Green sheet

1. Course Information

Instructor: Anastasiya Pryvarnikova
Department: Mathematics and Statistics (MH 308)
College of Science, San Jose State University.
Spring Semester, 2017

Course Title:	Math 129A – Linear Algebra I
Section:	08
Class Hours & Location:	TR 3:00 pm – 4:15 pm; MH 323
Office Hours:	TR 11:00-11:45, 2:00-2:45 and by appt.
Office Location:	DH 349
E-mail:	anastasiya.pryvarnikova@sjsu.edu

2. Course Description: Matrices, systems of linear equations, vector geometry, matrix transformations, determinants, eigenvectors and eigenvalues, orthogonality, diagonalization, applications, computer exercises. Theory in R^n emphasized; general real vector spaces and linear transformations introduced.
Sections: 1.1-1.5, 1.7, 1.8; 2.1-2.3, 2.8; 3.1, 3.2; 4.1-4.6; 5.1-5.3; 6.1-6.3, 6.5; 7.1, 7.2
Some sections may be offered for home reading.

Course Goals and Student Learning Outcomes:

To provide students from Computer Science, Mathematics, Engineering, Science, Business and Social Sciences with a working knowledge of matrix theory and its application in solving systems of linear equations; concepts like vector spaces, linear transformations and eigenvalues; related theorems and proofs using geometry as well as matrices; applications & proofs; using software to solve linear algebra problems.

Upon successful completion of this course, you should be able to:

- Prove elementary statements concerning systems of linear equations, their theory and solution
- Perform elementary row operations on matrices and find their inverses and transposes
- Calculate determinants using elementary row operations and cofactor expansions
- Prove elementary statements concerning the theory of matrices and determinants
- Prove algebraic statements about vectors, inner products, projections, norms, orthogonal vectors, linear independence, spanning sets, subspaces, bases, dimension, and rank
- Use determinants to solve homogeneous and non-homogenous systems.
- Calculate eigenvalues and eigenvectors of a matrix
- Determine if a matrix is diagonalizable

Prerequisites: Math 31, Calculus II, with a grade of C- or better, or instructor consent

Required text: Linear Algebra and Its Applications, 5th Edition, by David C. Lay, Steven R. Lay, Judi J. McDonald ISBN:9780321982384.

Technology requirements: MATLAB and/or OCTAVE may help with the understanding of the material and the checking of your homework solutions, but will not be required. OCTAVE is an open source software package available at http://www.gnu.org/software/octave/. MATLAB access can be gained by getting a Math Department account, by using the machines in Engineering or Physics (if you are taking engineering or physics courses), or by buying a copy of Student MATLAB.

Workload expectations: You are expected to spend 9 hours per week on this course, which includes class attendance, studying, homework, etc. You will notice that time spent on homework pays off during a test/quiz, especially because many homework problems may show up on tests/quizzes. You are encouraged to see me during my office hours, visit the Math-Lab in MH-221 and also the Peer Connections tutor center located in the Tenth Street garage, behind the Bursar's office.

3. Course requirements:

a. Exams: 2 Midterms 75 pts. each (on: **March 9, April 27**).
Comprehensive Final = 110 pts. (on: **May 18 from 14:45 to 17:00**).

b. Quizzes: Will be given once a week on Thursdays starting from February 9th (*February 9,16,23; March 2,16,23; April 6,13*); 8 quizzes in total, 5 points each.

c. Homework: Will be assigned daily, but not collected for grading. Some of the problems will be used for quizzes and tests.

d. Make-ups: Make-up examinations will not be given, except in cases of illness or other extenuating circumstances. A make-up examination will be authorized only if the student notifies the instructor prior to the scheduled examination, and provides a written explanation on the first day back in class.

5. Grades: Will be calculated from the accumulated total score

Midterm	150 pts or 50%
Quizzes	40 pts or 13%
Final Exam	110 pts or 37%
Total	**300 pts or 100%**

Grading information:

100%-99%	A+
98%-94%	A
93% - 90%	A-
89% - 86%	B+
85% - 82%	B
81% - 78%	B-
77% - 74%	C+
73% - 71%	C

70% - 68%	C-
67% - 65%	D+
64% - 62%	D
61% - 59%	D-
below 58%	**F**

b. Extra credit options: 2 quizzes (5 points each) on *April 20* and *May 4*

6. University, College, or Department Policy Information:

a) Academic Integrity Statement:
(from the Office of Student Conduct and Ethical Development)

"Your own commitment to learning, as evidenced by your enrollment at San José State University, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. The policy on academic integrity can be found at http://www.sjsu.edu/studentconduct/Policies/.

b) Campus policy in compliance with the Americans with Disabilities Act:

"If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with your instructors as soon as possible, or see them during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability."

7. APPENDIX:

• "You are responsible for understanding the policies and procedures about add/drops, academic renewal, withdrawal, etc. found at http://www2.sjsu.edu/senate/S04-12.pdf .Refer to the current semester's Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html.

• Expectations about classroom behavior; see Academic Senate Policy S90-5 on Student Rights and Responsibilities.

•A definition of plagiarism; see http://www2.sjsu.edu/senate/plagarismpolicies.htm

Important Dates Last day to drop without a valid documented reason: February 7
Last day to add: February 14
Spring Break: March 27 – April 2 (NO CLASSES)
Last day of classes: May 16