

Linear Algebra, MATH 223 (Section 1) Fall 2007

Burnside Hall 1B24, MWF 10:30-11:30 am

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Course Topics: Systems of linear equations and their solutions over arbitrary fields; matrices; vector spaces, subspaces, linear independence, spanning, basis, dimension; Linear transformations, including matrix representations; determinants; eigenvalues and eigenvectors; diagonalization of linear maps and matrices, the spectral theorem; inner products, orthogonality; applications to geometry, differential equations; others as time permits.

Text: The Schaum's outline on *Linear Algebra* by S. Lipshutz. Copies should be available in the bookstore, and second-hand copies are easy to find. It doesn't matter if you don't get the latest edition, since we will be treating this mostly as a reference. (All the main topics are there, but not in the same order as we will do them; we will not be assigning particular problems from the text.) Additional notes will be provided as the term progresses. Unless it is stated otherwise, you are responsible for the contents of these notes.

Method of Evaluation: Assignments: 10%, Midterm exam: 20%, Final exam: 70%, **OR** Final exam: 100%.

Homework: There will be up to a maximum of 10 assignments, approximately one a week. They are due *in class* on the date specified on the assignment.

Late Work: Late work is *not* accepted. All work is due at the *beginning* of class on the specified date.

Exams: The midterm will be held *in the evening* on a date to be announced shortly. The final will cover the entire course. The midterm and final will be closed-book exams, and calculators will not be permitted on them.

Important Dates: Please check minerva regularly to stay on top of the course schedule. Note in particular that we will have class on **Tuesday**, October 9th 10:30–11:30.

Questions: If you have any questions, at any time, *please* contact me. I am usually very quick to respond to email.

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