

Course	Dates	Time	Location
MATH221 – 02	9/9/09 – 12/14/09	MW 1:10 – 2:30pm	121 Exley Science Center

Instructor: Scott Schneider

Course website: <http://www.math.rutgers.edu/~scottsch/221.html>

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Office: 615 Exley Science Center Tower

Office hours: MW 3–4pm, T 1–2:30pm, and by appointment

Text: *Elementary Linear Algebra*, by Howard Anton

Course Description: This is a course in the algebra of matrices and Euclidean spaces that emphasizes the concrete and geometric. Topics to be developed include solving systems of linear equations; matrix addition, scalar multiplication, and multiplication; properties of invertible matrices; determinants; elements of the theory of abstract finite dimensional real vector spaces; dimension of vector spaces; and the rank of a matrix. These ideas are used to develop basic ideas of Euclidean geometry and to illustrate the behavior of linear systems. We conclude with a discussion of eigenvalues and the diagonalization of matrices. For a more conceptual treatment of linear algebra, students should enroll in MATH223.

Course Structure: There will be two in-class midterm exams and a cumulative final exam. Homework will be assigned regularly but will not be collected, unless it becomes necessary to do so. There will be frequent short quizzes, whose questions will be taken directly from the homework. This is to encourage both class attendance and time spent on homework; it is essential that you do both in order to digest the material. I will drop your two lowest quizzes, but there will be NO quiz make-ups. There will also be several writing workshops throughout the course that will give you experience collaborating with your peers, writing solutions more formally than in the homework, and solving problems that are more difficult than those that will appear on the exams and in the homework. Each midterm will be worth 20% of your grade. The final exam will be worth 35%, and quizzes and workshops combined, 25%. The following is a VERY TENTATIVE schedule of lecture material, which will be updated on the course website as we progress through the material. Please keep up with the readings by reading each section in the textbook around the time I lecture on it.

Day	Date	Sections	Day	Date	Sections
			Mon	9/14	1.3
Wed	9/9	Introduction, 1.3	Wed	9/16	1.1, 1.2
Mon	9/21	1.2	Mon	9/28	1.6, 1.7
Wed	9/23	1.4, 1.5	Wed	9/30	3.1, 3.2
Mon	10/5	3.3, 3.5	Mon	10/12	4.2
Wed	10/7	4.1	Wed	10/14	4.3
Mon	10/19	FIRST MIDTERM	Mon	10/26	No Class
Wed	10/21	5.1, 5.2	Wed	10/28	5.2, 5.3
Mon	11/2	5.3, 5.4	Mon	11/9	5.5
Wed	11/4	5.4	Wed	11/11	5.6
Mon	11/16	2.1, 2.2, 2.3	Mon	11/23	7.2
Wed	11/18	7.1	Wed	11/25	No Class
Mon	11/30	7.3	Mon	12/7	8.1, 8.2
Wed	12/2	SECOND MIDTERM	Wed	12/9	8.2, 8.3
Mon	12/14	8.4	TBA	FINAL EXAM	