

**Spring Semester 2008**  
**MATH 2853 Elementary Linear Algebra**  
**MWF, 10:00 AM-10:50 AM, Room: Boyd Building 303**

**Prerequisites:** MATH 1634

**Textbook:** Introductory Linear Algebra, An Applied First Course, 8th Edition, by Bernard Kolman and David R. Hill, Pearson Prentice Hall, 2005.

**Instructor:** Dr. Vu Kim Tuan  
**Phone:** 678-839-4135

**Office:** Boyd Building 325  
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**Office Hours:** Mondays, Wednesdays, and Fridays: 11:00 AM-1:30 PM, or by appointment. Please contact me only through campus MyUWG e-mail or in person.

**Course Description:** This course will provide an applied approach to matrix theory and linear algebra covering such topics as linear systems, Gauss-Jordan elimination, matrix inversion, determinants, vectors in  $R^n$ , real vector spaces, eigenvalues, eigenvectors and diagonalization.

**Learning Outcomes:** The student will be able:

- to express linear systems of equations in matrix form.
- to solve systems of linear equations using Gauss-Jordan elimination.
- to perform basic matrix operations and compute matrix inverses and determinants.
- to compute the dot product, length, inner product and norm of vectors in  $R^n$ .
- to compute eigenvalues and eigenvectors of a square matrix.
- to use software package MAPLE to perform basic matrix operations.

The student will be:

- introduced to the basic properties of real vector spaces and subspaces including properties such as linear independence, span, basis, rank.
- introduced to linear transformations.

**Tests and Final Exam:** There will be two in-class tests and two take-home tests worth 100 points each. Take-home tests are supposed to be completed individually. The lowest of these test scores will be dropped. You can miss at most one test, and that test will be considered to be the test with the lowest score to be dropped. The final counts 200 points. No make-up for missing tests and final exam.

1/30 : Test 1 (Take-home), due 2/1  
2/22 : Test 2 (In-class)  
3/24 : Test 3 (Take-home), due 3/26  
4/25 : Test 4 (In-class)  
5/7 : Final 8-10AM

**Grading:** The final letter grade will be determined by the following scale:

A = 450 - 500

B = 400 - <450

C = 350 - <400

D = 300 - <350

F = below 300

**Homework:** This is an important part of the course. At the end of most classes you will be given a list of problems – these are the minimum that you should work on. These problems will not be graded. Some of these problems will be gone over in the next class session and some will be included into the in-class tests. Practice is important. I encourage you to use my office hours if you have any question about homework. You should make sure to set aside some time every day to work problems.

**Disabilities:** Students with documented disabilities (through West Georgia's Disability Services) will be given all reasonable accommodations. Students must take the responsibility to make their disability known and request academic adjustments or auxiliary aids. Adjustments needed in relation to test-taking must be brought to the instructor's attention well in advance of the test (at least one week prior).

**Attendance Policy:** You are expected to attend every class. Although absences are not penalized, if a class is missed, you are responsible for all material and assignments.

**Academic Honesty:** You are expected to achieve and maintain the highest standards of academic honesty and excellence as described in the Undergraduate Catalog. In short, be responsible and do your own work.

**Other Important Dates:** Last day to withdrawal with grade of W is March 3. No class on Monday, January 21 (Martin Luther King Holiday), and Friday, March 28 (Math Day).