

Instructor: Prof. Monika Nitsche*Phone:* 277-5039*Email:* nitsche@math.unm.edu*Office:* Humanities 465*Office hours:* M 10-11, TR 1:45-2:45**Class Web Page:** <http://www.math.unm.edu/~nitsche/courses/linalg/info.html>**Textbook:** Steven J. Leon, *Linear Algebra with Applications*, 6th ed., Prentice Hall, 2002 (ISBN: 0-13-033781-1).

Course description : We will cover most of the material in chapters 1-3,5,6 of the textbook, on systems of linear equations, matrix algebra, determinants, vector spaces, orthogonality, eigenvalues and eigenvectors. We will also include computational algorithms such as Gaussian elimination, the least squares problem, the Gram-Schmidt orthogonalization process and the singular value decomposition. The theory of linear transformations in chapter 4 will be addressed as time permits.

Homework, Quizzes and Exams: The most important components of this course for you to be succesful are the homework problems, as well as reading the book and attending lectures. Homework problems will be assigned daily in class, and will also be announced on the course website. The previous week's homework will be collected *every tuesday, in class*.

We will also have about 10 quizzes during the semester, two in-class exams and one final exam. For your final grade, the 2 lowest homework and the 2 lowest quiz scores will be dropped. However, no late homework will be accepted and missed quizzes cannot be made up for any reason. Makeup exams will only be given unless you contact me ahead of time with a documented "university authorized absence" (illness, family emergency, active participation in scholarly or athletic events).

Homework, quizzes and exams will count towards your final grade in the following proportions:

Homework	25 %
Quizzes	25 %
Exam 1	15 %
Exam 2	15 %
Final	20 %

You are strongly encouraged to work together with other students, as long as the homework handed in is in your own words and writing.

Grading Guidelines: To get full credit on homework, quizzes and exams, *you need to show your work*. All steps need to be shown *neatly, in clear and correct* mathematical notation, so that someone else can follow your work. You will be graded based on the work shown, not on the answer. If you made a small mistake but your answer is otherwise consistent with your work, you will receive almost full credit. If your answer is correct but does not follow from your work, you will receive no credit.

Calculators and MATLAB: You will not need a calculator for this course. You may wish to use a simple calculator to multiply and add numbers. However, you will not be allowed to used any symbolic calculator. You will need to use MATLAB in some of your homework problems. You are not expected to know MATLAB. There is extensive material on MATLAB in the text and I will give you guidelines in class to complete each assingment.