

CRN: 30752 Math D002B25 Linear Algebra, Winter, 2014

Instructor: Dr. Karl Schaffer
Class meeting days: Mon/Wed.
Class time 6:30-8:45 PM
Classroom: E-36
email: schafferkarl@fhda.edu

Office phone: 408-864-8214
Office: E-23A
Office Hrs : Mon/Wed/ 5:30-6:20 PM, Tue/Thu 12:30-1:20 PM
or by appointment
Class web site: <http://nebula2.deanza.edu/~karl/>
Class login name: damath **password:** memath

Course content: Linear algebra and selected topics of mathematical analysis. This class will cover the traditional topics of linear algebra: linear transformations, matrices, vectors and vector spaces, eigenvalues and eigenvectors, linear systems of equations, determinants, and applications.

Student Learning Outcomes:

1. Construct and evaluate linear systems/models to solve application problems.
2. Solve problems by deciding upon and applying appropriate algorithms/concepts from linear algebra.
3. Apply theoretical principles of linear algebra to define properties of linear transformations, matrices and vector spaces.

You should have a graphing calculator - you may use it on all exams and quizzes. I recommend the TI-86 or one of the newer TI's, as they are also used in other math classes on this campus. You may NOT use a computer or cell phone or any electronic device with communication capability during classes or exams; this rule will be strictly enforced!! No emailing, texting, messaging, tweeting, facebooking, youtubing or bitcoining, or anything!!

Text: The text is Linear Algebra by Jim Hefferon, available free at <http://joshua.smcvt.edu/linearalgebra/>. This book is also available in printed form from Lulu press for \$26. Additional materials will be available on class web site or handed out. Also recommended are *Schaum's Outline Linear Algebra* by Lipschutz, and *Linear Algebra* by Gilbert Strang. You may not use the electronic form in class, as such readers are usually wifi capable, and that is not allowed during class time. We will cover the entire text, with some omissions; some other material will also be provided.

Homework: all checked problems ✓ unless otherwise noted. Homework sections will be posted at class web site above.

Grades: 90-100 A, 80-89 B, 70-79 C, 60-69 D, < 60 F, based on:

20% Several short quizzes or in-class assignments, usually to be given during class. These will often involve group work. You may drop your lowest score. These assignments will together constitute one exam. An individual or group project at the end of the quarter may count as two quizzes.

Exams:

You will need a scantron form (half-page) for the final exam and the following:

20%: one hour exam, Wed., Jan. 29

20%: one hour exam, Mon., Feb. 24

20% Homework assignments. Homework (all checked problems ✓ unless otherwise noted) is assigned during each class and must be kept in a loose leaf binder. Your homework will be turned in at the end of each chapter. Homework is graded for completion, not correctness. **NO LATE HOMEWORK ACCEPTED. EVER!** Do not turn in your entire homework notebook. You may miss one homework assignment and still receive full credit.

20% Final Exam: mandatory, comprehensive, given on **Wed., March 26, 6:15-8:15 PM**. There will be no make-ups or early exams. The final exam score will be used to replace lowest of the earlier exams, **if and only if** final exam is higher.

NO LATE WORK IS ACCEPTED - NO MAKE-UPS. IF YOU MUST MISS ONE MAJOR EXAM, IT WILL BE REPLACED WITH THE FINAL EXAM SCORE, BUT THIS IS NOT A GOOD IDEA! IF YOU GET BEHIND DO THE MOST RECENT WORK FIRST, KEEP YOUR WORK CURRENT!

Some background on the instructor: Ph.D. and MA in Mathematics from UC Santa Cruz, undergraduate work at University of Chicago and University of Alabama. Grew up in New England and Alabama. Do research in the mathematics of "networks," (graph theory) and am very active in math education. I am interested in and use collaborative learning and interdisciplinary learning techniques in the class. I am also a modern dance performer and choreographer, and company I co-direct does shows about math and dance, among other things; see <http://www.mathdance.org/>, or <http://www.schafferstern.org/>.