HOME PAGE OF MATH 2210Q, SECTION 002:

Applied Linear Algebra

Fall 2008

Sarah Glaz

glaz@math.uconn.edux
(click on link and remove end x)

Office: MSB 202
Phone: (860) 486 9153
Office Hours: T, Th 1:45 - 2:45 and by appointment
Open Door Policy: You are welcome to drop by to discuss any aspect of the course, anytime, on the days I am on campus-- Tuesdays and Thursdays.

Class Meeting Times/Place

Tuesday, Thursday 12:30 - 1:45. Classroom MSB 315

Textbook

Linear Algebra and its Applications, by David C. Lay, 3rd edition (Update)

Course Description

This course provides an introduction to the concepts and techniques of Linear Algebra. This includes the study of matrices and their relation to linear equations, linear transformations, vector spaces, eigenvalues and eigenvectors, and orthogonality.

Homework

Homework will be assigned after every section, discussed in class on Tuesdays, collected on Thursdays, and returned the following class. Solutions to selected exercises may be handed out at that time. For that reason, late homework will not usually be accepted. Homework assignments consist of individual practice exercises from the textbook (see Syllabus) and occasional group projects. You are encouraged to work with other students in this class on all your homework assignments, but must write up and hand in your individual solution. Group projects, one report per group, will be graded for exam points. Textbook homework assignments will not be graded but will carry exam points (this will be explained in more details in class).

Calculator Policy

You will need to show your work on exams and homework assignments, but may use calculators, in all cases, to double check your answers and save time on routine calculations. The recommended graphic Calculator is TI83 (best value for the money) but others will do as well.

Exam Schedule and Guidelines

There will be three in-semester exams and a Final Exam. None is strictly cumulative, but there will be overlap of material between the exams. NO MAKE-UP EXAMS unless there is a very serious emergency

for which you provide proof. Quizzes will be given only if necessary.

Exam Schedule	Exam Guidelines
Exam 1: Thursday, September 18, 7:30 pm - 9:30 pm, MSB 219	Materials and Review Suggestions for Exam 1
Exam 2: Thursday, October 16, 7:30 pm - 9:30 pm, MSB 219	Materials and Review Suggestions for Exam 2
Exam 3: Thursday, November 13, 7:30 pm - 9:30 pm, MSB 219	Materials and Review Suggestions for Exam 3
Final Exam: Monday, December 8, 3:30-5:30, MSB 315	Materials and Review Suggestions for Final Exam

For help with location of the Final Exam Building click on The Campus Map.
UConn Final Exam Policy.

Grading Policy

Homework, quizzes, and group projects: about 10%. Each Exam (including the Final Exam) is of equal weight, that is, about 22%.

Extra Help: The Q Center and Textbook Website

I encourage you to come to my office for help during office hours, and I will be happy to find other times when we can meet if my office hours schedule does not fit your schedule. However, there may be times when you need help and I am not available. A good source of extra help is the UConn Q Center. Check their website for hours and locations. In addition to drop-in free tutoring, the Q Center also maintains a list of private tutors. An online source of additional practice exercises, review sheets, and exam samples with solutions, is the **Student Resources** located on your textbook website: http://wps.aw.com/aw_lay_linearalg_updated_3/ .

Syllabus, Homework Assignments, and Course Handouts

The actual pace of the course may be slightly different than listed in the Syllabus below. It will depend on the students' response to the material. Homework assignments will be given in class after every section, and the **Homework Assignments** column will be filled in on a weekly basis as we progress through the course. The links to the handouts for each section appearing in **Sections: Topics and Section Handouts** column will be updated on a weekly basis as we progress through the course.

Week	Sections: Topic with Link to Section Handout	Homework Assignments
Week 1: 8/26, 8/28	1.1. System of Linear Equations 1.2. Row Reduction and Echelon Forms	Math-autobiography page 11-12: 1,8,13,17,22,23,24 page 25-26: 1,3,7,14,19,21,22
Week 2: 9/2, 9/4	1.3. Vector Equations 1.4. The Matrix Equation $A\mathbf{x} = \mathbf{b}$	page 37-40: 1,3,6,9,12,14,17,21 page 47-49: 1,4,7,9,13,22,23,25
Week 3: 9/9, 9/11	1.5. Solutions Sets of a Linear Equation 1.7. Linear Independence	page 55-57: 2,5,11 page 71-72: 1,5,8,9,15,20,22,33,34

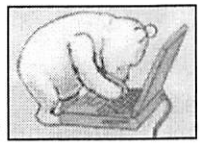
Week 4: 9/16, 9/18	1.8. Introduction to Linear Transformations 1.9. The Matrix of a Linear Transformation	**Exam I: Thursday, September 18** page 79-81: 1,8,9,13,17,31 page 90-91: 1,2,15,20
Week 5: 9/23, 9/25	2.1. Matrix Algebra: Operations 2.2. Matrix Algebra: Inverses	page 116-117: 2,5,7,10,15,27 page 126-127: 3,6,13,18,31
Week 6: 10/2	2.3. Characterizations of Invertible Matrices	**No class: Tuesday, 9/30** page 132-133: 3,5,8,13,15
Week 7: 10/7	3.1. & 3.2. Determinants: Introduction and Prpperties	**No class: Thursday, 10/9** page 190-191: 4,11,37,38 page 199-200: 25,29,31,32,40
Week 8: 10/14, 10/16	4.1. Vector Spaces and Subspaces	**Exam II: Thursday, October 16** page 223-224: 1,7,11,13,15,31
Week 9: 10/21, 10/23	4.2. Null Spaces, Column Spaces, Linear Transformations 4.3. Linear Independent Sets, Bases	page 234-235: 3,11,14,17,21,23,25 page 243-244: 3,4,9,11,13,15,23,24
Week 10: 10/28, 10/30	4.5. Dimension of Vector Spaces 4.6. Rank	page 260-262: 1,9,11,17,19 page 269-270: 2,5,7,10,13,27
Week 11: 11/4, 11/6	5.1. Eigenvalues and Eigenvectors 5.2. The Characteristic Equation	page 308-310: 2,3,7,13,17,19,23 page 317-318: 2,5,12,15,20,21
Week 12: 11/11, 11/13	5.3. Diagonalization	**Exam III: Thursday, November 13** page 325-327: 1,4,5,9,11,23,24,31
Week 13: 11/18, 11/20	6.1. Inner Product and Orthogonality 6.2. Orthogonal Sets	page 382-384: 5,10,13,15,17,20,25 page 392-393: 1,2,9,11,14,20,26,27
Break		**Thanksgiving, Mon.11/23-Sun.11/30**
Week 14: 12/2, 12/4	6.4. Gram-Schmidt Process 7.1. Diagonalization of Symmetric Matrices (as time permits)	page 407-409: 3,7,9
Week of Finals: 12/8 - 12/13		**Final Exam: Monday, December 8**

Academic Integrity

A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgement of the research and ideas of others. Misrepresenting someone else's work as one's own is a serious offense in any academic setting and it will not be condoned. Academic misconduct includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g. papers, projects, and examinations); any attempt to influence improperly (e.g. bribery, threats)any member of the faculty, staff, or administration of the University in any matter pertaining to academics or research; presenting, as one's own,the ideas or words of another for academic evaluation; doing unauthorized academic work for which another person will receive credit or be evaluated; and presenting the same or substantially the same papers or projects in two or more courses without the explicit permission of the instructors involved. A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in The Student Code.

Student Support Services

- Counseling and Mental Health Services 486-4705 (after hours, use 486-3427)
- Career Services 486-3013
- Alcohol and Other Drug Services 486-9431
- Dean of Students Office 486-3426
- Center for Students with Disabilities 486-2020 (voice), 486-2077 (TDD)



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