

Math 3A Syllabus

Text: *Linear Algebra and Its Applications*, David Lay

Lecture	Section	Topic
1	1.1	Systems of Linear Equations
2	1.2	Row Reduction and Echelon Forms
3	1.3	Vector Equations
4	1.4	The Matrix Equation $Ax=b$
5	1.5	Solution Sets of Linear Systems
6	1.6	Applications of Linear Systems
7	1.7	Linear Independence
8	1.8	Introduction to Linear Transformations
9	1.9	The Matrix of a Linear Transformation
10		Review
11		Midterm #1
12	2.1	Matrix Operations
13	2.2	The Inverse of a Matrix
14	2.3	Characterizations of Invertible Matrices
15	2.8	Subspaces of \mathbb{R}^n
16	2.8, 2.9	Cont.
17	2.9	Dimension and Rank
18	3.1	Introduction to Determinants
19	3.2	Properties of Determinants
20		Review
21		Midterm #2
22	5.1	Eigenvectors and Eigenvalues
23	5.2	The Characteristic Equation
24	5.2, 5.3	Cont.
25	5.3	Diagonalization
26	5.4	Eigenvectors and Linear Transformations
27	6.1	Inner Product, Length, and Orthogonality
28	6.2	Orthogonal Sets (up to page 343)
29		Review