



Course Syllabus: Vector Spaces

Bolin 109

MWF: 10:00 – 10:50

MATH 3753 Section 101

Fall Semester 2023

Contact Information

Instructor: Marcos Lopez

Office: Bolin 118B

Office hours: M F 11:00 – 11:50 AM ; T R 9:30 – 10:50 AM

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Course Description

A mathematically rigorous approach to Abstract Vector Spaces and Linear Transformations.

Textbook & Instructional Materials

There will be no book for this course. We will work on selected problems and proofs together in class which will make up our knowledge base in the course

Prerequisites

MATH 1734 and MATH 3233 with grades of C or better.

Grading

Assignments	Points
Homework	15%
In-Class participation	20%
1 st Exam	15%
2 nd Exam	15%
3 rd Exam	15%
Final Exam (Wed, Dec 13 th)	20%
Total Points	100%

Student Handbook

Refer to: [Student Handbook 2022-2023](#)

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of

work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct. [Student Handbook 2022-2023](#)

Make-Up Exams

There will be NO makeup exams. If you know that you cannot make it to any of the above test dates, then you must take the exam EARLY. You will notify me as soon as possible, and we will work out a time and place for you to take the exam. If you miss an exam, then you have taken a zero for its grade. In extreme circumstances where advanced notice is not possible, such as a helicopter crashing in your house the day of a test, your final grade will take the place of the missed exam. In these extreme circumstances, such as being kidnapped by a super-villain in a plot to lure a superhero into a trap, you must let me know about the situation as soon as humanly possible.

Homework

Homework sets will be graded on a scale of 0 to 3. (I reserve the right to assign 4 points to an exceptionally well written homework set) You should not think of the grade of an individual assignment as representing a percentage of questions which you answered correctly, but rather as delivering a message about the problem-solving process:

3	Student work is complete, including justification or explanation of the processes in solving problems. The work may not be completely correct, but the work demonstrates a good line of reasoning.
2	Student work is mostly complete, and all problems have been attempted including some justification or explanation of the process of solving the problem.
1	Student work is incomplete, lacking explanation, or not an adequate attempt at solving problems.
0	Student work is missing or does not represent an adequate attempt at solving problems.

Your Homework grade will include points for presenting and working on problems at the board. In general, you should be getting more problems properly solved and justified than not to pass this class.

Proofs Grading

Proofs will be graded on a scale of 0 to 2. You should not think of the grade as representing a percentage but, rather, to deliver a message:

2	Great work; no real complaints on content or on writing.
1	Argument basically correct but missing some details; less clearly argued than I would like. A correct but especially poorly written proof might merit a 1 as well
0	Serious errors or gaps in the mathematics or justification. This includes the problem being completely wrong or not done at all.

Remember you can resubmit proofs.

Late Homework

There will be a 50% penalty to the grade if you turn in homework late.

Appearance of Homework

- Homework will be stapled.
- Homework will be written neatly without problems cluttered together or scratch work in the margins.
- The solutions to each problem should be easy to follow. This means that the paper you hand in should not be the paper that you first started working on.
- Homework will NOT be turned in with spiral edges still attached to the paper.
- Did you remember to staple your homework?
- Do all of the above before showing up to class.

Practice tips

- Do not mistake being good at math with being able to do math quickly.
- Arriving at an answer is pointless if you have no idea how you got there.
- The version that you turn in is your final draft. You should have started your thoughts out on different paper.

You are the Authority

Many of the proofs you will do in class are “standard” in the sense that you would have no problem finding full solutions in books or online. But the idea here is for you to struggle with these ideas and produce solutions of your own. Thus, when you work on class problems, you may not consult any books. You are, of course, free to use any class notes, any previously proved theorems, and anything that is distributed in class. You may not consult outside sources, including online sources and human sources not associated with the class. In particular, it is fine to consult with students in your class or with Dr. Lopez (because he is awesome), but you should not ask students who took the course previously to help you or to provide you with copies of their work. You will get no credit if I find that you looked for solutions online, and this may result in your removal from class.

In-class

Class preparation and class work form a substantial portion of the grade. The grade for classwork has several components: class preparation and polished solutions and class participation, generally. (This last part includes contributing to class discussions, asking good questions, and active participation.) And, I should add, attendance. If you do not attend, you cannot participate. You are expected to be in class.

Final Exam

The final exam will be cumulative. It will take place on **Wednesday, December 13th from 10:30am to 12:30pm.**

Important Dates

Change of Schedule and Late Registration: August 21 - 25.

Deadline to file for graduation: September 25th.

Last Day to drop with a grade of "W:" October 30th.

Refer to: [Drops, Withdrawals & Void](#)

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Attendance

You are expected to attend every class. If you are not able to turn in a homework assignment or take an exam because of an unexcused absence, you will not be able to turn receive full credit on the homework or take the exam. You can turn in the assignments **early**. A university excuse from a scheduled class activity such as an exam must be presented in writing no later than one week prior to the date of the absence. An absence due to illness or family emergency may be excused, provided that you can supply acceptable written evidence if required, and that you notify me as soon as possible. Notification is almost always possible immediately upon occurrence of an emergency. Failure to make such timely notification may result in denial of your request.

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

College Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Notice

Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.