Course syllabus for Math 2406
Vector spaces

Fall 2013

Course description: Linear algebra is one of the most effective and fundamental mathematical tools. This course will cover the basics of abstract linear algebra.

Text: **Linear Algebra done right** by Sheldon Axler, second edition.

Time and place: TR 12:00-1:30pm. Skiles 311. Webpage via T-square.

Instructor and office hours: Kirsten Graham Wickelgren, e-mail: kwickelgren3@math.gatech.edu, office: Skiles 227, office hours: Tuesday 1:30 -2:30, Thursday 11am-12pm, or by appointment.

Prerequisites: Some experience with mathematical proofs would help, but this experience can be also be acquired during the course.

Course objectives:

- Vector spaces and linear maps.
- Eigenvalues and eigenvectors and diagonalization/spectral theory
- Inner product spaces
- Trace and determinant and characteristic polynomial

Homework, exams, and grading: There will be be weekly problem sets, two in-class midterms tentatively scheduled for September 24 and October 29, and a final exam. Grades will be based 20% on homework, 25% on each midterm, and 30% on the final. You are encouraged to work together on the homework. You are also free to consult any references you wish to complete the homework.

Any sources you use or collaborators you consult must be credited in writing on your work, of course. No references are to be consulted during the exams.

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