

MATH 2310: LINEAR ALGEBRA WITH APPLICATIONS (FALL 2019)

COURSE DESCRIPTION: Introduction to linear algebra for students who wish to focus on the practical applications of the subject. A wide range of applications are discussed and computer software may be used. The main topics are systems of linear equations, matrices, determinants, vector spaces, orthogonality, and eigenvalues. Typical applications are population models, input/output models, least squares, and difference equations.

MEETING TIME/SPACE:

Lecture 001, Tuesdays and Thursdays, 10:10–11:25am, Malott Hall 253

Discussion 201, Fridays, 1:25–2:15pm, Malott Hall 203

Discussion 202, Fridays, 2:30–3:20pm, Malott Hall 203

INSTRUCTOR: Brian Hwang (bwh59)

OFFICE HOURS: After classes and Tuesdays, 2:45pm–3:45pm in Malott 581, or by appointment.

TA: Brandon Shapiro (bts82)

TA OFFICE HOURS: 1:00–3:00pm in Malott 218.

TEXTBOOK: *Introduction to Linear Algebra* by Gilbert Strang (5th edition, 2016).

COURSE WEBSITE: <http://pi.math.cornell.edu/~bhwang/2310/>

PREREQUISITES: One semester of college-level calculus (e.g. MATH 1106, MATH 1110), or equivalent AP credit.

GRADE BREAKDOWN:

15% Homework and Quizzes

25% Exam 1 (Thursday, September 26), 10:10am, in class.

25% Exam 2 (Thursday, November 7), 10:10am, in class.

35% Final Exam (Saturday, December 14), 9:00am, location TBA.

Homework will be assigned weekly and collected each Thursday in class. You are encouraged to collaborate with others on assignments and use any other resources that you wish—other class members, office hours, the math support center, internet resources—but each student *must write up solutions on their own, in their own words* and *list their collaborators and other resources* on the first page of their submitted homework. Each student is expected to abide by the Cornell University Code of Academic Integrity. In particular, any direct copying of any resource—including a classmate, website, or textbook—is considered a violation.

There will occasionally be some short unannounced in-class quizzes consisting of a question from the most recently handed in homework. These will not occur during weeks with prelim exams.

POLICIES: No late homework will be accepted without a note from the Health Center or the Dean's Office. However, in calculating final grades, we will drop the lowest homework score. No make-up quizzes will be given. There are no make-up exams. If exceptional circumstances arise, let me know as soon as possible so that we can make the proper arrangements. You will need to provide a letter from the dean.