

Section numbers refer to *Elementary Linear algebra: A Matrix Approach, 2nd Edition*, by Spence, Insel, and Friedberg.

Date	Sections	Topics
1/20	1.1, 1.2	Matrices, vectors, and linear combinations
1/25	1.3	Systems of linear equations
1/27	1.4	Gaussian elimination
2/01	1.6	Span of a set of vectors MATLAB Lab 1 due
2/03	1.7	Linear dependence and linear independence
2/08	1.7,2.1	Homogeneous systems, matrix multiplication
2/10	2.1	Matrix algebra
2/15	2.3 Appendix E	Invertibility and elementary matrices Uniqueness of the reduced row echelon form MATLAB Lab 2 due
2/17	2.4,2.5	Inverse of a matrix, partitioned matrices
2/22	2.6	LU decomposition
2/24	EXAM 1. All material covered through lecture of 2/17	
3/01	3.1	Determinants; cofactor expansions
3/03	3.2	Properties of determinants
3/08	4.1	Subspaces; column, row, and null spaces of a matrix MATLAB Lab 3 due
3/10	4.2	Bases and dimension
3/22	4.3	Bases and dimensions of column, row, and null spaces
3/24	5.1	Eigenvalues and eigenvectors
3/29	5.2	Characteristic polynomial MATLAB Lab 4 due
3/31	5.3	Diagonalization of a matrix
4/05	5.5	Examples of diagonalization
4/07	EXAM 2. All material covered through lecture of 4/05	
4/12	6.1	Geometry of vectors; projections MATLAB Lab 5 due
4/14	6.2	Orthogonal sets of vectors; Gram-Schmidt process; QR factorization
4/19	6.3	Orthogonal projection; orthogonal complements
4/21	6.4	Least squares; normal equations
4/26	6.5,6.6	Orthogonal matrices; diagonalization of symmetric matrices
4/28	6.6	Spectral decomposition for symmetric matrices; diagonalization of quadratic forms
5/03		Catch-up and review MATLAB Lab 6 due
5/12	FINAL EXAM, 12:00 P.M.–3:00 P.M. Room to be announced.	