

MATH 150-10, Linear Algebra, Summer 2021

Instructor: Michael Raney

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Textbook: Lay, Lay and McDonald, *Linear Algebra and its Applications*, 6th edition, Pearson

Course overview: This course presents the basic theory and methods of finite dimensional vector spaces and linear transformations on them. Topics include: matrices and systems of linear equations; vector spaces, bases, and dimension; linear transformations, kernel, image, matrix representation, basis change, and rank; scalar products and orthogonality; determinants, inverse matrices; eigenvalues, eigenvectors, diagonalization of symmetric matrices, positive definite matrices, spectral theorem for Hermitian matrices; linear discrete dynamical systems via matrix iteration.

Homework: A homework assignment will be given over each section after it is covered in lecture. The assignments are accessible via Canvas. The assignments will be collected and graded. Each will typically be due two class periods after it has been posted on Canvas. You are allowed and even encouraged to discuss the assignments with each other, but the work that you hand in must be your own.

Exams: We will have a midterm exam and a final exam. The midterm is scheduled for Wednesday, June 23 during regular class time. The final exam is scheduled for Friday, July 9 during regular class time.

Grading scheme: Your homework average constitutes 40% of your overall course average. The midterm exam is worth 25%, and the final is worth 35%.

Note: Classes will not meet in observance of Juneteenth (Friday, June 18) and in observance of Independence Day (Monday, July 5).