

# MATH 221: Linear Algebra and Applications, Fall 2022

*\*\* subject to change \*\**

DATE	READING	TOPIC	ASSIGNMENT DUE
Aug. 30	Sections 1.1 - 1.2	Vectors, Dot Product	
Sept. 1	Section 1.2 - 1.3	Dot Product, Hyperplanes	
Sept. 6	Section 1.4	Systems of Linear Equations	HW 1
Sept. 8	Section 1.4	Gaussian Elimination	
Sept. 13	Section 1.5	The Theory of Linear Systems	HW 2
Sept. 15	Section 1.5, 1.6.1	The Theory of Linear Systems, Applications	
Sept. 20	Section 2.2 - 2.3	Linear Transformations, Inverse Matrices	HW 3
Sept. 22	Section 2.1 - 2.2	Matrix Operations	
Sept. 27	<b>MIDTERM #1</b>		HW 4
Sept. 29	Section 2.4 - 2.5	Elementary Matrices, Matrix Transpose	
Oct. 4	Section 3.1 - 3.2	Subspaces	HW 5
Oct. 6	Section 3.2	Four Fundamental Subspaces	
Oct. 13	Section 3.3	Linear Independence and Basis	HW 6
Oct. 18	Section 3.3 - 3.4	Dimension	
Oct. 20	Section 3.4	Dimension	HW 7
Oct. 25	<b>MIDTERM #2</b>		
Oct. 27	Section 3.6	Abstract Vector Spaces	HW 8
Nov. 1	Section 3.6, 4.1	Inconsistent Systems, Projection	
Nov. 3	Section 4.1 - 4.2	Orthogonal Bases	HW 9
Nov. 8	Section 4.4	Linear Transformations on Abstract Vector Spaces	
Nov. 10	Section 4.4	(see above)	HW 10
Nov. 15	Section 5.1	Properties of Determinants	

DATE	READING	TOPIC	ASSIGNMENT DUE
Nov. 17	Section 5.2	Cofactors and Cramer's Rule	HW 11
Nov. 22	Section 6.1	Characteristic Polynomial	
Nov. 29	<b>MIDTERM #3</b>		HW 12
Dec. 1	Section 6.2 - 6.4	Diagonalizability, Applications, the Spectral Theorem	
Dec 6.	Section 7.1, 7.3	Complex Eigenvalues, Jordan Canonical Form, ODEs	HW 13
Dec. 8	Section 7.1, 7.3	(see above)	