MAT 211: Introduction to Linear Algebra

Fall 2016

[Syllabus](#)

Instructor's Contact Details:

Instructor: Dr. Luigi Lombardi
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Office: Math Tower 3-120
Office hours: Monday 2-3pm and Tuesday 12-1pm in Math Tower 3-120
      Tuesday 3-4pm in MLC
      By appointment

Lecture (location and time):

Location: Library W4540
Time: Monday-Wednesday-Friday 12pm-12:53am

Textbook:

Otto Bretscher "Linear Algebra with Applications", 5th edition, Pearson Prentice Hall
(Optional) Student solutions manual for Linear Algebra with Applications, Otto Bretscher, 5th
edition

Course Description:

Introduction to the theory of linear algebra with some interesting applications; vectors, vector
spaces, bases and dimension, applications to geometry, linear transformations and rank,
eigenvalues and eigenvectors, determinants and inner products. It may not be taken for credit
in addition to AMS 210.

Homework:

Homework comes in two flavors. Both will be posted in Bb (Black Board – see below for
information on this) each week, usually on a Sunday and will be due on Monday the following
week (after the weekend). Practice Problems: These are not to be handed but are essential to
master the course and similar problems may appear on the Midterm Exams and Final. These
are designated P. If you have the Student Solutions Manual, you can find complete solutions
to these problems. NOTE: The Manual may solve problems in a different way than we do in
class. Either solution is acceptable. Problems to hand in: These should be done after you've
mastered the practice problems. These will be designated as H These will be graded. Late
assignments cannot be accepted. Homework that appears to be copied from someone else will
receive a grade of 0 and may result in charges of academic dishonesty.

Midterms and Final Exam:

Midterm 1: TBA
Midterm 2: TBA
Final Exam: Wednesday December 14th, 11:15am - 1:45pm

Course Grading:

25% Midterm 1
25% Midterm 2
35% Final Exam
15% Homework

Academic Integrity:

Each student must pursue his or her goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Instructors are required to report any suspected instances of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, see the academic judiciary web site at http://www.stonybrook.edu/cinncms/academic-integrity/index.html

Stony Brook

STATE UNIVERSITY OF NEW YORK

Course Syllabus

MAT 211: Introduction to Linear Algebra

- **About this course:** Introduction to the theory of linear algebra with some interesting applications; vectors, vector spaces, bases and dimension, applications to geometry, linear transformations and rank, eigenvalues and eigenvectors, determinants and inner products. It may not be taken for credit in addition to AMS 210.
- **Textbook**: Otto Bretscher, *Linear Algebra with Applications*, 5th Ed., Pearson Prentice Hall.
- **Calculators:** You may find using a graphing calculator helpful (TI 83, TI84 and TI-nspire are the best choices). Some of the HW problems will require technology for their solution but **no** quiz or test questions will require the calculator. Also the following apps will be useful, again for HW and class but **not** on exams:
    - *Wolfram* "Linear Algebra Course Assistant". This will be demonstrated in class.
    - *Quick Graph* or equivalent. Quick Graph has a free version. You'll see this in class also.
    - **Note**: None of these are required but are a big help

- **Homework:** Homework comes in two flavors. Both will be posted in Bb (Black Board – see below for information on this) each week, usually on a Sunday and will be due on Monday the following week (after the weekend).
    - **Practice Problems:** These are not to be handed but are essential to master the course and similar problems may appear on the Midterm Exams and Final. These are designated **P.** If you have the Student Solutions Manual, you can find complete solutions to these problems. **NOTE:** The Manual may solve problems in a different way than we do in class. Either solution is acceptable.
    - **Problems to hand in:** These should be done after you've mastered the practice problems. These will be designated as **H** These will be graded. Late assignments cannot be accepted. Homework that appears to be copied from someone else will receive a grade of 0 and may result in charges of academic dishonesty.
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- **Reading:** The textbook is intended to be read, although it may be a little hard to understand at times. Read the assigned sections after the material was discussed in class. Furthermore, the lectures will not always be able to cover all of the material for which you will be responsible so the text will be helpful.
- **Examinations and grading:** There will be two in class **Midterms**, and the ever-popular **Final Exam** which is a common exam given to all students in the course**.** The dates and times are listed below; the location for the final will be announced in lecture. Success on the exams will require correct and efficient solutions to the more difficult of the homework problems.

    Midterms: The dates will be announced in class at least a week in advance. These are **in-class EXAMS** and may be given at different times for different sections.
    Final Exam: Wednesday, Dec 14, 11:15am to 1:45pm

- **Final Grade Calculation**

MT 1	MT 2	Final	Homework
25%	25%	35%	15%

- **Math Learning Center:** The Math Learning Center, in Math S-240A, is there for you to get help with Linear Algebra. It is staffed most days and some evenings— I'll be there one day a week.

- **Cell Phones:** If you have a cell phone with you, please have it turned off or set to vibrate. Allowing your phone go off in class is inconsiderate. If you need to talk to someone on the phone please leave the room and move far enough away so that the class is not disturbed. Playing video games on the phone and text messaging are equally inappropriate.

- **DSS advisory:** If you have a physical, psychological, medical, or learning disability that may affect your course work, please contact Disability Support Services (DSS) office: ECC (Educational Communications Center) Building, room 128, telephone (631) 632-6748/TDD. DSS will determine with you what accommodations are necessary and appropriate. Arrangements should be made early in the semester (before the first exam) so that your needs can be accommodated. All information and documentation of disability is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and DSS. For procedures and information, go to the following web site http://www.ehs.sunysb.edu and search Fire safety and Evacuation and Disabilities.

- **Conduct:** The following statement is University policy:

  "Stony Brook University expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and to respect the rights, privileges, and property of other people. Faculty are <u>required</u> to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn."

- **Email:** Please be sure to use Standard English in writing emails to me, including correct spelling and punctuation. Also use complete sentences. <u>Start the subject line with "MAT 211"</u> then your subject.

- **Blackboard:** (Abbreviated **Bb**): You are <u>required</u> to use this application throughout the course to access assignments and other material, to view grades, to contact me and to check for announcements. (See the box below.) It is also a good way to contact other students in class to complain about the professor. It would best if you check the site and your email <u>daily</u> since you are responsible for any updates or other material that are posted. If you need help with Blackboard go the following site: http://it.stonybrook.edu/it-guides/students

Enjoy the Course!