

MAT 211: INTRODUCTION TO LINEAR ALGEBRA LEC 03 SYLLABUS

FALL 2026

Instructor:

Johan Asplund, johan.asplund@stonybrook.edu, Math Tower 4-105

Class time & location: MW 3:30–4:50pm, [Physics P112](#)

Office and MLC hours: <https://math.stonybrook.edu/cards/asplundjohan.html>

Course webpage: https://math.stonybrook.edu/~jasplund/mat211_fall26

Grader: Daniel Johnson, Daniel.A.Johnson@stonybrook.edu

Course description: 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. May not be taken for credit in addition to AMS 210.

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

Attendance: Strongly encouraged, but not mandatory.

Textbook: Linear Algebra with Applications (5th edition) by Otto Bretscher.

Brightspace: We will use Brightspace for announcements and grades.

Quizzes: Most weeks there will be an in-class quiz that will be held at the last 15 minutes. Each quiz will consist of one or two problems. No tools other than pen and paper are allowed.

The quizzes are scheduled at the lectures on the following dates: Aug 31, Sep 9, Sep 16, Sep 23, Sep 30, Oct 26, Nov 2, Nov 18, and Nov 30.

The lowest quiz score will be dropped at the end of the course, before calculating your final grade.

Exam dates: You must bring your University ID to all exams.

Exam	Date	Time	Location
Midterm I	Wed Oct 7	3:30–4:50pm	In class
Midterm II	Wed Nov 11	3:30–4:50pm	In class
Final	Mon Dec 14	11:15am–1:45pm	TBA

Grades:

Quiz:	15%
Midterm I:	25%
Midterm II:	25%
Final:	35%

Makeup exams: Not available. If you e.g. miss one midterm exam with documented evidence (for instance, a letter from Student Accessibility Support Center), the instructor may allow you to shift the weight of the missed midterm exam to the final exam. A student must attend the final exam at the scheduled time in order to receive a passing grade in the course.

Tentative schedule: See the course webpage for the most up-to-date schedule and for notes. All sections refer to sections in the course textbook.

Week of	Contents	Sections
Aug 24	Systems of linear equations, vectors, matrices	1.1–1.3
Aug 31	Linear transformations	2.1–2.2
Sep 7	Matrix products	2.3
Sep 14	Inverses, kernels and images	2.4, 3.1
Sep 21	Bases and dimension	3.2–3.3
Sep 28	Coordinates, orthogonality	3.4, 5.1
Oct 5	Midterm review, Midterm I	5.1–5.2
Oct 12	No class (Fall break)	
Oct 19	Gram–Schmidt process and orthogonal transformations	5.2–5.3
Oct 26	Least squares and inner product spaces	5.4–5.5
Nov 2	Determinants	6.1–6.2
Nov 9	Midterm review, Midterm II	
Nov 16	Cramer’s rule, diagonalization	6.3, 7.1
Nov 23	Eigenvalues	7.2
Nov 30	Eigenvectors, applications	7.3–7.4
Dec 7	Final review	
Dec 14	Final exam	

AI Policy: AI tools can be a valuable resource if it is used correctly. The class policy is that AI tools are allowed, but when reading notes/solving suggested problems, it is highly recommended to resist the temptation. (Of course, nothing besides pen and paper are allowed at quizzes and tests, so AI tools are of course not allowed then.)

Student Accessibility Support Center Statement: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. 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 is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology and Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at https://www.stonybrook.edu/commcms/academic_integrity/.

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 Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students’ ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.