Linear algebra I (Math 129A), Spring 2002
MacQuarrie 224, MWF 12:30pm (Sec. 10, code 10548)

Instructor: Dr. Tim Hsu (pronounced "shoe").

Office and phone: MacQuarrie 419, (408)924-5071.

Office hours: MWF 10–11:20, M 3:30–4:50, subject to change. For a current schedule, see:
http://www.mathcs.sjsu.edu/faculty/hsu/courses/generic/sched.pdf

E-mail: hsu@mathcs.sjsu.edu. I can be reached by e-mail at most times of the day, and will often answer within a few hours.

Course web page: http://www.mathcs.sjsu.edu/faculty/hsu/courses/129a/

Texts: *Elementary Linear Algebra: A Matrix Approach*, by Spence, Insel, and Friedberg. Make sure you get the large flat black book by Spence, Insel, and Friedberg, and not the book by Friedberg, Insel, and Spence.

We will also use a Spartan-published set of *Computer projects*, written by Jane M. Day. This packet should either be on sale now at the bookstore, or on sale soon. You will also need to get access to the program MATLAB; details can be found in the handout on "Getting access to MATLAB."

Grading: Your final course grade consists of:

Homework:	10%
Quizzes:	5%
Exam 1:	15%
Exams 2 & 3:	20% each
Final exam:	30%

What is linear algebra? We'll answer this question in several different ways throughout the semester. At its simplest, linear algebra is about solving systems of linear equations; however, in its full glory, linear algebra is a tool that you can use to understand topics as diverse as electrical networks, population growth, and error-correcting data transmission, all using ideas like *vectors, matrices, bases*, and *linear transformations* (all of which will be explained later).

Explanations and definitions. Much of the power of linear algebra comes from its theoretical framework and the abstract ideas behind it. Since the best way to show that you understand an abstract idea is for you to *explain* it, some of this class will consist of not just solving problems, but also explaining your solutions, or even explaining general phenomena. This may be quite different from math classes you've taken before; the key is to keep up with the class, and really learn the *definitions* of new terms from the start.

Class is a cell/beeper-free zone. Please turn off all cellphones and beepers before you get to class.

Homework. Homework will be due every day, except for exam days. There will be two types of homework assigned: short answer homework and paragraph-style homework. For details, see the handout on "Homework in Math 129a." Specific homework assignments will be given as the term progresses; for a complete list of all homework assigned to date, you can always check the course web page.

Late homework will not be accepted. However, to allow for personal problems (illness, etc.), your two (2) lowest homework grades will be dropped.

Doing homework together. If you want, you can form a team of 2 or 3 people and do all of the homework together. The rules on homework teams can be found in the handout on "Homework in Math 129a." The basic idea is that you really have to work together, and not just divide up the work; furthermore, you must demonstrate that everyone in the team is contributing.

Calculators. You will *not* be allowed to use calculators for *any* in-class work, including quizzes and exams. The numerical work on quizzes and exams will be simple enough that a calculator shouldn't be necessary, and even if you make numerical mistakes, you won't lose a lot of points on them.

Quizzes. We will have a 10 minute quiz at the end of class once a week, except on exam weeks. These quizzes are meant to help you prepare for the in-class exams.

Exams. We will discuss this topic in more detail before the first exam, but briefly, the material on exams will mostly resemble the material from the homework and quizzes. All quizzes and exams are closed-book, and again, calculators are not allowed.

How to add this course. If you are not registered for this section, and you would like to add it, you must first do all of the work in the course, and do well on it. Second, if you are a graduating senior, you need to produce documentation to verify that. Remember: your best strategy for getting into a class is to pick the section you want and stick with it.

I'll make a waiting list, and I'll give out add codes starting **Feb 04**, mainly based on attendance and completeness of homework. Note, however, that graduating seniors have the highest priority, and that Open University students have the lowest priority.

How to drop this course. Until **Mon Feb 11**, you can drop by Touch-SJSU. Nothing will appear on your transcript. However, please tell me if you drop, so someone else can add the course.

To drop after Mon Feb 11, you must go to the student services center and submit a Course Drop form to the Director of Academic Services. Dropping under these circumstances is only allowed for "serious and compelling reasons" (course catalog). A low grade is not a serious and compelling reason.

Syllabus

Date	Reading		Date	Reading
			Mon Mar 25	**SPRING**
Wed Jan 23	1.1		Wed Mar 27	**BREAK**
Fri Jan 25	1.2		Fri Mar 29	**NO**
Mon Jan 28	1.2		Mon Apr 01	**CLASSES**
Wed Jan 30	1.3		Wed Apr 03	4.1
Fri Feb 01	1.4		Fri Apr 05	4.1
Mon Feb 04	1.4–1.5		Mon Apr 08	4.2
Wed Feb 06	1.6		Wed Apr 10	4.2
Fri Feb 08	1.6		Fri Apr 12	4.3
Mon Feb 11	Review (drop date)		Mon Apr 15	4.1–4.3 (review)
Wed Feb 13	**Exam 1**		Wed Apr 17	5.1
Fri Feb 15	1.7		Fri Apr 19	5.1–5.2
Mon Feb 18	1.7 (add date)		Mon Apr 22	5.2
Wed Feb 20	1.6–1.7 (review)		Wed Apr 24	Review
Fri Feb 22	2.1		Fri Apr 26	**Exam 3**
Mon Feb 25	2.1–2.2		Mon Apr 29	5.3
Wed Feb 27	2.2–2.3		Wed May 01	5.3
Fri Mar 01	2.3		Fri May 03	5.3
Mon Mar 04	2.4		Mon May 06	6.1
Wed Mar 06	2.6		Wed May 08	6.2
Fri Mar 08	2.6–2.7		Fri May 11	6.2
Mon Mar 11	2.7		Mon May 13	5.5
Wed Mar 13	Review		Wed May 15	Review
Fri Mar 15	**Exam 2**		**Fri May 17**	**Final exam,**
Mon Mar 18	3.1			**12:15pm–2:30pm**
Wed Mar 20	3.2			
Fri Mar 22	TBA			