

MATH 322 - Advanced Linear Algebra Spring 2022

Instructor: Gabriela Bulancea

Office: Exploratory Hall 4217

Office Hours: TR 10 am - 11 am, T 11 am - 12 pm, or by appointment

The office hours will be held on Zoom (link: <https://gmu.zoom.us/j/8097488760>).

Please let me know in advance if you would like to attend office hours in-person.

E-mail: gbulance@gmu.edu

Text: *Linear Algebra*, by S. Friedberg, A. Insel and L. Spence, Prentice Hall.

We will cover portions of Chapters 1 - 7 in the text.

Prerequisite: Math 300 and Math 203

Broad purpose of the course: Build a mathematically rigorous foundation for the principal topics of linear algebra, which include abstract vector spaces, linear independence, bases, linear transformations, matrix algebra, inner product. Students will have the opportunity to develop their ability to understand and write proofs in this field, and will become acquainted with some of its applications.

Homework: Problem sets will be assigned regularly throughout the semester. You are expected to solve all the assigned problems, although only some of these problems will be handed in and graded.

Assignments will be collected and returned via Gradescope, an online grading platform. The link to Gradescope is provided in Blackboard.

Advice for the written assignments:

- Collaboration is permitted on the writing assignments, but the final write up must be your own. You must demonstrate in your written proofs that you substantially understand the problem and what you are writing. If you are just copying someone else's solution, I will know.
- It is wise to start any homework assignment early. If you try to solve a problem and get stuck, please come to my office hours or contact me by email to ask for a hint.

In-class work: You will be asked to solve certain problems related to the lecture in class working in small groups. You will submit your work individually through Gradescope.

Class Tests: There will be two class tests given during class time. There is a tentative schedule for the tests below. You are responsible for keeping up with all information announced in the classroom and on Blackboard. There will be no makeup tests.

Test dates:

Test 1 Wednesday, February 23

Test 2 Wednesday, April 13

Final Exam: The final will be on Wednesday, May 11 between 1:30 and 4:15 p.m. It will be a cumulative exam. The final exam is mandatory regardless of your class standing prior to that. You

may replace your lowest test grade with your final exam percentage. In order for this to happen you must write a note above your name on your final exam.

Grading: Each of the class tests counts for 20%, the graded homework for 20%, class participation for 10%, and the final exam for 30%.

UNIVERSITY POLICIES: The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at <http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies.

Honor Code: It is expected that each student in this class will conduct themselves within the guidelines of the Honor Code. Sharing with anyone information of any kind about exams before they are graded, or using online resources during the exams will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See <http://academicintegrity.gmu.edu/honorcode> for a copy of the Honor code.

Inclusivity and equity: George Mason University is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.

Gender identity and pronoun use: If you wish, please share your name and gender pronouns with me and how best to address you in class and via email.

Disability Services: Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email:ods@gmu.edu — Phone: (703) 993-2474

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS):
(703) 993-2380; <http://caps.gmu.edu>

Safe Return to Campus Statement

- All students taking courses with a face-to-face component are required to follow the university's public health and safety precautions and procedures outlined on the university Safe Return to Campus webpage (<https://www2.gmu.edu/safe-return-campus>). Similarly, all students in face-to-face and hybrid courses must also complete the Mason COVID Health Check daily, seven days a week. The COVID Health Check system uses a color code system and students will receive either a Green, Yellow, Red, or Blue email response. Only students who receive a green notification are permitted to attend courses with a face-to-face component. If you suspect that you are sick or have been directed to self-isolate, please quarantine or get testing. Faculty are allowed to ask you to show them that you have received a Green email and are thereby permitted to be in class.

- Students are required to follow Mason's current policy about face mask-wearing. As of August 11, 2021, all community members are required to wear a facemask in all indoor settings, including classrooms. An appropriate facemask must cover your nose and mouth at all times in our classroom. If this policy changes, you will be informed; however, students who prefer to wear masks will always be welcome in the classroom.