

## Math 524, Linear Algebra, Fall 2006

4:10-5:25 WF, C-8

**Instructor:** Imre Tuba

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**Office hours:** 5:30-7 W, 3-4 Th, 2:15-3:15 F.

**Prerequisites:** Math 245 and 254, or Math 342A. Math 521A is recommended.

**Text:** Friedberg, Insel, Spence: Linear Algebra, 4th edition. I also recommend Axler: Linear Algebra Done Right as a supplementary text.

**Course objective:** This is a second course in linear algebra at the senior/1st year grad student level. We will study the basic concepts and theorems of linear algebra rigorously. You will have to be able to state precise definitions, come up with examples, prove theorems covered in class and in the text, and prove or disprove unfamiliar statements in linear algebra appropriate to the level of the course. You are expected to be already familiar with basic technics of proof and computational aspects in linear algebra, such as matrix multiplication, Gauss-Jordan reduction (row and column reduction), finding inverse matrices, etc.

**Website:** [www.rohan.sdsu.edu/~ituba/math524](http://www.rohan.sdsu.edu/~ituba/math524).

**Homework and reading** will be posted on the class website regularly. You will be able to follow the progress of the course using the website. It is essential that you take the HW very seriously. Don't leave it to the last moment, do it all, and do it on time. You are unlikely to succeed in a math class without doing all of the HW.

I want to be able to grade and return HW promptly. So to be fair to everyone, I will not accept late HW for credit as a general rule.

**Collaboration:** You will be expected to submit individual work. Limited collaboration with your fellow students in the class is ok. The purpose is to let you discuss and critique each other's ideas and not to let you split the workload. Keep collaboration constructive and reasonable. You are expected to fully understand the solution and write it up on your own. Submission of essentially identical work by two different students will not be acceptable.

**Exam:** There will be an in-class exam on Sep 15.

**Project:** You will be asked to choose a topic related to linear algebra that is not covered in class, study it, and give a presentation on it in class. The timing of this project will be announced in class.

**Final exam:** Time and place TBA.

**Grading scheme:**

Homework	40%
In-class exam	15%
Project	15%
Final exam	30%

A score of 90% or more will guarantee an A, 80% a B, 70% a C, and 60% a D. The curve may be adjusted lower than this.

**Quality of work:** It is important that you work neatly on the assignments. The quality of your work will affect your grade. Quality has to do with how easy it is for someone else to read your solution to a problem. It is not enough to do the math right, you must also present it well.

**Students with disabilities:** If you need special arrangements, let me know well in advance so we can plan to accommodate your needs.

**Another general note:** Learning math is much like learning to ride a bicycle in that you learn by doing it and not by watching someone else do it. Attending class and reading the textbook won't be enough to do well on the exams. You should work through every example and proof in the book and in your class notes and expect to have to re-read everything several times. It's slow, but then your reading list for this class is short.