MATH 3130: Introduction to Linear Algebra
Spring 2016, MWF 12:00-12:50 pm, ECCR 150

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Office hours: Monday and Wednesday 3-4 pm, Tuesday 11-12 am

Course description. Linear Algebra is not only about solving systems of linear equations and calculating with vectors. Its applications are everywhere. For example it provides the tools for computer graphics, fitting a line through a cloud of points, analyzing mappings in $\mathbb{R}^n$, and the development of dynamical systems.

In this class we learn the basics of linear algebra and visit a few applications. In particular we will cover the following topics:

- systems of linear equations
- linear transformations, matrices
- determinants
- vector spaces
- basis, dimension
- eigenvalues, eigenvectors
- orthogonality
- diagonalization of matrices

Assignments. Every Wednesday I will hand out homework problems. Please hand in solutions at the beginning of class on the following Wednesday or send a pdf at least 30 minutes before class. Please use "Math 3130 S4 - assignment n" as title for the mail for the n-th assignment, where $n = 01, 02, \ldots$ (otherwise I will not find and grade it).

There will be a short quiz every Monday. There are 2 midterm exams in class on Wednesday, February 10, and on March 16 as well as a final exam on Sunday, May 1, 4:30-7 pm.

Cheating on your assignments may result in a grade of 0. Please find the honor code of CU Boulder here `http://honorcode.colorado.edu/`

Grading. Your final grade will be determined by the scores of your homework, quizzes, midterms, and final exam. To combine these items the following weights will be used:

> Homework: 30%
> Quizzes: 20%
> Midterms: 25%
> Final exam: 25%

The 3 lowest homework scores and the 3 lowest quiz scores will not count towards the final grade.

Text. David C. Lay. Linear Algebra and its applications, 4th edition, Addison-Wesley, 2012.

University regulations. I am happy to accommodate disabilities or religious observances, or a request that I address you with a different name or pronoun than my roster indicates. Please contact me as soon as possible.

For details on accomodations please see `http://disabilityservices.colorado.edu/`

For details on university policies please see `http://www.colorado.edu/policies`