

## LINEAR ALGEBRA – MAT 310: SPRING 2014

### Topics and Text:

This course will focus on mathematical proofs as well as on computations. Some of the topics we will cover are: matrices and operations on matrices; determinants of matrices; vector spaces and subspaces; linear transformations and linear operators – and their kernels and images; basis for vector space and the dimension of a vector space; eigenvalues, eigenvectors and the diagonalization of linear operators; the Cayley-Hamilton Theorem; inner product spaces; selfadjoint operators, normal operators, and orthogonal operators; the Spectral Theorem.

Our text for the course is *Linear Algebra*, fourth edition, by Stephen Friedberg, Arnold Insel and Lawrence Spence.

### Your Teachers:

**Lowell Jones** is teaching Lecture 01, which meets TuTh 2:30pm-3:50pm in Library E4315; his office is Math Tower 2-211; office hours are noon-1pm on Tues and Thur, and 9am-10am on wed, in 2-111; email at lejones@math.sunysb.edu; phone at 632-8248.

**Dyi-Shing Ou** is teaching Recitation 01, which meets Mondays at 4pm-4:53pm in Physics P122; his office is Math Tower 3-118; office hours are 9am-10am on Thur in 3-118, and 5pm-7pm on Monday in MLC; email at dsou@math.sunysb.edu.

**Roman Gayduk** is teaching Recitation 02, which meets on Tuesdays at 10am-10:53am; his office is Math Tower 4-116; office hours are 4pm-5pm on Tues in 4-116, and 5pm-6pm Mond and 6pm-7pm Tues in MLC; email at gayduk@math.sunysb.edu.

### Homework

Homework is assigned for each week and should be handed in during your first lecture of the following week. Only your highest 10 Homework scores will count towards your final grade for this course. (See below for grading policy.)

The first homework assignment can be found by going to the date 1/28/14 on the course “Calendar” (on course Black Board website for your lecture) and clicking on “HW 1 and topics”. The second homework assignment can be found by going to the date 2/4/14 of the second week of classes and clicking on “HW 2 and topics”. Likewise all later home work assignments can be found by going to the Tuesday of the appropriate week on our course “Calendar” and clicking on “HW and topics”.

**Exams** There is one inclass midterm and a final exam, scheduled as follows:

Midterm: This will be an in class test on Thursday 3/13 from 2:30pm-3:40pm. Please go to your lecture (in the usual lecture room) at this time to take the midterm.

The Final exam is scheduled for Thursday May 19, 11:15am-1:45pm. The room assignments for this final exam will be announced on this website towards the end of the semester.

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 your lecturer. Scheduling problems – such as another exam scheduled at the same time as your Mat 310 exam – are not considered an acceptable reason for missing an exam.

### **Grading Policy**

Homework=30%,

Midterm=30%,

Final exam=40%.

### **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 accommodations are necessary and appropriate. All information and documentation is confidential.

### **Academic Integrity Statement**

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/>.

### **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 safety of the learning environment, and/or inhibits students' ability to learn.

**Course Schedule**

week of 1/27-1/31: sections 1.1-1.3.

week of 2/3-2/7: 1.4-1.5.

week of 2/10-2/14: sections 1.6-1.7.

week of 2/17-2/21: sections 2.1-2.2.

week of 2/24-2/28: sections 2.3-2.4.

week of 3/3-3/7: section 2.5-3.1.

week of 3/10-3/14: section 3.2, midterm on 3/13.

week of 3/17-3/21: spring recess

week of 3/24-3/28: sections 3.3-3.4.

week of 3/31-4/4: sections 4.1-4.3.

week of 4/7-4/11: sections 4.3-4.6.

week of 4/14-4/18: sections 5.1-5.2.

week of 4/21-4/25: sections 5.4,6.1

week of 4/28-5/2: sections 6.2-6.4

week of 5/5-5/9: sections 6.5-6.6, last week.