INTRODUCTION TO LINEAR ALGEBRA (MAT 211)– LECTURE 03: SPRING 2017

Contact information. Giulia Saccà is teaching Lecture 03. Her office is in the math building **3-116**. Office hours are **Tue** and **Thu 11:30am-12:30pm** or by appointment. You can contact her by email at **giulia.sacca@stonybrook.edu**.

There are no recitations for this class. The grader is Silvia Ghinassi her email is ghinassi@math.sunysb.edu

Description. This course is an introduction to the theory of linear algebra with some 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.

Prerequisite. C or higher in AMS 151 or MAT 131 or 141 or coregistration in MAT 126 or level 7 on the mathematics placement examination

Textbook. Linear Algebra with Applications, by Otto Bretscher (5th edition). Please notice that the 3rd and 4th editions as fine too, as long as you make sure you do the correct homework assignments!

Lecture

	Instructor	Time	Location
Lecture 03	Giulia Saccà	Tue–Thu 2:30pm – 3:50 am	Earth & Space 069

Homework

Homework is assigned for each week on Tuesdays and should be handed in the following Tuesday in class. If you can't come to class, you can slip it under the door of my office by 4pm of that day. There is a **no late homework policy** for this class.
Every week an email will be sent out to announce that the assignment has been posted on Blackboard.

Exams

There will be two in–class midterms and a final exam, scheduled as follows:

	Date	Location	Time
Midterm 1	Week of 02/27	In class	In class
Midterm 2	Week of 04/10	In class	In class
Final exam	Wed 05/10	TBA	8:00am-10:45am

If you continue with this course it is with the understanding that you are able to take all of the exams at the scheduled times. If you miss an exam for reasons beyond your control, then discuss this **as soon as possible** with Giulia Saccà. **Scheduling problems such as another exam scheduled at the same time as your Mat 211 exam are not considered an acceptable reason for missing an exam.**

Grading Policy

Homework=20%,
Midterm 1=20%,
Midterm 2=20%,
Final exam=40%.

Though class participation is not officially accounted for, attending classes is **strongly recommended**.

Disability Support Services (DSS) Statement

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services at 631-632-6748 or at http://studentaffairs.stonybrook.edu/dss/ They will determine with you what accomadations are necessary and appropriate. All information and documentation is confidential.

Academic Integrity Statement and student conduct

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instance of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http.//www.stonybrook.edu/uaa/academicjudiciary/.

If you have a cell phone with you, please have it turned off or set to vibrate. Allowing your phone go off in class, playing with your phone, texting, or listening to music is inconsiderate. You will be asked to stop or leave the classroom.

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the saftey of the learning environment, and/or inhibits students' ability to learn.

Week #	Date	Sections and topics
1	01/23– 01/27	1.1 Intro to linear systems-1.2 Gauss–Jordan, RREF
2	01/30– 02/03	1.3 Solutions of linear systems– 2.1 Linear Transformations
3	02/06– 02/10	1.3 Matrix Algebra – 2.2 Linear Transf in Geometry
4	02/13– 02/17	2.3 Matrix multiplication– 2.4 Inverse of linear transformation
5	02/20– 02/24	3.1 Image and Kernel– 3.2 Subspaces of $\mathbb{R}^n$
6	02/27– 03/03	MIDTERM 1 – 3.2 Bases and linear indipendence
7	03/06– 03/10	3.3 Dimension– 3.4 Coordinates
Spring Break!	03/13– 03/17	————
8	03/20– 03/24	4.2 Linear Transf. and Isomorphisms –4.3 Matrix of a linear transformation
9	03/27– 03/31	5.1 Orthonormality–5.2 Gram–Schmidt and QR Factoriazation
10	04/03– 04/07	5.2 – 5.4 Least squares and Data Fitting* 5.5 Inner product spaces
11	04/10– 04/14	MIDTERM 2–6.1 Determinant 6.2 Properties of Det.
12	04/17– 04/ 21	More on determinants*– 7.1 Diagonalization
13	04/24 – 04/28	7.2 Eigenvalues – 7.3 Eigenvectors
14	05/01– 05/05	Review