

Proposed Course Schedule (subject to change):

<u>Date</u>	<u>Topics</u>	<u>Homework Problems</u>
1/13 (R)	Course Introduction Sect 1.1: Intro. to Systems of Linear Equations Sect. 1.2: Gaussian Elimination	Sect. 1.1: 1-13 odd, TF all Sect. 1.2: 1 (only row-echelon form) 9-12
1/18 (T)	Sect. 1.2 cont.: Gauss-Jordan Elimination and Homogeneous Systems	Sect. 1.2: 1-7 odd, 13-29 odd, 32, TF a-c, e Homework #1 assigned. Due 1/27
1/20 (R)	No Classes (At home Matlab intro)	
1/25 (T)	Sect. 1.3: Matrices and Matrix Operations	Sect. 1.3: 1-6, 11-17 odd, TF a-c
1/27 (R)	Sect. 1.4: Inverses; Rules of Matrix Arithmetic	Sect. 1.4: 1-3, 5-15 odd, 19-21 odd, 51, 53a, 54, TF all Homework #2 assigned. Due 2/3
2/1 (T)	Sect. 1.6: Further Results Sect. 1.7: Diagonal, Triangular, and Symmetric Matrices	Sect. 1.6: 1-19 odd, TF a-b Sect. 1.7: 1,3, 13-25 odd, 32, 33, 37a,b, TF a-d,g,h,j
2/3 (R)	Sect 2.1: Determinants by Cofactor Expansion	Sect. 2.1: 1-7 odd, 15-33 odd Homework #3 assigned. Due 2/10
2/8 (T)	Sect. 2.3: Properties of Determinants; Cramer's Rule	Sect. 2.3: 7-31 odd, TF a,c,d
2/10 (R)	Review Sect. 1.1-1.7, 2.1, 2.3-2.4	Study for test
2/15 (T)	Test #1: (1.1-1.7, 2.1,2.3- 2.4)	
2/17 (R)	Sect. 3.1: Introduction to Vectors Sect. 3.2: Norm; Dot Product and Distance in \mathbb{R}^n	Sect. 3.1: 1-29 odd Sect. 3.2: 1-11 odd, 17, 19, 23, 25
2/22 (T)	Sect. 3.3: Orthogonality Sect. 3.4: Geometry of Linear Systems	Sect. 3.3: 1-5 odd, 9-39 odd Sect. 3.4: 1-15 odd Homework #4 assigned. Due 3/1
2/24 (R)	Sect. 4.1: Real Vector Spaces	Sect. 4.1: 1-5 all, 7, 11
3/1 (T)	Sect. 4.2: Subspaces	Sect. 4.2: 1-3 all, 7-10 all Homework #5 assigned. Due 3/15
3/3 (R)	Sect. 4.2: Span Sect. 4.3: Linear Independence	Sect. 4.2: 11—13 all Sect. 4.3: 1-4
3/8 (T)	Fall Break – no class	
3/10 (R)	Fall Break – no class	
3/15 (T)	Sect. 4.4: Coordinates & Basis Sect. 4.5: Dimension	Sect. 4.4: 1-5 odd Sect. 4.5: 1-7 odd, 13, 15, 20
3/17 (R)	Still to be determined	
3/22 (T)	Review Sect. 2.3, 3.1-3.5, 4.1-4.5	Study for test
3/24 (R)	Test #2: (2.3, 3.1-3.5, 4.1-4.5)	
3/29 (T)	Sect. 4.4: Coordinates & Basis Sect. 4.6: Change of Basis	Sect. 4.4: 7-15 odd Sect. 4.6: 1-10 all, 13-17 odd
3/31 (R)	Sect. 4.7: Row Space, Column Space and Nullspace Sect.4.8: Rank & Nullity	Sect. 4.7: 1-12 all Sect. 4.8: 2, 4, 7 Homework #6 assigned. Due 4/7

4/5 (T)	Sect. 8.1: General Linear Transformations Sect. 4.9 Matrix Transformations from \mathbb{R}^n to \mathbb{R}^m .	Sect. 8.1: 6, 7, 9-17 all, 20-26 all Sect. 4.9: 1-21
4/7 (R)	Sect. 4.10: Properties of Matrix Transformations	Sect. 4.10: 1-17 odd Homework #7 assigned. Due 4/19
4/12 (T)	Sect. 5.1: Eigenvalues & Eigenvectors	Sect. 5.1: 1-14 all
4/14 (R)	Sect. 5.2: Diagonalization	Sect. 5.2: 12-23 all
4/19 (T)	Review Sect. 4.4, 4.6-4.10, 5.1-5.2, 8.1	
4/21 (R)	Test #3 (4.4, 4.6-4.10, 5.1-5.2, 8.1)	
4/26 (T)	Presentations	
4/28 (R)	Presentations / Review for Final	
5/3 (T)	Final Exam 8:00-10:00	