MAT 211
Introduction to Linear Algebra

About me, your instructor

Moira Chas
Ph.D. in Mathematics, Universitat Autonoma de Barcelona.
Research interest: Topology and geometry.

Email: moira.chas@stonybrook.edu

Office Location: 3-119 Math Tower

Office hours: Mo-1:30pm-3:30pm in office
                                We 2:45 – 3:45pm in P-143
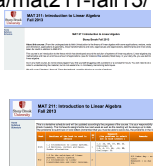   **AND** by appointment.

Homepage http://www.math.sunysb.edu/~moira/

Course Homepages

http://www.math.sunysb.edu/~moira/mat211-fall13/
- Announcements
- Syllabus
- Schedule
- Homework assignments
- Slides

https://blackboard.stonybrook.edu/
- Grades
- A link to the course webpage.

MAT 211: Introduction to Linear Algebra
Fall 2013

Home
Syllabus
Schedule

This is a tentative schedule and will be updated accordingly the progress of the course. It is your responsibility to check it weekly. The homework assignments due next week as well as the reading will be always up to date. The problems to submit are in bold letters (remember that you must be able to solve ALL the problems in the list).

| Week	Sections of the book to read in advance	HW #	Homework (the problems to submit are in bold letters)	Remarks
8/26	1.1 Introduction to linear systems. 1.2 Matrices, vectors and Gauss-Jordan elimination.	1	1.1: **11**, **16**, 18, **20**, 22. Challenge: 44 1.2: 4, 10, **16**, ,18, **20**, Challenge: 32.	
9/2	1.3 On the solutions of linear systems, matrix algebra. 2.1 Introdution to linear transformations and their inverses.	2		9/2 Labor day – no class Homework 1 is due 9/4.

Course Description

This course provides an elementary introduction to linear algebra. It covers systems of linear equations, Gauss-Jordan elimination, matrices and determinants, vector (linear) spaces and linear transformations, bases, dimension, the Kernel-Image theorem, inner-product spaces, orthogonality, Gram-Schmidt orthogonalization, eigenvalues and eigenvectors, diagonalization. Algebraic objects are considered together with their geometric interpretations.

Secret goal of the instructor: Teach you mathematical thinking.

Textbook: Read it!!

Linear Algebra with Applications, 5th edition, by Otto Bretscher (any difference between 4th and 5th that affects homework assignments edition will be posted)

LINEAR ALGEBRA
with Applications
FIFTH EDITION

OTTO BRETSCHER

Linear Algebra
WITH APPLICATIONS
FOURTH EDITION

Otto Bretscher
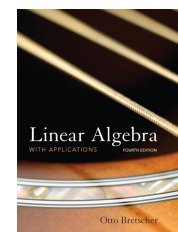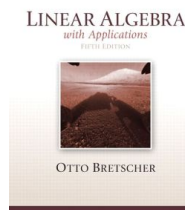
How are grades computed?

• Homework, class participation 20 %
• Midterm 1   20%
• Midterm 2   20%
• Final 40%

Except for the class participation, the grade will be strongly based on performance. Effort will always contribute but it is not the basis of the grade.

How to succeed in this course

- Start working on the course since the very beginning of the course (and do not stop until the end).
- Attend and be present in class.
- Ask questions in class when something is not clear.
- Ask for help (to your instructor, the grader, your classmates, the instructors in the MLC) whenever you need to.
- Participate on the class activities.
- Turn off electronics in class.
- Minimize electronics when working on the course.
- Work thoroughly on the homework problems and if you need it, work on additional problems.
- Make sure you *understand* how to solve the problems.
- Read the assigned material before each lecture.
- Read the book with pen and pencil at hand.

Miscellanea

If you find any mistake or omission in the course webpage, please let me know by email.

Since this course does not have recitation, we will discuss problems in class.

There will be challenge problems in the schedule. It not required to work on those problems, but it will be very good for your "math soul" if you do so.

There are many computations involved in this course. It is easy to make mistakes. You are encouraged to tell me if you see any mistake in my computations. Keep in mind that the most important aspect is to understand the procedures.

Even if many the homework problems can be solved faster with the aid of technology, you should learn how to solve them with pencil and paper (unless the statement of the problem says you can use technology). Think of this problems as a work out for your brain.

I will be happy to answer emails with questions that need an answer. I will not answer emails with questions whose answers where given in class or can be found in the course website.

Homework and exams policy

No late homework will be accepted and make-ups for the exams will not be given.

If you have a serious documented reason communicate it to me as soon as possible and the semester grade will be determined based on the balance of the work in the course.

The exam dates are posted now and cannot be changed. Organize your schedule so you attend to the tests.

Homework Assignments

•Homework should be submitted every Monday before class (with the exception of next Monday)

•You cannot learn in this course without working on problems.

•Expect to spend a few hours a week (between 6 and 8) working on homework.

•Start submitting homework from the beginning of the course (and don't stop until the end!).

Homework Assignments

•Each assignment will consist in about twelve problems.

•The grader will grade selected problems (about half of them) marked in bold in the schedule.

•Problem sets which prove to be too difficult to read may be marked incorrect or may be returned to the student to rewriting (as the instructor sees fit)

•All of the homework pages MUST be stapled together

•Use black or dark blue ink when writing up answers for your homework assignments. Do NOT use RED ink and do NOT use PENCIL.

•Homework must be submitted on Mondays, before class with the exception of the first homework due next week.

Homework presentation

Every homework assignment must be handed in with a header containing:

* Last name, Name
* University ID Number
* Date Submitted
* Assignment number.

Homework solution

A complete solution will include the following:

1. The statement of the problem
2. An organized presentation of ideas leading to a solution
3. An answer that is circled or boxed, if appropriate.
4. If a problem has multiple parts it should be solved as though each part were a separate problem, following the order in which parts are listed.
5. If there is no work shown, there is no credit. In other words, an answer with no justification is not admissible (even if it is the correct answer!)

Midterms and final

• The midterms and final will consist of problems similar to the more difficult homework problems.

Exam	Date		% of Final Grade
Midterm 1	Monday 9/30	12-12:53pm	20%
Midterm 2	Monday 11/4	12-12:53pm	20%
Final Exam	Thursday 12/12	5:30pm-8pm	40%
Homework, participation, etc.			20%

Is it allowed to work in teams?

• You may discuss the assignments in this course with classmates, before working in the write-up.
• Each student's submission must be his or her own work.
• It is not allowed to browse the Internet for solutions.

ACADEMIC DISHONESTY

• All work you submit for homework, final, or exams MUST be your own work.
• If you cheat or aid someone in cheating, you will automatically fail this course and be brought up on charges of academic dishonesty without warning.
• Cheat includes: presenting work of other as your own (such as cutting and pasting from the internet), copying other student work, facilitate that other student copies your work, use of notes and/or electronic devices during examinations.

Reasons for not cheating

1. It is wrong.
2. It does not help you learn.
3. You will be penalized.
4. It is wrong.