, it will be different from the Pacific Time exam.

***Homework:***

Every week, homework problems will be assigned. You will find them on Blackboard and Gradescope every week. Homework will be due every FRIDAY and should be turned in exclusively on Gradescope. (first homework

will be due on Friday, August 28th).

There will be about 11 homework assignments. The 10 best will make your homework grade.

***Daily Check Quizzes:***

Twice a week, you will be assigned a very short multiple choice questions quiz, that will be posted on Gradescope and you will have 48h (or 72) to take the quiz anytime you want during that window on Gradescope (first quiz will be due on Friday, August 21st).

There should be about 24-25 of them, the 20 best will make your Daily Check Quiz grade.

***Academic Integrity:***

The instructor strongly adheres to the University policies regarding academic integrity violations, and will strictly enforce these rules. You are encouraged to review those, for instance in your copy of SCampus or online, <http://www.usc.edu/student-affairs/SJACS/forms/tio.pdf>.

Prior experiences make it necessary to clarify a few things . It is acceptable to refer to another students notes for clarification. It is acceptable and encouraged to work with others to understand assignments, however all homework submitted should represent your own work and indicate your personal level of understanding. (As an example, it is fine to ask a fellow student: " what is this problem asking? I don't really understand the question?", it is NOT OK to ask: "hey, give me your problem 5", neither it is ok to say: " I do problem 4, you do problem 3 and then we swap our papers" .

The answers in the back of the book should be used to provide feedback; they do not represent an adequate write-up for a solution. It is not acceptable to place an answer from the back of the book (or obtained from any other book or internet) at the end of your work, if your work does not support that answer. It is never appropriate to communicate with another student during a testing period. Notes and other materials will not be accessible during testing.

***Attendance:***

Attendance to class is ESSENTIAL IF YOU WANT TO SUCCEED. While some of you may attend the class synchronously because of the time differ-

ence, you should make sure you view the recording of the class on the SAME DAY as the class. It is YOUR RESPONSIBILITY (once that word is said, it means the stressful life of an adult just started for you) to KEEP UP with any announcement made in class. You are of course encouraged to use the instructor's (and teaching assistant) office hours as much as needed. (the schedule for office hours will be set up during the first week of class).

***Important Notice:***

1. THERE WILL BE NO MAKE UP EXAMS!
2. For weekly homework, since only 10 are required to make your grade, you can miss one homework without penalty. If you know you will not be in class to turn in the weekly homework, you should arrange for a classmate to hand in the paper for you as no late homework will be accepted.  
If you know ahead of time, you will be missing the quiz on a given week (for a good reason), you should tell your TA ahead of time to see if any arrangement can be made for you to take the quiz at a different time.
3. Homework assignments and tests dates, grades, office hours and any other relevant information for the class will be found on BLACKBOARD. Make sure you know how to get access to your account. (don't hesitate to tell me if you encounter any problem).
4. Also, Students who think they may need accommodations in this course because of the impact of a disability should register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

***Suggestions:***

1. COME and SEE ME: ask me questions or seek for advice. I may not have an answer for all your questions or worries but communicating is essential. If for any reason, you cannot meet me during office hours, email me or talk to me at the end of class in order to find a convenient time for you and me to meet.
2. READ the BOOK and your NOTES: ideally before each class and again before attempting your homework.
3. Try problems SEVERAL TIMES: when you get stuck, take a break, do something else and try again later. Sometimes, the solution to a problem may NOT come to you at the peak of your struggle but instead the next day during your French class. Keep in mind that no matter when you see the light, it appeared thanks to your work and struggle.
4. LOOK at other BOOKS: go the library and have a look at different calculus books. Some of them may be better fitted to your learning style.
5. INTERNET is a great source of info but it will most likely feel like a tsunami coming to you. When you do get ideas inspired by internet (it is legal), then mention it along with the exact source on your paper.
6. TALK to each OTHER: if you can explain a concept to someone else, it usually means you got it already and sometimes it may even help yourself realizing there are gaps in your understanding.

***Resources:***

1. Your primary resource for help should be the INSTRUCTOR and the TA. For extra help,

2. You can go to Math Center, KAP 263. The Math Center is a suite of rooms that is attended by graduate students in the department. Undergraduates can use it as a place to work on their homework and get help with math as and when they need it. IT IS NOW VIRTUAL. The graduate assistants give their consulting (office) hours in the Math Center. More information can be found at [dornsife.usc.edu/mathcenter](http://dornsife.usc.edu/mathcenter).
3. VITERBI LEARNING CENTER : For those of you that are in the School of Engineering, the Viterbi Learning Center is a valuable source of help. They provide tutoring for Calculus. For more information about VARC go to <http://viterbi.usc.edu/varc>.
4. Office of Academic Support: [study@usc.edu](mailto:study@usc.edu), [www.usc.edu/dept/student-affairs/](http://www.usc.edu/dept/student-affairs/). Provides tutoring on a walk-in basis and study skills workshops.

***Content:***

Linear Algebra is about matrices, linear spaces and linear maps (yeah big deal since you probably don't know what they are). But the KEY word is LINEAR. Just keep in mind that most problems (in sciences in general) are easy to deal with if they are linear (remember those tangent lines from calculus 1, we love them because they are LINES). When problems are not linear, well that's why people are paid big bucks to work on them...

With the exception of a few sections, we will try cover:

Sections 2.1 to 2.8

Sections 3.1 to 3.4

Sections 4.1 to 4.10

Sections 6.1 to 6.5

Sections 7.1 to 7.3

***Disclaimer:***

This syllabus is not a contract and the instructor reserves the right to make necessary changes during the semester.