Math 2270-2 Linear Algebra

Instructor.
Professor Grant B. Gustafson
Email: See the online door card: http://www.math.utah.edu/~gustafso/s2012/2270/doorcardS2012.pdf
Office: JWB 113
Course Web page, all files: http://www.math.utah.edu/~gustafso/s2012/2270/
Office Hours: M-W 9:30-10:30, MTWF 3:10-4pm, or by appointment

Meetings.
Time: MTWF 14:00-14:50
Location: AEB 360

Prerequisites. MATH 2210 OR MATH 1260 OR MATH 1280

Textbook. *Linear Algebra, fourth edition* by Gilbert Strang, ISBN 978-0-980232-71-4.

This book is part of MIT's OpenCourseWare project. There are video lectures and sample exams with solutions on the MIT website:
http://ocw.mit.edu/courses/mathematics/18-06-linear-algebra-spring-2005/

Course Description. Euclidean space, linear systems, Gaussian elimination, determinants, inverses, vector spaces, linear transformations, quadratic forms, least squares and linear programming, eigenvalues and eigenvectors, diagonalization. Includes theoretical and computer lab components.

Technology.
Course announcements may be made via email. You are responsible for monitoring your University assigned email address. No notes, books, calculators or computers may be used during exams. Weekly homework assignments are to be submitted on paper in class. Answer checks may be done by computer assist, when that is possible (maple, mathematica, matlab, scilab, ruby, R, python, C, C++).
There will be a computer lab component of the course which will require use of the Maple Computer Algebra System. Maple is available in the Math Department computer labs, most departmental computer labs, the Union computer labs and the Marriott Library computer labs . Login information is available at the Math Department student computer labs in the Math Center, located on the lowest level between buildings JWB and LCB.

Quality and Quantity of Work.
You are expected to conduct yourself in a professional manner. This includes classroom etiquette, email correspondence, and written reports such as homework, projects, labs and exams.

Submitted work is expected to be neat, legible, and clearly written. Suggestions for writing reports can be found **here:** http://www.math.utah.edu/~gustafso/s2012/2270/2270format.pdf

University policy 6-100 Section 2:
"A university credit hour shall represent approximately three clock hours of the student's time a week for one semester. "
The average work load is two hours outside of class for every hour spent in class. This is a four credit class, so please plan to spend approximately eight hours outside of class every week studying and doing homework. The assigned homework problems are the *minimum*. Beyond the minimum, expect to continue working similar problems until they become routine.

Evaluation

Homework. Weekly homework assignments will be submitted on paper in class. Late homework will be accepted with an excuse suitable for broadcast to the university administration (illness, interview, marriage, funeral). Extra credit problems may be applied to correct scores from missing work. Homework is scored **complete** or **not complete**. Scores of 50 percent or higher are considered to be **complete**.

Homework Packages. A package is collected every Wednesday beginning in Week 2 and ending in the last week of classes. This package is sent to a grader, who decides the credits. Work not in the package sent to the grader is recorded as a zero. Extra credit work can cancel the zeros.

Extra Credit. There is a limited selection of extra credit problems, independent of the book, available at the course web site only. They are matched to chapters in Bretscher's linear algebra textbook. Credit is one-to-one with missed homework from Strang's textbook, without regard for chapter or topic.

Computer Projects. There are five small computer lab projects and one semester group project, due April 25. A group project is organized by group leaders in the class, by agreement with the instructor. Once a group is formed, then others may join it or leave it, with agreement from the group leader. A group size of one is fine. Some topics can be found **at** http://www.math.utah.edu/~gustafso/s2012/2270/projects.html

Maple 15 Offer S2012: Visit Maplesoft's web store here and use the following 25-percent promotion code: AP34033-E6F16 The promotion code is valid until Monday, May 07, 2012.

Math Dept Computer Lab. http://www.math.utah.edu/ugrad/lab.html

Exams. There are two **midterm exams**, February 17 and March 23. The comprehensive **final exam** is on Monday April 30 from 1:00pm to 3:00pm, in the regular classroom AEB 360.

Exam 1 sample: Exam 2 sample: Final Exam Sample:

Grading.
Homework 20%
Computer Labs 10%
Two Midterms 30%
Semester Group Project 10%
Final Exam 30%

For Homework and Computer Help:

Tutoring Lab
T. Benny Rushing Mathematics Student Center http://www.math.utah.edu/ugrad/mathcenter.html
Private Tutoring.
University Tutoring Services http://www.sa.utah.edu/tutoring/
There is also a list of tutors at the Math Department office, JWB 233, http://www.math.utah.edu/

Students with Disabilities

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Note: The syllabus is not a binding legal contract. It may be modified by the instructor when the student is given reasonable notice of the modification.