

COURSE INFORMATION

Math 350 – Honors Linear Algebra – Fall 2016

M 5:00 PM - 6:20 PM & W 5:00 PM - 6:20 PM; ARC-333, Busch Campus

Instructor: Zhi Qi, e-mail: zhi.qi@rutgers.edu, Hill Center 242, Phone: 848-445-7278, Home-page: <http://www.math.rutgers.edu/~zq44/>

Suggested Text: Spence, Insel & Friedberg, *Linear Algebra, 4th Edition*; Prentice-Hall, (ISBN # 0-13-008451-4)

Office Hours: F 3:00 PM - 5:00 PM, or by appointment.

Course Introduction:

The course is strongly based on Math 250. However, we shall work axiomatically, starting from the abstract notions of vector space and of linear transformation. Much of the homework and many of the exam problems will require you to write precise proofs, building on your proof-writing experience in Math 300. From this more abstract viewpoint, we'll be developing linear algebra far beyond Math 250, with new insight and new applications.

Note that we shall cover significant material from all the chapters in the book, Chapters 1-7, but we will cover Chapter 7 before Chapter 6. This is because the material in Chapter 7 is a natural continuation of the material in Chapter 5 on the theory of eigenvalues, eigenvectors and diagonalizability. Chapter 6 also concerns eigenvalues, eigenvectors and diagonalizability, but this time, based on a generalization of the theory of dot products.

Homework: There will be 10 homework sets. Homework problems will be collected on Mondays.

Homework Policy:

1. **No late homework will be accepted under any circumstances!** (This is as much a courtesy to the grader as an incentive to stay current with the course and not fall behind.)
2. When you have worked on a problem for a while and remain stuck, you are encouraged to ask for hints from the instructor. Students may also discuss problems with one another, but must write solutions on their own. In particular if you have taken notes while discussing homework problems with friends or the instructor, you must put these notes away when writing your solution.

Exams: There will be 2 midterms and a final. (The dates are given in the table.)

Exam Policy: All exams will be closed book and student-prepared formula sheets will not be permitted.

Academic Integrity: All Rutgers students are expected to be familiar with and abide by the academic integrity policy. **Violations of the policy are taken very seriously!**

Calculator Policy: Calculators may be used on homework but do not suffice on problems for which explanation is required. Calculators may **not** be used on quizzes or exams.

Grades: The proportions for computing your final grade will be the following:

Homework: 20 %, Midterm 1: 20 %, Midterm 2: 20 %, Final: 40 %.