

# Math 251: Matrix Algebra I – Fall 2007

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**Office Hours:** MWF 11:15am-12:15pm (*subject to change!*) or by appointment  
**Course Web Page:** <http://www.math.utk.edu/~finotti/f07/m251/M251.html>  
(Careful with lower and upper case letters!)

**Textbook:** H. Anton, “Elementary Linear Algebra”,  
9th Edition. Wiley, 2004.  
**Prerequisite:** Math 152 or Math 148.  
**Class:** MWF 12:20pm-1:10pm at Ayres 318. (Section 2.)  
**Midterms:** 09/28 (F) and 11/05 (M) during regular class time.  
**Final:** 12/12 (W) from 12:30pm to 2:30pm.  
**Grade:** 20% for homeworks, 20% for each midterm, 40% for the final.  
**Note the weight of the HWs!**

## Course Information

This is a first course on *Linear Algebra*. We will study matrix algebra, system of linear equations, vector spaces, linear transformations, and eigenvalues/eigenvectors.

The first two of these topics are of computational nature, while the latter topics will be more theoretical, and hence usually considered harder by the students. Therefore, the initial plan is to go *rather fast* through the computational material, so that we can go over the most challenging topics on a better pace.

## Course Structure

We will likely cover the following:

- **Chapter 1:** sections 1-7.
- **Chapter 2:** sections 1-4.
- **Chapter 3:** sections 1-3.
- **Chapter 4:** sections 1-3.
- **Chapter 5:** sections 1-4.
- **Chapter 6:** sections 1-3 (no Gram-Schmidt or QR-decomposition), 5.
- **Chapter 7:** sections 1-3.

The first three chapters will be covered in a faster pace. Chapter 4 might also be covered superficially and briefly. The last three chapters should be the more challenging ones, I hope to have enough time to cover them in a slower pace.

Also, note that this outline is subject to change slightly without prior notice.

## Homeworks

Homeworks will be assigned after every class and will be posted at the course home page at

<http://www.math.utk.edu/~finotti/f07/m251/M251.html>

No paper copy of the HW assignments will be distributed in class. **It is your responsibility to check the course page often!** Besides HW assignments, other important information will be posted there. (Check the section *Important Notes* often!)

The HWs will be collected on Mondays (except on Labor's Day week, when it will be due on Wednesday). Each HW will have problems from the previous week (Monday, Wednesday and Friday lectures). The problems to be turned in, as well as due dates, will be clearly posted on the course page. Note that not all of the problems turned in will be graded, but you won't know which until you get them back.

No late HWs will be accepted, except in extraordinary circumstances which are properly documented.

**It is your responsibility to keep all your graded HWs and Midterms!** It is very important to have them in case there is any problem with your grade.

I will do my best to post solutions. Please check the course page.

If I find a student copying solutions from the *Solutions Manual* of the book, he/she will get a zero in the assignment, and I will report him to the *Office of Student Judicial Affairs*. Obviously, the same goes for any other kind of cheating. (See *Legal Issues* below.)

In my opinion, doing the HW is one of the most important parts of the learning process, so the weight for them is equal to the weight of a single midterm, and I will assume that you will work very hard on them.

Also, you should try to come to my office hours if you are having difficulties with the course. I will do my best to help you. Please try to come during my *scheduled* office hours, but feel free to make an appointment if that would be impossible.

## E-Mails

**You will have to check your e-mail at least once a week, preferably daily.** I will use your e-mail (given to me by the registrar's office) to make announcements. If that is not your preferred address, write me an e-mail letting me know ASAP. I will assume that any message that I sent via e-mail will be read in a week or less, and it will be considered an *official* communication.

## Feedback

I have an *On-line Feedback Form* at

<http://www.math.utk.edu/~finotti/php/feedback.html>

where you can anonymously send me your comments and suggestions. I will consider your comments and try to do whatever I can to resolve possible problems before it is too late. So, please, feel free to use it whenever you have any constructive comment or suggestion. (In fact, I would greatly appreciate it.) If you don't want your comments to be anonymous, just send me an e-mail or come by my office and we can discuss the problem.

## Legal Issues

**Conduct.** All students should be familiar with and maintain their *Academic Integrity*: from *Hilltopics 2007/2008* (<http://web.utk.edu/~homepage/hilltopics/HILLTOPICS2007-08.pdf>) pgs. 39-40:

### *Academic Integrity*

*The responsibility for learning is an individual matter. Study, preparation and presentation should involve at all times the student's own work, unless it has been clearly specified that work is to be a team effort. Academic honesty requires that all work presented be the student's own work, not only on tests, but in themes, papers, homework, and class presentation. There is a clear distinction between learning new ideas and presenting them as facts or as answers, and presenting them as one's own ideas. It is part of the learning process to incorporate the thoughts or ideas of others into one's own mind and presentations with the purpose of learning and enlarging on personal boundaries of knowledge.*

All students should follow the *Honor Statement*: from *Hilltopics 2007/2008*, pg. 11:

### *Honor Statement*

*"An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."*

You should also be familiar with the *Classroom Behavior Expectations* found at

<http://www.math.utk.edu/Undergraduate/undergrad/Expectations.pdf>.

**Disabilities.** Students with disabilities that need special accommodations should contact the *Office of Disability Services* (<http://ods.utk.edu/>) and bring me the appropriate letter/forms.

**Sexual Harassment and Discrimination.** For *Sexual Harassment* and *Discrimination* information, please visit the *Office of Equity and Diversity* at <http://oed.admin.utk.edu/> and check

[http://oed.admin.utk.edu/docs/complaint\\_sex\\_harass.pdf](http://oed.admin.utk.edu/docs/complaint_sex_harass.pdf) (Sexual Harassment)

<http://oed.admin.utk.edu/docs/DiscrimCompProc.pdf> (Discrimination)