Math 3013: Linear Algebra

MWF 10:30 - 11:20, HSCI 004

Instructor: Jeff Mermin
office: 414 MSCS
email: mermin@math.okstate.edu
Course web page: http://www.math.okstate.edu/~mermin/3013/
Desire2Learn: https://oc.okstate.edu (then log in and find our course).

Office Hours   TBA or by appointment.

T 1:00-2:30, W 1:30-2:30, 4:00-5:00

Subject matter   This course deals with the arithmetic and algebra of vectors and matrices. It has important applications to almost every area of modern science, mathematics, and engineering.

An important theme of the course is the communication of mathematical ideas in a logical and rigorous way. You will be expected to write some proofs on homework and exams.

Relationship to other courses   Math 2144 and 2153 (Calculus I and II) are prerequisites for this course.

A solid understanding of linear algebra will prepare you well for all 3000-level and many 4000-level math courses.

Textbook   *Linear Algebra: A Modern Introduction* (Third edition) by David Poole.

Grading   Your course grade will be out of 1000 points, assigned as follows:

300	Homework, Quizzes and classwork
150	Midterm, Friday, February 3
150	Midterm, Friday, March 2
150	Midterm, Friday, April 13
150	Final, Friday, May 4, 10:00-11:50 AM
100	Intangibles (e.g., class participation)

A total score of 900 will guarantee you an A, an 800 will guarantee a B, etc.

Homework, Quizzes, and Classwork   Weekly homework will be due every Friday, but may not be collected every week. Every Friday, I will collect homework, give a ten-minute quiz, or both.

Some days (not necessarily Fridays) I will assign problems to be worked in-class, and sometimes I will collect and grade them.

Quizzes will be open-book and open-notes. If there are five or more quizzes, I will drop the lowest quiz grade. If there are ten or more, I will drop the lowest two.

Homework will be collected most Fridays and graded by an undergraduate grader. The grader will probably not be able to grade every problem, but you work through them all anyway.

The problems on quizzes and homework are chosen not only to help you master the material but also to help you learn to communicate your understanding in a clear, logical way. Thus, the grader's decisions about partial credit on homework are final, since they measure how well the grader was able to understand your communication. Also, **you should expect to have to work very hard to solve some of the problems.** You learn little about math and less about communication by simply mimicking what you've seen in class and in the text.

Grades on quizzes, homework, and in-class work will all be subject to a curve, and will be weighted according to their respective frequencies.

Late policy. Because the course builds on itself, it is important that you not fall behind. Thus late homework will in general not be accepted. However, subject to the grader's agreement, I will allow you ten "grace days" in case of illness or other circumstances.

Collaboration. Mathematics is a collaborative venture; you are encouraged to work together with friends and/or classmates on homework, including written homework. However, you must **write up your work yourself** without reference to anything produced by anyone else, and **acknowledge anyone who helped you.** For your own protection, you should insist that both you and your collaborators truly understand everything you claim.

Illness policy If you cannot attend one of the exams due to illness or another emergency, you must provide documentation to arrange a make-up.

If you cannot attend a regular class due to illness or another emergency, no documentation is necessary. If you aren't sure whether or not you're too ill to attend class, please see a doctor. If you need to miss *several* classes, let me know as soon as possible, so that I may plan how to accommodate the situation.

Calculators Calculators and computer algebra packages will be neither necessary nor allowed on exams. You are welcome to use these on most other work for the course, though I strongly recommend that you practice without them.

Where to go for help You have many resources for this course. I hope you will bring questions to me in office hours. Most students find it helpful to talk to classmates and work problems together. I encourage you to post and answer questions in the Discussion section of Desire2Learn. available in the MLRC (See http://www.math.okstate.edu/mlrc for details).

Academic integrity Don't cheat, or help other students cheat. Please read my "rules for written assignments" at http://www.math.okstate.edu/~mermin/3013/airules.pdf. If, after reading this, you aren't sure whether or not something is allowed, ask me before you try it.

Don't violate academic integrity in any other way, either. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned according to the OSU academic integrity process. If you have further questions, contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, http://academicintegrity.okstate.edu.

Syllabus attachment Please read the OSU syllabus attachment on the web at

http://academicaffairs.okstate.edu/faculty-a-staff/48-syllabus-spring

This has a lot of important information, including instructions about disability accomodations. Please contact me privately during the first week of the course if you need accommodations as the result of a disability.