

MATHEMATICS 251- LINEAR ALGEBRA-FALL 2009

Time and place: Section 3: MWF, 10:10-11:00, Haslam Business Bldg. 130
Section 5: MWF, 2:30-3:20, Haslam Business Bldg. 113

Instructor: Dr. A. Freire, Aconda 406B, office phone: 974-4313
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Office hours: MW, 3:30-4:30, or by appointment (send me an e-mail)

Goal and prerequisites: First course on linear algebra, intended primarily for students in mathematics, science and engineering (including computer science). Prerequisite: one year of calculus of one variable.

Textbook (optional): *Matrices and Linear Transformations 2nd ed.*, by Charles G. Cullen (1972); Dover Ed. (1990) – \$14.95 (new) at the UTK bookstore.

Remark: students will be expected to have a linear algebra text at the appropriate level; you should buy Cullen's book unless you already own another text, or can borrow one. I won't follow any one text particularly closely, but most of the material to be covered is found in Cullen's text.

COURSE POLICIES

1. *Attendance:* students are expected to come to every class. Each lecture will include new material, sometimes not found in the typical texts. **(Take notes!)** I will take attendance, and missing too many classes will affect your grade. NOTE: missing 3 consecutive classes will result in an 'automatic F'.
2. *Course log:* This link to the course web page will contain a brief listing of the material covered in each lecture, handouts (including material not found in the text) and homework problems. It will be updated after every class and should be consulted often.
3. The most important concepts and examples for each topic will be presented in class, but for thorough understanding you are expected to (i) *read* your textbook and your class notes; (ii) work on the *homework* problems, and other problems found in the text you're using; (iii) *ask questions* (in class or during office hrs.)
4. The link [classroom behavior expectations](#) includes a list of behaviors considered disruptive (math department policy). Please familiarize yourself with it, as this policy will be enforced. *This includes:* no texting, cell phones, laptops, electronics of any kind or reading of extraneous material will be allowed during lecture.
5. Students with disabilities: if you need special arrangements to take this class (including exams), please contact the Office of Disability Services (2227 Dunford Hall, 974-6087 V/T, <http://ods.utk.edu/>)

HOMEWORK, EXAMS and GRADING.

HOMEWORK- there will be a total of FIVE homework sets, each consisting of about ten problems. The sets will include *non-routine* problems, the kind you may have to spend some time thinking about. Thus, if you wait to work on a HW set the night (or hour) before it's due, you're unlikely to be able to solve many problems. You should think of the sets as mini-projects, that is, the presentation should be close to that of a class project. If you try to turn in, say, an unstapled set of pages with scribbled last-minute incomplete solutions, your grade for the set will be zero. If your HW grades are much higher than your exam grades, you may be called to an interview (to confirm that you understand the solutions you turned in.)

There will be *no extra-credit* assignments to improve the grades of individual students. *Oral grade:* if you ask (or answer) a good question in class, I will make a note of it, and this will count towards the Hw grade (up to one problem-equivalent per question).

COMPUTERS- there will be a few lectures explaining how to use MATLAB for linear algebra problems. Prior familiarity with Matlab is not required, but I'll expect students to have the student version freely available through the UTK campus license. Some of the HW problems may be easier using Matlab, and others may require the use of Matlab.

EXAMS- There will be **three** in-class written exams, with dates announced one week in advance. Only the two highest grades will count towards the exam average. *There will be no make-up exams, even in cases of a justifiable absence;* if you miss an exam, your exam grade will be the average of the other two. Missing two exams (for whatever reason) will result in a grade F. There will also be a comprehensive final.

GRADE COMPUTATION- HW: 30%, Exams: 40%, Final: 30%

Expected scale: below 50: F; 50-59: D to C-; 60-69: C or B- 70-79: B; 80-100: B+ to A. *I do not 'grade on a curve'.*

Remark. Regardless of the course average as computed above, each of the following will result in an F grade: (i) missing two exams, or missing the final; (ii) exams+homework average less than 40%, or less than 40% on the final. (iii) missing 3 consecutive lectures.

IMPORTANT DATES: Add/drop without W: Aug. 28; drop w/ W: Oct. 20; fall break: Oct 15-16; drop w/ WP/WF: November 10; Thanksgiving: Nov. 26-27; last day of class: Nov. 30; Final Exam: December 9 (Section 3); December 8 (Section 5).