

DATE	DUE	SECTION AND TOPIC
M 8.29 W 8.31 F 9.2		1.1: Course introduction 1.2: Vector spaces 1.3: Examples of vector spaces
M 9.5 W 9.7 F 9.9	1-10	<i>No class - Labor Day</i> 2.1-2.2: Matrix vocabulary 2.2-2.3: Matrix operations
M 9.12 W 9.14 F 9.16	11-25	3.1: Subspaces 3.2-3.3: Linear independence and dimension 3.4: Affine subspaces of \mathbb{R}^n (lines and planes)
M 9.19 W 9.21 F 9.23	26-34	3.5: A more rigorous discussion of linear independence 3.5-3.6: Basis and dimension 3.6: More on basis and dimension
M 9.26 W 9.28 F 9.30	35-49	4.1-4.2: Dot product (definition and properties) 4.2-4.3: Dot product and geometry (norm, distance, etc.) 4.4: Orthogonality and projection
M 10.3 W 10.5 F 10.7	EXAM 1 50-57	4.4: Orthogonal decomposition theorem 4.5: Gram-Schmidt procedure 4.6: More on projections; Cauchy-Schwarz inequality;
M 10.10 W 10.12 F 10.14	58-70	4.7: Normal equations of hyperplanes; review of dot products 5.1: Linear transformations: introduction 5.2: Standard matrices of linear transformations
M 10.17 W 10.19 F 10.21	71-80	5.3: How to prove transformations are linear 5.4: Examples of linear transformations 5.5: Subspaces associated to linear transformations
M 10.24 W 10.26 F 10.28	81-90	5.6: Injectivity, surjectivity, bijectivity 5.7: Fundamental subspaces associated to a matrix 5.8: Invertibility; review of linear transformations
M 10.31 W 11.2 F 11.4	91-98 EXAM 2	6.1: Systems of linear equations 6.2: Theoretical approach to linear systems 6.3: Row reduction and echelon forms I
M 11.7 W 11.9 F 11.11		6.3: Row reduction and echelon forms II 6.4: Row reduction and echelon forms III 6.5: Matrix inverses; Gauss-Jordan method
M 11.14 W 11.16 F 11.18	99-116	6.5: Review of systems of linear equations 6.6: Least-squares approximations 7.1: Determinants: definition and properties
M 11.21 W 11.23 F 11.25	117-124	7.2: Determinants: computational techniques <i>No class - Thanksgiving break</i> <i>No class - Thanksgiving break</i>
M 11.28 W 11.30 F 12.2	125-129	8.1: Eigenvalues and eigenvectors I 8.1-8.2: Eigenvalues and eigenvectors II 8.2: Diagonalization of a matrix
M 12.5 W 12.7 F 12.9	130-141	8.3: Matrix powers and exponentials 8.3: Applications to difference and differential equations Review/ catch-up / reflection on course material
M 12.12 R 12.15	EXAM 3	FINAL EXAM: 10-11:40 AM in STR 137