

LINEAR ALGEBRA – MAT 310: FALL 2020

Course description and text book: 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; canonical form, minimal polynomial, Jordan canonical form.

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 (online): contact by email at lowell.jones@stonybrook.edu.; office hours are Mondays and Wednesdays 11am-12:30pm.

Jae Ho Cho is teaching recitations 01, 02 (in person); contact by email at jaeho.cho@stonybrook.edu; office hours are Wednesdays 10am-11am, and math learning center hours are Wednesdays 11:30am-1:30pm.

Runjie Hu is teaching recitation 03 (on line); contact by email at Runjie.Hu@stonybrook.edu; office hours are Mondays 9am-10am, and math learning center hours are Fridays 10am-12pm.

Homework

Homework is assigned for each week and will be posted on the blackboard website for your recitation (not your lecture website) under “Assignments”; to find the homework assignment for a given week just go to “Assignments” on your recitation black board website and download the pdf document containing the appropriate assignment; complete your solutions for the hw problems on sheets of paper, and then upload a pdf document containing your solutions onto the same blackboard website before the due date. The due date for each hw assignment will be clearly stated where the pdf form of the assignment is posted.

Exams There is one midterm which will be scheduled during class time on Monday, October 12.

The Final exam is scheduled for Wednesday December 16 from 8am to 10:30am.

These two exams will be posted under “Assignments” on your blackboard Lecture website (not your recitation website); just go to “Assignments” on your lecture website at the time the exam begins, download the pdf file containing exam, write your solutions for the exam problems on paper, and then upload a pdf file containing your solutions onto the same blackboard website before the time for the exam expires.

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.

Face Mask Policy

Students should be aware that wearing a face mask during an inperson class is required . If a student does not do this that student will be asked to leave the classroom. If the student refuses both to wear a face mask and to leave the classroom then the class will be ended and the student will be reported to the Office of Student Conduct and Community Standards (communitystandards@stonybrook.edu).

Some students with hearing and communication impairments may need their instructor to wear a clear mask for lip and facial expression purposes. If the student has registered with the Student Accessibility Support Center (SASC) and has requested an accomodation for clear masks, SASC will reach out to the student's instructors and provide a clear mask for them to wear while teaching and/or interacting with the student. If you have questions please email sasc@stonybrook.edu or call 631-632-6748.

The Student Accessibility Support Center (SASC) works with students who may require academic accomodations. If a student is unable to wear a mask for health reasons, the student should contact SASC at sasc@stonybrook.edu. SASC will work with the student to help identify arrangements to complete in-person courses in an alternate format. If however there is an in-person class that cannot be accomodated in an alternate format, a student may be approved by the Medical Director of Student Health Services to wear a modified face mask or no face covering. In this situation SASC will communicate this information to the faculty member. Approved students will also be provided with a written exemption form the Medical Director of Student Health Services that indicates any modifications or exceptions, which they must carry with them to show faculty if requested. Note that medical examptions are rare and are based solely on medical necessity. If a student is exampt from the face mask policy, then the instructor should consider how to seat students to ensure proper social distancing within a given instructional setting. If you have questions regarding accommodations then email sasc@stonybrook.edu . For health concerns in the classroom you should contact Dr. Rachel Bergeson, Medical Director at rachel.bergeson@stonybrook.edu.

Course Schedule: This schedule may be changed a bit as the course proceeds.

week of 8/24-8/28: sections 1.1-1.3.

week of 8/31-9/4: 1.4-1.5.

week of 9/7-9/11: (no class on 9/7); sections 1.6.

week of 9/14-9/18: sections 2.1-2.2.

week of 9/21-9/25: sections 2.3-2.4.

week of 9/28-10/2: section 2.5-2.6.

week of 10/5-10/9: section 3.1-3.2.

week of 10/12-10/16: midterm on 10/12; section 3.3-3.4.

week of 10/19-10/23: sections 4.1-4.2.

week of 10/26-10/30: sections 4.3-4.4 .

week of 11/2-11/6: sections 4.5,5.1

week of 11/9-11/13: sections 5.2,5.4.

week of 11/16-11/20: sections 7.1-7.3

week of 11/23-11/27: no classes this week

week of 11/30-12/4: sections 7.1-7.3.

week of 12/7-12/11: section 7.1-7.3 (class only on 12/7).