COURSE CONTENT

The course prerequisite is undergraduate linear algebra, so I will assume you have mastered the concepts from that course. The goal of this course is to teach you those same concepts and more, but with wider applicability, with mathematical formalism and with rigor. We will cover most of Chapters 2-8 of the book. The topics will include vector spaces and subspaces, dual spaces and quotient spaces, the concepts of basis and linear independence, inner product on a vector space, orthogonality, linear transformations between vector spaces, invariant subspaces of a linear transformation and eigenvalues and eigenvectors, determinant of a linear transformation and Jordan normal form of a linear transformation.

There will be a lot of homework assigned, none of which will be graded. The best way to guarantee a good grade in this class is to do ALL the assignments and to work with each other on homework etc. It is very important that you know how to work out those homework problems correctly. Much of the tests will be based on the homework problems. Without a good understanding of the material in this class, you will have trouble with your future studies in mathematics; this course is a stepping stone for all other graduate mathematics classes.

HELP OUTSIDE CLASS TIME

Feel free to ask me questions during class and after class. Sometimes I will be available in my office before class for you to ask me questions. I will also be around the mathematics department on Mon and Wed afternoons, and some Tuesday and Thursday afternoons. You can either take your chance to find me then, or send me an e-mail or phone my office to schedule an appointment. Some questions could even be answered via e-mail, so you could even try e-mailing me your questions.

My web page (given above) will list the homework as the semester progresses as well as other miscellaneous information pertinent to this course. You are advised to check it every couple of days.

OVER
DISABILITY ACCOMMODATIONS

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 — The Rehabilitation Act of 1973 as amended. With the passage of the Americans with Disabilities Act (ADA), pursuant to Section 504 of the Rehabilitation Act, there is renewed focus on providing this portion of the population with the same opportunities enjoyed by all US citizens. In particular, students in this situation should notify the Disabilities Office at the start of the semester with official authorized documentation. Furthermore, if a student has an officially recognized disability, and would like special arrangements for the tests, then s/he should notify me AT LEAST 10 SCHOOL DAYS prior to the test date so that the disability may be verified and appropriate arrangements made in time.

MAKE-UP EXAMINATION POLICY

If you miss a test, you should contact me as soon as possible (in person, or by phone (leave a message if I am not there) or by e-mail). If you miss any test for an authorized reason which can be verified with official documentation (e.g., hospitalization), then you may have a make-up test. In general, the make-up test will be harder than the test since you would have had more time to study for it. An alternative to a make-up test is to spread your grade across the remaining tests and Final. If you miss the Final examination for an authorized reason which can be verified with official documentation (e.g., hospitalization), and if you are attaining a high-enough grade at that time, then you may obtain an Incomplete which should be completed as soon as possible. Students who miss tests due to unauthorized reasons will not be accommodated. In order to pass this class, you must at least pass the Final for this class.

SCHOLARLY INTEGRITY

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline includes suspension or expulsion from the University and a grade of FAIL in the class given to involved student(s). Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22 of the Regents’ Rules and Regulations states the following. “Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or material that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts”. Moreover, engagement in conduct which disrupts, obstructs or interferes with activities authorized by the University will result in disciplinary action against the perpetrator.

Photo-ID is REQUIRED at all tests. The University has informed all its faculty that steps should be taken to discourage cheating on tests. As such I will uphold the following during the tests:

- if you wish to leave the room during a test, you should ask permission first and turn in your test to me — only in exceptional circumstances will I let you continue the test should you return (so it is better to be 3 minutes late to the test, rather than ask to go to the restroom during the test);
- if you finish a test early but prefer to stay in the room, then you should NOT get out any work, book or item, no matter what the subject matter is;
- no electronic equipment with a keyboard may be used in tests; no electronic nor nonelectronic equipment may be shared during tests; electronic work is no substitute for written work.

Remember, in any test, keep your eyes on your own work only.